

Face Value: How Male Sex Workers Overcome the Problem of Asymmetric Information

Male sex work presents a number of challenges for traditional market analysis. Despite its appearing online in a manner similar to that of other products in the age of the Internet, an economic approach to male sex work must begin with by considering several preliminaries that we usually neglect in economic analysis because we can safely assume them away. For example, in a traditional market we are not usually worried about whether prices in the market accurately reflect equilibrium prices – the point where producer supply and consumer demand intersect. When we observe a price in an online marketplace we take that to mean that the firm is choosing the price to maximize profit, and implicitly assume that the maximization takes into account consumer demand for the good.

If the prices in the market do not reflect underlying economic principles, it is difficult to know how this market operates, or if it operates at all. A traditional supply-and-demand approach would be inappropriate if observed prices had little relationship to economic primitives. The illicit nature of the transactions in male sex work make it difficult to argue that the market “gets prices right” simply because they are publically posted online. After all, in what other illegal market are the prices of goods and services openly displayed? The basic tenets of market analysis require that we first confirm that the prices in the market reflect underlying fundamentals about consumer and producer behavior. The first question to answer is the most basic: Does this market work? (And if so, how does it work?)

To answer this question, we must step back and think more abstractly about what a sex worker transaction is. At its most basic level, sex work is a contract. Whether purchasing gasoline, a candy bar, or a home, transactions are contracts. A good or service is sold at a specific price offered by a seller to a buyer at a specific place and time. The contract does not have to

be formal or written, and the law acknowledges that most contracts are informal ones whose terms are implied by the context of the transaction itself. Payment terms are stipulated and our legal system enforces these contracts if they are disputed. This helps both buyers and sellers – if the good or service is not delivered as advertised, or if payment is not received, either party can turn to the courts to have the contract enforced.

If a consumer were purchasing shoes from an online retailer, for example, the customer would be confident that the product he or she ordered would be the product they would receive. If this turned out not to be the case, they could resort to a payment service, the vendor, or even the courts if they were duped and either sold a different product or received nothing. In other words, they would buy with confidence – if not confidence in the seller, than certainly confidence in a system that would enforce or void their contract, depending on the situation. The same applies for the seller. For that reason, analysis of the market would proceed with an understanding that both buyers and sellers are acting with full faith that their transactions will be completed. The analysis of markets usually presumes that contracts will be enforced.

In an illegal market such as male sex work this presumption does not hold. Courts will not aid those seeking to enforce contracts for illegal acts. This poses a problem for market analysis of male sex work because we cannot assume that buyers and sellers are acting with any confidence that their transactions will be enforced. We therefore lose confidence that what we observe from the illegal market is what actually occurs. In other words, we need to first check that the prices we observe from these online sources are plausibly related to actual transactions.

In addition to formal enforcement, information is also critically important in markets. Economists have long recognized that information exchanged between buyers and sellers helps to ensure that more transactions will take place. Even with contract enforcement, it is still possible that information will improve market function, lead to more transactions, and increase consumer welfare. In the classic example, if a seller offers a used car for a certain price, any reasonable buyer would have to fear that the car may be worth (much) less than the advertised price. Unless the seller can provide additional information about the car's quality or offer a guarantee, it is unlikely that a buyer will be found at the price advertised. In this case, the seller has more information than the buyer, and a smart buyer will realize this and naturally fear that he or she can be duped by the seller. This case of asymmetric information can stop transactions before they start. In the most extreme case, no buyer will be found.¹

Even when there is contract enforcement, buyers and sellers would rather not use them. Contract enforcement is costly in both time and money, and buyers will rightly be wary of sellers whom they do not trust. The seller must therefore provide a great deal of information to the buyer in order for the transaction to take place. As such, information helps to make transactions possible because they build trust between a buyer and seller. The market can and does take information into account, and the more objective the information the better. One reason this information can be taken into account is because it, too, is an implicit part of the transaction.

Male sex work does not necessarily have this market structure. While the information structure of the online market is quite rich, the transactions themselves are completely illegal. This is the reason the Department of Homeland Security moved to close Rentboy.com in 2015 – the federal government argued that the website was facilitating prostitution through the website, even though the website did not profit from transactions. Every transaction that takes place within male sex work is done with full knowledge that any agreements between sex worker and client cannot be enforced. For economic analysis, this creates a serious problem. Formal enforcement is often seen as the cornerstone of contracts. While information can overcome the problems of asymmetric information, this assumes that the information provided is credible and verifiable, which is made more likely when contracts can be enforced.² At a minimum, if the information were false economists assume that there would be a means of redress for fraud. While the use of formal institutions such as courts is rare relative to the volume of transactions, the standard argument is that the *presence* of formal institutions gives contracts their authority and information its credibility. In Schelling's classic terminology, "the power to sue and be sued" gives parties the ability to make credible exchanges of information and enforceable commitments, a prerequisite to most transactions.³

Without any means of redress, the information that buyers and sellers share would have little value. Since there would be no punishment for misrepresentation, a reasonable consumer would heavily discount all promises made by sellers. With no recourse for fraud, gross misrepresentation, or failure to provide the service, the market might not exist at all – no buyer would trust any of the information provided by a seller, and honest sellers would not be able to distinguish themselves from fraudulent ones. This implies that what we see online is an illusion with little connection to the actual practice of male sex work.

This is not to say that economists are naïve and always assume that formal enforcement is necessary or available. There are many transactions

that take place without formal enforcement, and some that do not require the presence of formal enforcement. Numerous studies have documented how informal networks, long-term relationships, and reputations overcome problems of asymmetric information. Indeed, researchers have developed large literatures that look at limited contractibility and situations where formal enforcement is costly, as a way to consider the additional mechanisms that must be in place if existing institutions are lacking or unable to settle disputes.⁴ The literature has not developed an empirical answer to whether the value of information without formal enforcement approaches its value when formal enforcement is present, however.

This question matters a great deal for the study of the market for male sex work. Without an answer to this question it is not clear that this market behaves in a way that can be described by traditional economic theory. There is information transmitted in the market, but the question is whether (and how) it is valued. In most illegal markets this is not a problem because the good exchanged (say, narcotics) is done in a face-to-face process. Reputations, networks, and relationships are key in most illegal markets, and prices are private and negotiated directly between buyer and seller. In the modern world for male sex work, however, this is not so. Male escorts are not hired off of the street. Rather, they are selected online in a highly impersonal process. There are few escort agencies that could act to vouch for a sex worker – the websites simply host advertisements. Reputations established online could be entirely false. Men enter the market regularly, and new entrants need to be able to establish themselves in the industry like any other service provider, but there are few ways to do this in an illegal market. Most important, every client knows this to be the case.

The question, “Does this market work?” is therefore actually two related questions: Are formal enforcement mechanisms *necessary* in order for the information that male sex workers and clients share to have value? And if not, what is the value of information in this environment without formal enforcement? These questions are refinements of the basic question asked before, and get to the heart of the issue – in order to study the market for male sex work in a traditional way, we first need to know whether the market functions like a traditional market. In traditional markets, information has value, and if the information in this market has no value, then it is unlikely that the prices and quantities correspond to what we would assume in traditional supply and demand analysis.

The problem is most illegal markets have coarse information environments. Take the example of illegal narcotics. It is rare that someone looking

to purchase drugs can choose between several sellers the way that someone shopping for a book would. Most illegal markets are also highly secretive and heavily dependent on personal connections. Unlike regulated businesses, illegal markets work by word of mouth and knowledge of the goods and services being provided is not usually in plain view. In these markets, reputations and networks operate to ensure that transactions take place. Given the types of networks, it is challenging to obtain information on prices, quantities, and consumer and producer behavior, making empirical answers to these questions especially difficult. The online market for male sex work must overcome the problems posed by asymmetric information but in an impersonal manner for an illegal service, a very tall order.

So, then, how *does* this market work? Does it get prices right? In this chapter, I show how the male sex work market leverages high technology and a rich information structure to make this market work. I begin by documenting the ways in which the clients of male sex workers informally police the market: by informing other clients of deceptive sex workers and by reviewing sex workers on independent, client-owned websites. The informal policing in the market is critically important and allows this market to function. In economic terms, the policing raises the cost of misrepresentation for would-be fraudulent escorts and simultaneously rewards the truthful self-disclosure of honest escorts. This acts to encourage credible escorts to enter or remain in the market and to prevent fraudulent escorts from entering or persisting in the market. In an illegal market such as male sex work this policing works as one of the only means of enforcement, and it is entirely informal.

I exploit this institutional knowledge further to identify the specific information clients treat as a signal of escort quality. Both clients and escorts explicitly mention face pictures in discussions of escort credibility and misrepresentation. Using narrative evidence from qualitative studies, news reports, and online forums, I show that clients look for face pictures in an escort's advertisement as a sign that the escort is trustworthy. Being mentioned as the signal of escort trustworthiness is one thing, though, and whether the market values that information is another. If this market is well functioning, the signal of quality should have value.

The market values face pictures, and escorts who post face pictures are able to earn 11 percent more than escorts who do not, on average. In dollar terms, this would be in excess of an additional \$10,000 per year in earnings. Spot prices – specific transaction prices recorded by clients – independently confirm the estimates from advertised prices. This is important because spot prices are prices we know that clients actually paid, which could be

different from the prices that have been advertised. Consistent with the institutional analysis, I find that escorts who post pictures of their faces receive a sizable price premium: twice the premium to that on pictures in general. Indeed, the premium that accrues to pictures is actually completely attributable to face pictures.

This finding is robust with regard to a number of considerations. First, it holds when looking at escorts who have no reputation measures in their advertisements. This implies that new entrants to the market understand the value of face pictures, and price their services accordingly. Second, the premium holds when looking at spot prices only. This means that the premium is not an artifact of escorts with face pictures simply posting higher prices than others – clients actually do pay more for the services of escorts who post their face pictures. Third, I find that the premium is not driven by beauty. It could certainly be the case that only attractive escorts show pictures of their faces, and this would mean that the value of face pictures is not about information in an abstract sense but about the physical features revealed in face pictures. I find that the premium remains even when controlling for the physical beauty of the male escort.

Male sex workers and their clients successfully overcome the problem of asymmetric information in an illegal market. I show how this market functions without formal enforcement, describing how clients police the market and identify the specific information consumers take as the signal of quality in this market. Interestingly, the per-picture price premium I estimate, 1.7 percent, is similar to the per-picture premium observed for used automobiles on eBay.com.⁵ Irrespective of the reputational concerns of escorts, I document how client policing can increase the costs of doing business for low-quality escorts. Increasing their cost is one of the primary ways of minimizing their numbers. While previous empirical work looks at how information technology improves market function, I provide the first evidence that an illegal online market is quite responsive to information, even when it cannot be verified or where misrepresentations cannot be punished.⁶

The market for male sex work provides a case where the richness of the information environment overcomes some of the problems of asymmetric information. The illegality of the market and the near-impossibility of guaranteeing truthful disclosure imply that the market should disappear or be a market where information has dubious value. However, I find that clients informally police the market, successfully punishing misrepresentation and rewarding credible escorts. This enables male escorts to signal their quality and allows prices in the market to respond accordingly.

Despite its being an illegal market, male sex work exploits high technology to ensure that the market functions well. The answer to the question, "Does this market work?" is, despite obstacles generally presented by illegal markets, "Yes."

THE ONLINE MARKET FOR MALE ESCORT SERVICES

The male sex work market now largely takes place online.⁷ Although female sex work has recently begun to appear online in Internet forums such as Craigslist.com, male escorts have had access to large and profitable websites devoted to the male sex trade for well over 15 years.⁸ Unlike escort agencies and other online, two-party transactions such as eBay.com purchases, the websites themselves do not derive any profits from the transactions escorts conduct with clients; they simply allow escorts to post their advertisements and contact information. The websites charge a set fee to escorts for hosting an advertisement and act as a clearinghouse where escorts advertise their services and clients choose between escorts. Consequently, these sites do not screen clients for escorts or vice versa, make no claims or guarantees about the quality of the escorts, and offer no recourse to clients in cases of poor escort performance or fraud.

The large number of male escorts and their ability to price directly without intermediaries create a market setting similar to others that are compatible with competitive market assumptions.⁹ Competitive markets generally rest on relatively simple criteria: many buyers and sellers, free entry and exit of sellers, the same good or service is sold by all sellers, and buyers and sellers have the same information. Under these conditions we expect markets to function well. Since this market is an illegal market, however, there is a potential for escorts to mislead clients and engage in fraud. In particular, an escort's ability to post unreliable information and to misrepresent himself should lead to adverse selection in the market. The adverse selection here would be one where fraudulent male escorts would be the predominant actors in the market.

While escort claims are verifiable *ex post*, there are no formal institutional penalties for *ex ante* misrepresentation. Similarly, it is unclear how much weight a reputation in an illegal online market carries, and whether any client would respond to claims of high-quality service. Without formal enforcement and with the stakes particularly high (especially for men who are married or not generally assumed to partake in homosexual behavior), it is unclear whether a rich information environment alone can prevent the adverse selection described above. Previous research based on newspaper

advertisements for male escorts found no differences in pricing due to information.¹⁰ Since the market has moved online, however, there are more service providers and more likely clients than before. The open question is whether the rich information environment offered by the Internet increases opportunities for escorts to disclose information about themselves, which could signal their trustworthiness, and whether the pricing of male escort services is related to this information.

The market for escort services is one of the few instances where illegal behavior is openly advertised. While this is extremely rare for illegal markets, there are reasons why escorts publicly announce their prices for services. First, and somewhat counterintuitively, is that it minimizes the legal risks of sex work. In most police stings for solicitation, the sex worker and the client must agree to both a price and sexual conduct. In order to be prosecuted for prostitution the illegal contract must specify, verbally or otherwise, the terms of the transaction. By posting prices and sexual behaviors online, clients and escorts obviate the need to discuss payment, prices, and sexual behaviors at the same time. In fact, escorts are wary of clients who discuss prices, as this is taken as evidence that they could be police officers.¹¹ In fact, how-to guides for clients and escorts advise both to keep contractual discussions to a minimum:

Understand, though, that they might not be able to fully describe over the phone what they do because they don't want to get busted . . . Most escorts will not discuss specific sexual acts for sale. Such is illegal and their services are for time and companionship only. Money is exchanged for time only, the decision to have sex would be a mutual and consensual decision two adults make. Upon meeting the escort, you may be asked certain questions about any possible affiliation with law enforcement.¹²

Second, escorts compete with one another on these websites. While clients calling a traditional escort agency can be steered to a particular sex worker, clients of male escorts can freely choose between hundreds of options. This is close to the assumption of a market with many sellers. In such a market, clients may be unwilling to engage escorts who do not post their prices or who appear to be less forthcoming about the services they offer, especially if their competitors are forthcoming. Some qualitative interviews with escorts have revealed that escorts post prices as a way to ensure that clients who contact them can afford their services.¹³

Third, by setting their prices publicly, escorts avoid the time otherwise spent haggling with clients over prices, a staple of street prostitution.¹⁴ Escorts assume that any client contacting them knows their price and will pay the posted rate for services, just as any other business owner would

expect customers to pay the advertised rate. While the online advertisement sites are clear that money is not exchanged for sex and is only compensation for an escort's time, the value of that time is not subject to negotiation, either. Despite this publicly posted information about illegal activity, police raids of online male escorts are surprisingly rare.

There are several sources that describe the generic male escort encounter.¹⁵ Clients contact escorts directly and arrange for appointments either at the home of the escort (an "incall") or at the home or hotel of the client (an "outcall"). In the most basic form of an outcall, a client will search escort advertisements and choose an escort. If an appointment is immediately desired, such as the same day, the client will usually phone the escort. Appointments for future dates may be arranged by e-mail, although some escorts prefer to make all appointments by phone. Escorts generally encourage clients to describe the length of the desired appointment and to note any circumstances of which the escort should be aware (e.g., manner of dress required by client and clients who may be disabled). Escort and client then discuss the time and location of the appointment. Once the escort arrives at the location, he meets the client and the two may have a brief discussion to reaffirm the earlier phone conversation. Payment is almost never discussed face-to-face. Money is usually exchanged after the appointment ends, but clients are encouraged to place the money in plain view, such as on a dresser or desk, either before the escort arrives or at the beginning of the appointment.

Interestingly, one reason the street market may be preferred to the online market, from a client perspective, is that misrepresentation would be rare. On the street, a client can see the available sex workers and choose one after negotiation. The problem is that the client can only choose from the escorts available at the time he is looking – he cannot schedule a future meeting nor can he see all of the available sex workers. Itiel (1998) notes that male escorts and clients have less leeway to informally penalize misrepresentation than street sex workers and their clients. While street sex workers and clients can freely disengage from a transaction for whatever reason by simply walking away, the clandestine nature of an "incall" or "outcall" makes it difficult for either party to escape penalty free if there has been any misrepresentation. For example, once the escort has arrived at the hotel door or home of a client, it may be difficult to induce him to leave without payment of some sort. Also, once the misrepresentation is revealed, the client (and potentially the escort) is already exposed: the escort knows the client's location, almost certainly some form of contact information, and the client may be open to blackmail and harassment depending on

his circumstances. Moreover, clients cannot appeal to an intermediary's reputation to minimize their exposure. There is no pimp, madam, or escort agency acting as a guarantor. The very nature of the male sex market alters the usual interpretation of the risks involved in sex work. While male escorts are seen as a "safer bet" than male street sex workers, the overall structure in the market is one in which the client is at risk of harm.¹⁶

Unlike female sex workers, who are at greater risk of being violated by clients, male sex workers are more prone to violate their clients. Clients are at risk in a number of ways, and the harm from hiring an unsavory escort can have serious consequences. First, escorts may simply rob clients; a traditional scam is to request payment up front and then feign an excuse to leave, never to return. Another common ploy is to steal the client's wallet in the course of an appointment. In online forums, by far the most frequent complaint from clients is that escorts take payment but do not deliver services.

Second, an escort may blackmail a client or expose his client's sexual behaviors. As noted earlier, clients and escorts usually communicate by way of telephone or e-mail before the appointment. Most escorts refuse calls from clients who have a "blocked" phone number, and this exposes clients to a risk of blackmail because escorts can trace the client's phone number. Escorts could threaten to "out" a client, to inform his family of his sexual practices, to contact his employer, or even to contact legal authorities, since the client has solicited prostitution. The case of Ted Haggard (the former president of the National Association of Evangelicals, who became embroiled in a sex scandal involving a male escort in 2006) is one in which the escort kept voicemail messages from the client and later released them to the press. The additional social stigma attached to being exposed as a homosexual, particularly for men who hold positions of power in conservative religious or political organizations, can be career ending.

Several prominent political careers have been damaged by allegations of involvement with male sex workers.¹⁷ In addition to the well-publicized national cases, local politicians have also been exposed. In 2003, Utah State Representative Brent Parker (R) resigned when accused of soliciting an undercover police officer. In 2006, Tom Malin lost a Democratic primary bid for the Texas State Legislature when it was revealed that he had formerly been an escort.

Finally, since escorts are relatively young and virile men, physical violence is not uncommon. While escorts usually have someone they will keep abreast of the location and contact information for every appointment in case of an emergency, clients are less likely to let others know of their whereabouts, leaving themselves particularly vulnerable.¹⁸ In online

forums, clients themselves mention instances in which escorts either attacked them or threatened them with bodily harm. Clients describe being punched, kicked, threatened or attacked with knives, guns, and other deadly weapons. For example, one client noted “The time an escort grabbed me by the throat and slammed me up against wall rifling my pockets for my wallet. Then punched me a couple of times for not bringing my ATM and credit card.”¹⁹ Moreover, these crimes are likely to be unreported, since the client would be forced to reveal how he came to know the escort in question.

Unlike the markets for other services, where clients may not choose to pursue legal redress for small matters, clients of male escorts do not have the option of seeking redress for any grievance, regardless of size. While one may be compensated in-kind for poor service at a restaurant, for example, there is no evidence of similar arrangements in the male escort market, even for relatively petty grievances. Escorts are not known to offer compensation or in kind services to dissatisfied clients.

The dangers that clients face increase their incentive to police the market. Without some form of policing, the market would be difficult for clients to navigate. Even with policing by clients, there are limits to how effectively an illegal market can be policed. Even in well-functioning online markets there are fraudulent sellers, and online services spend a great deal of time screening sellers. In the next section, I show exactly how clients informally police the market to minimize the probability that they will hire an unscrupulous escort.

EVIDENCE FROM THE DEMAND SIDE OF THE MALE ESCORT MARKET

Informal Enforcement in the Male Escort Market

Why would clients be driven to police the market for male escort services? While policing helps the market to function, it comes at a cost to individual clients that benefits not only themselves but also clients who do not police the market. The precise motivations behind client policing are difficult to ascertain. The clients active in policing are providing a service to the market that enhances its ability to operate. It may be due to egalitarian feelings, a desire to protect others, or knowledge that their activities are critical to a market they are eager to be active in.

When a firm discloses information it is inherently making a promise to the consumer. Theoretically, in order for the signals that escorts send to be informative, there must be a reasonable basis for the client to trust the

accuracy of the signal.²⁰ Most economic models of signaling assume that signaling is truthful and that misrepresentation does not exist. In these types of models, when an escort signals, his sending a signal acts as a commitment device.²¹

The key issue when misrepresentation is forbidden is whether to disclose information at all, since the information must be truthful. This issue is pertinent for firms that would expose themselves to significant liability if they were to knowingly mislead consumers. In an illegal market, however, such guarantees cannot be made and informal policing may be the only option. Clients may police the market because they have little choice if they would like to minimize the probability of dealing with a deceptive escort. Since the websites that host advertisements for male escorts derive no income from clients and maximize profits by hosting the largest number of advertisements, they pay little attention to clients' complaints about deceptive escorts who advertise on the websites. Interestingly, one client framed the situation in the classic used-car reference familiar to most economists:

That site is an advertising site, not an agency. If the used car you buy turns out to be a lemon, do you take it up with the paper that ran the classified ad for it? Could you imagine what managing that he said/he said would be like?

Just as the purchaser of a car advertised in the newspaper does not hold the newspaper responsible for the car being a lemon, clients of escorts cannot hold the website responsible for hosting advertisements of escorts who turn out to be fraudulent, dangerous, or deceptive.²²

In this market, clients police escorts in two ways: through posts to independent, client-owned forums and through detailed reviews of escort services on the escort websites, which are linked to the respective escort's advertisement. The primary functions of client-based forums are information gathering by potential clients and posting of detailed reviews of escort services. In the forums, clients ask other clients for leads to good escorts in an area with which they are not familiar and clients post unsolicited information about escorts.²³ This information is available to all interested users. The following exchange is typical. "CLIENT #1: I've been drooling over an ad in Chicago who had been listed on XXX as "XXX." Anybody know more? CLIENT#2 (Response): I can add some information on this guy. I actually can't remember the name he used, but I do remember the photos. He quoted me \$300 and listed himself as a dominant top. He showed up at my hotel on time and when I opened the door I didn't think his face looked the same as the face pic on the ad. I don't think the other pics on his current ad are him though. So in a nutshell, buyer beware."

These forums can be used to highlight a number of dangers regarding escorts. Escorts can create deceptive advertisements on escort websites, use multiple aliases, and even steal from their clients. The forum acts to ensure that these rogue escorts are exposed to clients. The following is an example of such a warning. “[Link to escort advertisement] I hope this link works and I want to let everyone to know to STAY AWAY!!!! He stole \$500 from my house and is in partnership with John, Johnny, Joe . . . [he] also goes by Jake, Michael and many other names . . .”

The reviews on the website offer a different type of assessment. The reviews of these escorts act as public goods, much more so than the forums. The reviews describe a specific transaction with an escort. The reviews contain a great deal of information that is free form. The reviews are searchable by city or escort, allowing any client to obtain information about an escort without having to ask.

Additionally, clients can also write reviews of escort services on escort websites. These reviews allow for free form opinions of the escort’s services and are directly linked to, and a product of, the advertisement website. They usually contain a great deal of information about the escort and his behavior during a particular appointment – clients give information on how the appointment was made, specific information regarding the escort during the appointment, such as escort hygiene, physical appearance, conversational ability, the escort’s manner of dress, sexual activities provided, and the price charged. While the escort websites do give escorts the option of allowing themselves to be reviewed by clients (nearly 95 percent in the data allow it), escorts have no control over the reviews and all reviews are posted if the escort allows reviews. This all-or-nothing nature of reviews is a key advantage of these reputation measures, in that escorts have no control over their reviews: all reviews for the escort are retained on the website, not a selected sample posted or chosen by the escort.

The market policing by clients allows for the stock of information to be large: clients who would never meet exchange information about escorts, and clients who never review escorts can access a large amount of information about escorts. While the cost per client to share information is relatively high, given the amount of time it would take to write a detailed review, the returns to the accumulated knowledge are also high. These policing measures also allow disclosure to be credible. Theoretically, the policing and reviews raise the cost of deception for the untrustworthy escort, creating a wedge where the honest escort can credibly signal and receive a premium for doing so. A deceptive escort would need to create a totally new advertisement with new pictures and new contact information

to continue to operate in the market once he had been discovered as being deceptive. These new identities are not without cost. This means the cost of being a deceptive escort is greater than that of being a truthful escort. This cost differential is a necessary condition for signaling to be informative – and the cost differential could only exist if clients police the market.

Identifying the Signal

Due to the inherent dangers in male sex work and the unique situation where male sex workers have to provide information to their clients with regard to their honesty and safety, the information flow is from escorts to clients. Clients choose escorts from many available options, and clients reveal that they choose escorts based on both physical characteristics and cues as to who will not pose a threat to their security and privacy. High-quality escorts will show up on time, match their advertised description, provide the agreed upon services at the advertised price, be discreet, and generally act in a manner respectful of the client's privacy and safety.

What information do clients consider when they hire a male escort? What type of information is more likely to be observed, given a particular type? Using the same client-based forums that serve as policing, I identify the types of information that escorts and clients take as important in male escort advertisements. Clients reveal that they pay particular attention to the presence of face pictures (ideally multiple face pictures) in an escort's advertisement as a signal of truthfulness. Clients explicitly and implicitly note that face pictures are more likely to be observed when the escort is high quality.

I've been tempted [to hire an escort with no face pictures] but have always ended up feeling let down by anyone without a face-shot so I've stayed away.

As far as pics that are probably not real, same deal, do not hire. No one has just a professional modeling pic or two and no other pics. They need to have more than one face pic in their ads.

Even in their advertisements, escorts note that face pictures are what clients take into account. Escorts agree that face pictures transmit information about quality in their advertisements to clients and in their advice to other escorts.

Don't get fooled by escorts using headless picture, they are often fake! Choose the certified one! A real man!

Indeed, escorts who do not have face pictures in their advertisements apologize for the lack of them.

Good looking all-American . . . clean-cut type . . . Sorry no face pic but you won't be disappointed!!

The qualitative evidence suggests that escorts and clients treat face pictures as particularly valuable information and a signal that the escort is unlikely to misrepresent himself.

There are several reasons why face pictures would be a signal of quality. Face pictures give a key measure of immediate representativeness: upon meeting the escort, the client would know whether the escort was "as advertised." This would allow a client to minimize any potential losses, since misrepresentation would be obvious. Escorts who do show their face convey that they have less to hide. They are willing to be publicly identified, making it less likely they will violate the client or expose him to blackmail or harassment, since they could be readily recognized by third parties. Posting a face picture is similar to posting a bond – it decreases the probability that an escort would misrepresent himself, and therefore act as advertisements for quality.²⁴ Showing face pictures not only acts as a signal of quality, but could also be interpreted by clients as commitment device (a special case of disclosure). A deceptive escort, once discovered, cannot costlessly reinvent himself. Also, clients can use face pictures as a search characteristic when looking for male escort services. Escorts who do not show their faces may not want to be identified because of their occupation and/or because they are not high quality. Not signaling is one way of ensuring anonymity, which makes it easier to deceive clients.

CONCEPTUAL AND EMPIRICAL FRAMEWORK

The key issue is whether or not there is a response by the clients to the signal. There are two possibilities: either the market responds to the signal offered by escorts or it does not. Theoretically, this would be a separating or pooled equilibrium. In the pooled equilibrium, the signal does not lead to wage differences – all escorts would be paid the same, whether they signal or not. In the separating equilibrium, there is separation between types, where the signalers receive a higher wage than non-signalers. In this case the signal is informative as it leads clients to believe that the escort is more likely to be a high-quality escort.

In an illegal market such as male sex work, it is difficult to specify which equilibrium would hold. Most signaling models implicitly assume that some type of formal enforcement or institution guarantees truthful disclosure. For example, in the simplest version of the classic signaling model in

Spence (1973), workers obtain otherwise useless education to signal their ability to employers. If schools could not certify that an agent had actually obtained the years of schooling she claimed (for example, by printing fraudulent degrees or transcripts), anyone could act as if they had the highest level of education possible. Such fraud would obviously decrease the value of the signal and, in the extreme, the signal would have no value.

There are several reasons we might expect a pooled equilibrium for male sex work. First, the degree of uncertainty could be large, which can cause clients to react to signals weakly, if at all. The information being provided comes from websites advertising sex work services, after all. Second, the cost differential for signaling by type may be particularly small in this market. Although clients act to police the market, this may not result in a substantial cost differential between those that would signal and those that would not. If deceptive escorts could easily produce fake face pictures, clients would have no ability to discern quality from the signal itself. Any client without direct experience with a given escort would be fundamentally uninformed (or less than fully informed) as to the escort's true quality, since deception is a distinct possibility. Since the cost of signaling against type for the deceptive escort may not be much higher than that of the genuinely high-quality escort, it is difficult to argue on theoretical grounds that clients would trust the veracity of the signal.²⁵ By the same token, it is not clear that reputation would solve the problem, since those describing the reputation of the escort may have ulterior motives. For example, positive reviews may be left by the escort or his associates, and negative reviews by competitors.

I therefore test for whether information – in particular, the signal of face pictures – leads to wage difference (separation) in this market. If there is separation, then the market partially overcomes the problem of asymmetric information. Most important, it would do so without formal enforcement.²⁶ While, theoretically, the question is whether or not the signal has value, an additional empirical question looks at how much value the signal has relative to the value of a signal in a market where formal enforcement is present – whether legal and illegal markets value information to the same degree.

The key empirical question is the value of the signal. The task is to test whether the expected value (average price, w) of male sex workers who use face pictures, the signal (s) identified earlier, is greater than the average price of those who do not, holding other escort characteristics (x) constant

$$E(w|x, s > 0) > E(w|x, s = 0) \quad (1)$$

Following empirical studies of information in markets, I use a regression of the escort's price (which is also the wage he earns for his services) on the information he provides in his advertisement. I take the usual interpretation that the coefficients reflect a consumer's willingness to pay for each characteristic, and therefore reflect the characteristic's value. While there have been criticisms of this interpretation due to restrictive assumptions, Bajari and Benkard (2005) show that the interpretation holds and that the price function is identified under very general conditions that apply to this case.²⁷ If the market separates based on the signal identified, then face pictures will have value in terms of escort prices. I therefore regress the escort's hourly price on the signal in the advertisements (*Signal*), reputation and reviews (*R*), personal characteristics (*Z*), and identifiers for location/market (*X*).²⁸

$$\ln(P_i) = \phi + \gamma \text{Signal}_i + \varphi R_i + \delta Z_i + \lambda X_i + \varepsilon_i \quad (2)$$

In contrast to other studies that analyze the total amount of information in the market, I disaggregate the information in order to estimate the value of particular types of information. While pictures may have value, pictures were not the signal that clients looked for from escorts. I therefore estimate the value of pictures in general and specific types of pictures, namely face pictures. Based on the institutional analysis presented earlier, I hypothesize that face pictures are the key type of information that leads to separation in the market for male sex work, which is a clue to see whether this market functions well by overcoming the problems of asymmetric information. If the market takes face pictures as a signal of escort quality, we would expect γ to be positive. If not, then participants do not respond to the signal either because it is not believed or because it is a noisy signal of quality to which market prices do not respond.

DATA FROM THE ONLINE MALE ESCORT MARKET

Since the issue is type of picture listed, I recorded not only the number of pictures, but also the type of pictures in each advertisement. In particular, I look at three categories of pictures – pictures that show an escort's face in a distinguishable way (which may or may not include nudity), pictures that show a nude body only (either from the front or the back, but with no face shown), and pictures that show neither nudity nor an escort's face (pictures of torsos, biceps, legs, feet, etc.). While nudity is allowed, escorts may not post pictures that display sex acts and may not

Table 2.1 *Summary statistics for the escort sample*

| Variable | Whole sample | | No face pictures | | Face pictures | |
|----------------------|--------------|-----------|------------------|-----------|---------------|-----------|
| | Mean | Std. dev. | Mean | Std. dev. | Mean | Std. dev. |
| Price | 216.88 | 64.46 | 187.09 | 64.54 | 231.59 | 59.15 |
| Log of price | 5.34 | 0.29 | 5.18 | 0.31 | 5.41 | 0.25 |
| Spot price | 217.86 | 64.49 | 188.52 | 64.52 | 232.30 | 59.40 |
| Number of pictures | 6.14 | 2.84 | 5.17 | 2.81 | 6.61 | 2.73 |
| Body-only pictures | 2.08 | 2.07 | 3.16 | 2.39 | 1.55 | 1.66 |
| Face pictures | 2.90 | 2.96 | 0.00 | 0.00 | 4.32 | 2.63 |
| Survey reviews | 3.18 | 6.72 | 3.25 | 7.43 | 3.15 | 6.34 |
| Text reviews | 0.35 | 1.03 | 0.36 | 1.16 | 0.35 | 0.96 |
| Fraction Good Survey | 0.88 | 0.27 | 0.86 | 0.31 | 0.89 | 0.25 |
| Fraction Good Text | 0.88 | 0.30 | 0.89 | 0.29 | 0.87 | 0.31 |

Notes:

Fraction Good Survey and Fraction Good Text are defined over escorts with survey or text reviews, respectively.

Price is the outcall price posted by an escort in his advertisement.

If an escort has both a spot price and a posted price, or no posted price and a spot price, the spot price replaces the posted price.

display pictures that include persons other than the escort. Uploaded pictures are placed in an online holding tank until cleared by the website's management. Every advertisement must be accompanied by at least one picture.

Table 2.1 shows the summary statistics for the escorts in the data. In terms of information, escorts post an average of six pictures in their advertisements and have three survey reviews, and one escort in three has a text review. Two-thirds of escorts post at least one face picture and, on average, escorts post three pictures containing their face and two containing their nude body with no face shown. There are some differences when looking at the summary statistics for escorts sorted by whether they post face pictures. For example, the average escort who shows pictures of his face posts nearly seven pictures, four of which are of his face. The average escort who does not show pictures of his face posts five pictures, three of which are of his nude body. Escorts who post face pictures charge approximately \$230 an hour, while escorts who do not post face picture charge approximately \$190 an hour. Below, I check to see if these differences in prices hold after controlling for various individual, reputation, and geographic differences that have the potential to explain the price difference between sex workers who post face pictures and those who do not.

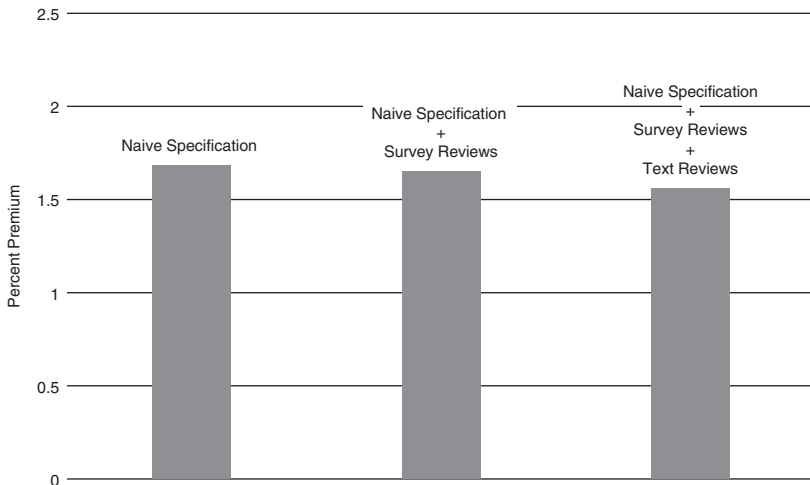


Figure 2.1 The value of pictures in escort advertisements

FACE VALUE

Figure 2.1 reports the results from various ordinary least squares (OLS) regression specifications, where I regress the escort's log hourly price on the number of pictures and a large number of controls such as escort characteristics and location.²⁹ This is a naïve specification, since it treats all pictures equally and considers only the quantity of pictures. The first estimate shows that the number of pictures in an escort's advertisement is strongly related to the escort's price, controlling for individual characteristics and market location. Each additional picture increases an escort's price by 1.7 percent. The magnitude of the premium for pictures is close to the premium noted by Lewis (2009) for used cars on eBay.com (which is between 1.66 and 1.82 percent), one of the few estimates for the value of information in legal markets. I find that information has value in this illegal market just as it does in legal markets where enforcement is formal.³⁰

The second estimate is the value of pictures when I add the more coarse measure of reputation: survey reviews. By themselves, survey reviews do not exert a significant effect on prices, but the effect of pictures on prices remains the same even when this measure of quality is included. Recall that these reviews were just star ratings of escorts and asked a simple set of questions about performance. They did not reference a specific transaction nor do they allow clients to offer further details. For the third estimate, I add the more detailed and informative measure of reputation: free form text reviews. Text

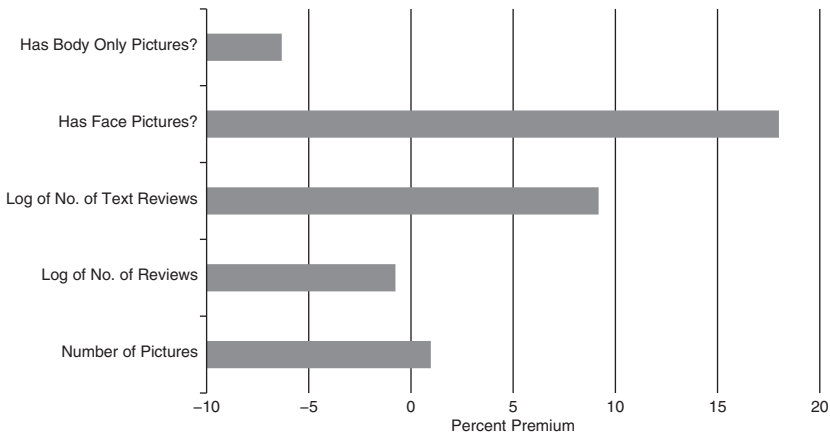


Figure 2.2 The premium of picture types

reviews are strongly and positively related to prices, but the effect is quite small, less than one-half of one percent. Consistent with other results in the literature, reputation affects prices in the male escort market.³¹

Figure 2.2 shows a set of results for a different specification, where the number of pictures is included as well as a dichotomous measure for the presence of face pictures in an advertisement. The institutional evidence presented earlier suggests that face pictures are the key measure of truthfulness in the market, and we therefore expect their presence to be positively related to escort prices if they are a signal of quality. The effect of face pictures on prices is quite large. Escorts who post pictures of their faces have prices that are more than 20 percent higher than those that do not, even after controlling for both measures of reputation and a host of individual escort and market characteristics.³² Additionally, including a measure of whether face pictures are present significantly reduces the relationship between total pictures and the escort's price – the coefficient on number of pictures is reduced by more than 50 percent once the indicator for face pictures is included (see Figure 2.1). I also include a dichotomous measure of having a nude body picture with no face shown. The effect of having nude, headless photos actually *reduces* the price by more than 5 percent. If an escort sees an average of twenty clients per month, the difference would amount to roughly \$10,000 per year in additional earnings for the escorts who post face pictures.

While Figure 2.2 examines the role of information at the extensive margin, Figure 2.3 presents the results from the preferred specifications, in which I use the number of face and body pictures in the specification.

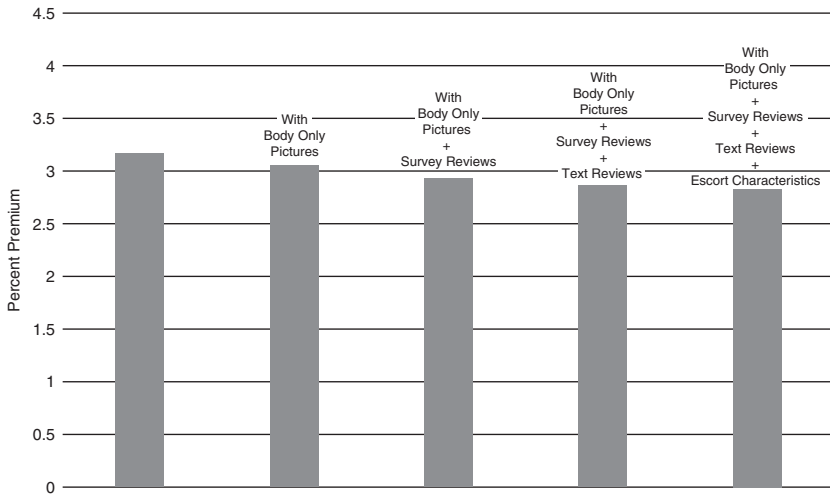


Figure 2.3 The premium of face pictures

I investigate the premium to each additional face picture and body picture to see how much of the total premium to pictures in Figure 2.1 can be attributed to each type of picture an escort will display.

In Figure 2.3 I use the number of face and body-only pictures as the measures of information. This specification is similar to the naïve specification for all pictures, where now I can estimate, directly, the value of face pictures. The first estimate shows that the premium to each face picture is large – each additional face picture increases the price charged by an escort by roughly 3 percent, nearly twice the premium of total pictures reported earlier. Put another way, one standard deviation in the number of face pictures increases escort prices by 0.3 of standard deviations, a large effect on prices for sex workers. In the second estimate I add body-only pictures and find that they are not significantly related to prices. For the third and fourth estimates I add the two measures of reputation and find that they behave similarly to the results in Figure 2.1, where survey reviews are not related to prices and where text reviews are strongly related to escort prices. Finally, I control for a host of escort- and market-specific characteristics and the result holds – the premium to face pictures is much larger than the premium to pictures overall, and body-only pictures are not significantly related to prices.

In Figure 2.3 the results come from a specification where I allow picture types to enter directly, but this can be problematic since escorts who convey different information may also use different numbers of pictures. As the summary results (Table 2.1) showed, escorts who post face pictures also post

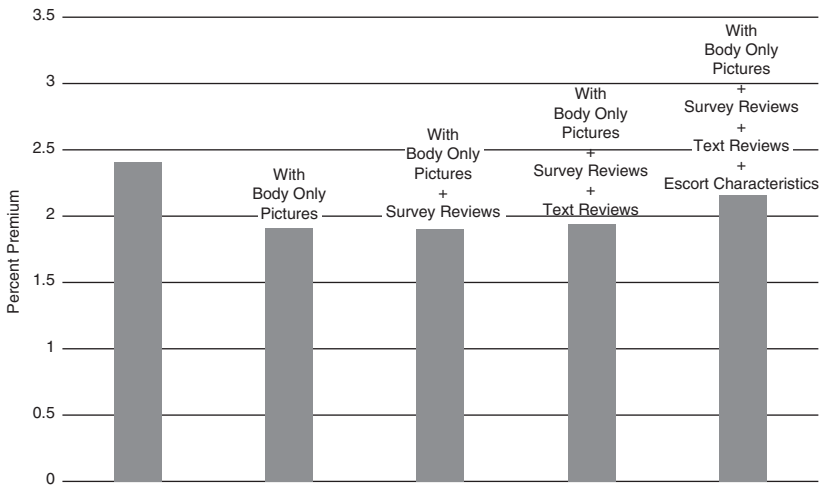


Figure 2.4 The premium for the fraction of pictures that are face pictures

more pictures overall. To see if this drives the relationship between prices and face pictures, in Figure 2.4 I report the results where I use a specification that controls for the total number of pictures in an advertisement to focus on the *composition* of the information, the fraction of pictures that are face pictures, rather than the quantity of information. To ease interpretation, the results are presented in terms of the premium for a 10 percent increase in the fraction of face pictures in an escort's advertisement, such as having three of ten pictures being face pictures as opposed to two of ten pictures being face pictures. For the first estimate I include only the number of pictures and the share of pictures that are face pictures. Consistent with the results in Figure 2.3, the fraction of face pictures is strongly related to escort prices. One standard deviation in the fraction of face pictures increases escort prices by 0.12 of a standard deviation. I then add the fraction of pictures that are body-only pictures and find that they are negatively related to prices, but their effect on prices (in absolute value) is much smaller than the effect of face pictures. As earlier, I then add measures of reputation, and the effect of a larger fraction of pictures being face pictures is still positive and of similar size to the most basic results.³³ (The inclusion of the additional reputation measures does lessen the magnitude of the effect of body-only pictures, and they cease to be statistically significant.³⁴) The effect of face pictures is robust to the inclusion of reputational measures, which suggests that face pictures are a different signal of quality and not a direct substitute for the information contained in reviews.

Taken together, Figures 2.1–2.4 establish that information and reputation are important in the market for male sex work and that each is priced in a different manner. While the amount of information matters (each picture increases prices by roughly 1.5 percent), the quality of the information matters more (each face picture increases prices by 3 percent). In fact, the entire premium to information in the market is driven by face pictures.³⁵ Also, reputation matters in the market, but only in the form of free form text reviews, which contain more information about an escort's quality and behavior than do survey reviews. This implies that the information regarding reputation also varies depending upon how it is delivered.

What, exactly, do face pictures and the text reviews signal? While they both appear to signal quality, it is likely that they each signal a different component of quality. The first and most important would be "basic quality." Basic quality includes the escort's truthfulness and the client's safety, and is the most fundamental aspect of quality. Escorts who are high in basic quality will show up on time, match their advertised description, provide the agreed upon services at the advertised price, be discreet, and generally act in a manner respectful of the client's privacy and safety. This is the type of quality likely signaled with face pictures. A second aspect of quality is something I define as skill at providing services, or "service quality." Service quality refers to how well the escort performs services relative to others. Given that the two types of quality are different and serve different functions, it is not surprising that they have similar (but empirically distinct) effects on prices.

The results support the idea that the information environment afforded by the Internet allows male sex workers to signal their type successfully via face pictures and receive a premium for doing so. It also supports the hypothesis that face pictures are a specific signal of quality in this market. The results also support the idea that reputations are best established with evidence of the type of experience clients could expect from an escort. More importantly, the results suggest that the value of information conveyed in an illegal market is similar to the value of information provided in a legal market.

RULING OUT ALTERNATIVE EXPLANATIONS FOR THE VALUE OF FACE PICTURES

The previous section presented evidence in support the interpretation of face pictures as a signal of basic quality. However, that interpretation is subject to several criticisms, given the cross-sectional nature of the data.

First, though the price responds positively to the presence of face pictures, the value of face pictures should be finite – if every face picture increased prices that would be implausible. Below I show that the marginal value of face pictures decreases as a function of the number of face pictures. This is what we would expect – while showing the first few face pictures is a signal of basic quality, sending several would not increase the signal itself. Second, it is possible that clients respond to empty signals of quality. In other words, price differences do not reflect signaling as much as a client's wishful belief that face pictures convey credibility. I explore this possibility below and find it to be inconsistent with the evidence. Third, the results could be driven by a beauty premium as opposed to a signal of quality. Naturally, physical attractiveness would be related to prices and would be displayed via face pictures. I provide suggestive evidence that beauty is not the driving force behind the face picture premium. Lastly, I construct a counterfactual and show that where client policing is stymied, the value of the signal decreases substantially. This is confirmatory evidence that information only has value when the signal is rendered credible by client policing.

Marginal Face Value

Since the interpretation of the price effect of face pictures hinges on face pictures being a signal of quality, it is critical to estimate the marginal value of face pictures. The marginal value of face pictures should be a decreasing function of the number of face pictures. Once a threshold of credibility is attained, additional pictures should not convey additional quality. If this were not so, escorts could be rewarded for infinite numbers of face pictures. This would imply that the signal had infinitely positive value, and that would certainly be difficult to justify if the signal is one of basic quality. In the review of client forums, clients note that they look for multiple pictures of an escort's face, but there should be a limit to their value after some reasonable number of pictures establishes that the escort in question is not deceptive.

To estimate the marginal value of face pictures, I estimate a polynomial function of the value of face pictures.³⁶ I plot the marginal value as a function of the number of face pictures in Figure 2.5. As the figure shows, the marginal value of face pictures decreases sharply, approaching zero at the seventh picture. These marginal values are consistent with the interpretation of the results for face pictures being a signal of basic quality. The average value of face pictures is large, but the marginal value of the eighth

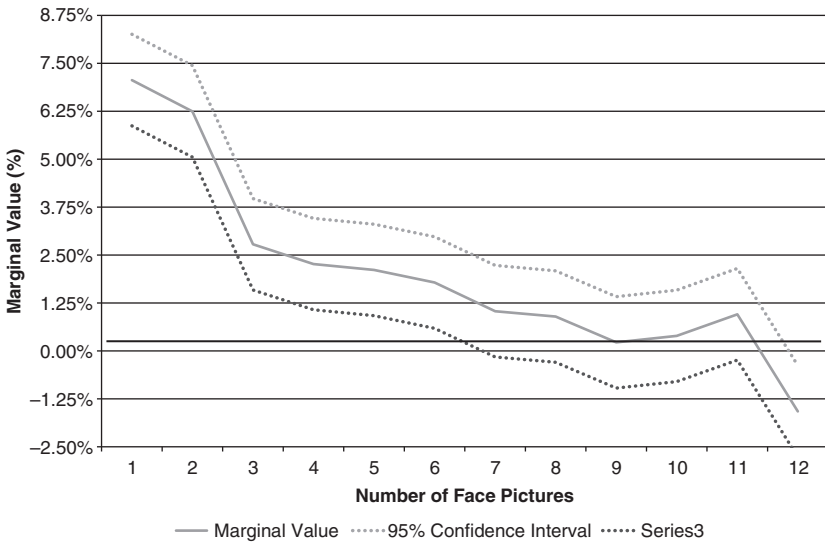


Figure 2.5 The marginal value of face pictures

additional face picture is indistinguishable from zero. While the signal has value, excessive signaling is not rewarded in this market.³⁷

True Quality

It could be that clients are responding to empty signals of quality. Uninformed clients could certainly be duped into believing claims that are not supported. Jin and Kato (2006), for example, conducted an experiment on eBay.com auctions for baseball cards and found that while advertised quality was positively related to price, actual quality was not. They conclude that sellers in online markets target uninformed buyers, and that eBay.com’s system of universal ratings and anonymous identities allows this situation to persist. In essence, clients could respond to signals that turn out not to truly be signals related to quality. Lewis (2009) contends that Jin and Kato’s result may be due to the fact that the stakes are relatively low in the auctions that they study, where the baseball cards in question are not very expensive. It is certainly true that the stakes for misrepresentation are high in the market for male sex work, both in dollar value and the potential negative outcomes from misrepresentation. Furthermore, while buyers in online markets such as eBay.com have some form of formal protection from fraud, the clients of a male escort do not have any formal or implied guarantees against fraud: it is not possible for them to

be lulled into a false sense of security by an escort's guarantee. The active policing documented earlier shows that clients are not easily or consistently fooled. As such, while some portion of these results could be explained by the presence of uninformed consumers who are targeted by escorts who use fraudulent face pictures, that portion is likely to be small. Also, nearly every escort advertises that he is of the best quality. Certainly, no escort claims to provide average or mediocre services. While the signal of quality is not used by every escort, claims of quality are made by every escort.

Beauty

One concern with the interpretation of the results is that the face picture premium could be due to a beauty premium and not signaling. Many papers document the premium to beauty in the labor market, and it would be reasonable to conjecture that the premium may be even higher among sex workers.³⁸ In this sample of sex workers it could certainly be the case that more attractive escorts are more likely to display pictures of their faces and, conditional on displaying any face picture, display more face pictures. It is doubtful, however, that all attractive escorts show their faces since men may not want long-lived evidence of their careers in commercial sex on the Internet.³⁹

I tackle the issue of beauty directly by obtaining beauty measures for the escorts in the data. I first address the issue that more attractive sex workers may display more face pictures, conditional on displaying any picture. I then discuss the potential selection issue that more-attractive sex workers might be more likely to display face pictures in general. To do so the beauty of the male escorts was rated independently by a group of men. Beauty was scored from 1 to 5, with 1 being the least attractive, and 5 being the most attractive. These types of rating systems are standard for measures of physical attractiveness. Both openly gay and closeted men were requested to serve as enumerators, since heterosexually identified men likely make up a non-negligible portion of the client base.⁴⁰ Nearly 90 percent of the escorts who show their face pictures in the data were given beauty scores; the mean beauty score is 3 and the standard deviation 1.2.⁴¹

In Figure 2.6 I present results of the value of face pictures where I also include estimates of escort beauty. Since subjective ratings of beauty and other personal characteristics may differ across enumerators, giving rise to a spurious correlation, the estimates include enumerator-fixed effects in all specifications. The first bar shows the estimate of the premium to face pictures for comparison, but in this instance only includes the escorts for

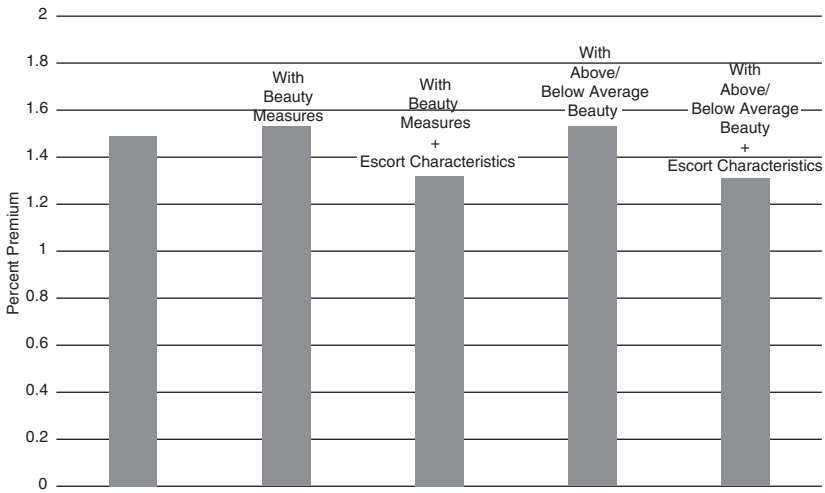


Figure 2.6 The premium to face pictures when beauty is also measured

whom I have beauty scores.⁴² Conditional on posting face pictures, the premium for each additional face picture is 1.5 percent, which is similar to the previous estimates. In the second estimate I include the measure of beauty, and find that while positively correlated with log hourly price, the coefficient is not statistically significant and the effect on the value of face pictures is nonexistent. The main face picture result remains statistically significant and has a magnitude of 1.5 percent. Therefore, even after controlling for escort beauty, the main result remains consistent and statistically significant. I then include all the various control measures, such as race, height, weight, body type, and eye color, and the beauty coefficient, though smaller and still positive, is not statistically significant, and the inclusion of beauty and these individual measures (which could be correlated with beauty) does not significantly change the face picture premium.

Perhaps it is not beauty differences between a “2” and a “5” that matter, however. It could be a case of simply being or not being attractive. The next estimate in Figure 2.6 explores whether returns to beauty may be nonlinear by including a dichotomous indicator for above-average beauty (beauty score equals 4 or 5) and below-average beauty (beauty score equals 1 or 2). Again, neither of the beauty measures is statistically significant, although the point estimates show that above-average beauty is rewarded and below-average beauty is not. Last, I include the above- and below-average beauty measures along with the various control measures for escort characteristics.

Even with all of these controls, the face premium coefficient is still 1.5 percent and statistically significant. It appears that the inclusion of beauty and face pictures has no significant effect on the relationship between face pictures and escort prices.

This relative lack of a relationship between escort beauty and prices is consistent with the literature on the variety of beauty standards in gay and heterosexual communities. For example, Carpenter (2003) has shown differential partnership and attractiveness patterns between gay men and heterosexuals by measures of physical well-being such as body mass index (BMI). Also, there could be premiums in the market for men who would otherwise be considered unattractive if they had other attributes that were valued by the market, such as expertise in specific sexual conduct.⁴³ Overall, the results show that the beauty premium in the market is small – part of this, however, could be due to the fact that the online market involves some self-selection into online male sex work.

Recall that the results in Figure 2.6 show estimates of the effect of face pictures on prices for the men who show their faces in their advertisements. Therefore, there might be selection by beauty into posting – i.e., more beautiful men might be more likely to post face pictures. Ultimately, I cannot rule out this explanation definitively, but I can use the results of Figure 2.6, and the other coefficients in the specifications, to roughly calculate how much beauty could explain the difference between men who do and do not show their face pictures. To estimate the maximum of the proportion of the results that could be due to beauty, assume that all men who do not post their face picture are rated a beauty that is *strictly less* than the *lowest* rated beauty (that men who do not show their faces have a beauty rating of, say, zero, where the lowest beauty rating allowed is one) and that men who do post their faces are rated as the highest beauty score (every man who shows a face picture is a “5”). Even under this implausible assumption, the differences in the beauty premium between the two groups (4.5 percent) could explain, at best, less than one-quarter of the face picture premium (which is 20 percent). Put another way, even the least attractive man is still much better off showing a picture of his face than not, as the “no picture” penalty is more than four times as large as the “unattractive” penalty. This implies that beauty can explain, at best, a small fraction of the estimated face picture premium.

In the data there are also the physical characteristics of the escorts. If more beautiful escorts select into providing face pictures and have different physical characteristics, then a comparison of the distribution of characteristics of escorts who do and do not show face pictures would reveal such

differences. Overall, the results show that along nearly every dimension of physical characteristics, the escorts who provide face pictures are statistically similar to those who do not. Out of more than twenty physical characteristics (e.g., hair color, eye color, body type), there are only three instances where escorts who show their face pictures are significantly different from those that do not: escorts who show their face pictures are more likely to be blond (14 percent versus 10 percent) and have an “athletic/swimmer’s” build (50 percent versus 42 percent); escorts who do not show their faces are *more* likely to be muscular, however (34 percent versus 28 percent).⁴⁴

This issue is also addressed indirectly by considering second-order implications of the interpretation of the face picture premium. Consider that text reviews reveal information about the quality of the escort, but not the escort’s beauty. If the premium to face pictures is due to beauty, then the interaction of face pictures with text reviews should be positive: beauty would be a *complement* to quality as described in the text reviews. If face pictures are a measure of quality, however, the interaction of face pictures and text reviews should be negative, as face pictures are *substitutes* for client descriptions of quality. In essence, this is a test of how the interaction of basic quality and service quality operate. The two should have a negative interaction if face pictures are indeed a signal of quality – but a positive interaction if face pictures are about beauty as opposed to quality. When I include the interaction of face pictures and text reviews in the specification, the interaction is negative in both instances (-0.009 [0.004] and -0.028 [0.031] for number and fraction, respectively). The results do not change when I interact the number or fraction of face pictures with the number of positive text reviews (-0.004 [0.002], -0.009 [0.013] for number and fraction, respectively). I take this as suggestive evidence that face pictures convey similar information about quality text reviews, and therefore are substitutes for quality measures.

If face pictures only conveyed beauty, then the marginal value of additional face pictures would be zero. Otherwise, additional pictures would have value, although, as I argued earlier, that value would decrease with the number of pictures as credibility is established. The results indicate that, on average, additional face pictures come with a 1.5 percent price premium, similar to the estimate in Figure 2.6. The premium I find applies to additional face pictures – two escorts of the same beauty would be paid differently if one supplied one face picture and the other supplied five. This is more consistent with the notion that face pictures establish quality rather than beauty, which can be ascertained from a single picture. Given the

evidence presented above, I believe it is unlikely that the majority of the face picture premium is driven by beauty, although this cannot be established conclusively.

A Counterfactual – Signaling without Informal Enforcement

A key to the interpretation of face pictures as a signal of quality is the belief that informal policing by clients causes the signal that escorts send to be credible. Without the informal enforcement, the value of the signal would certainly be suspect. Additionally, informal policing would have little effect on beauty premiums or true quality in the market, since policing would not be related to escort beauty itself or the claims that escorts make about the quality of their services. Unfortunately, the value of informal enforcement is difficult to test directly. The data does give us one unique instance where I can observe the value of the signal when informal enforcement is lacking. As noted earlier, in the advertisement data escorts can choose whether or not they will allow themselves to be reviewed on the website. Disallowing reviews is all-or-nothing: escorts do not have the option of deleting or selectively posting reviews of either type. An escort who disallows reviews cannot establish a reputation in the data source. The vast majority of escorts (nearly 95 percent) allow themselves to be reviewed. In general the issue is moot since there is little variation.⁴⁵ There is one exception: the escorts in Las Vegas allow themselves to be reviewed only 40 percent of the time. Las Vegas is unique – there is no other city where fewer than 90 percent of the escorts disallow reviews. Of all escorts who disallow reviews, more than 35 percent are located in Las Vegas. It is doubtful that this is a state effect, since escorts in other Nevada cities allow reviews more than 90 percent of the time. While the exact cause of this curiosity is unknown,⁴⁶ I am able to test for the value of the signal in a location with little client policing. As described earlier, client policing allows signaling to be credible, so without client policing, the value of the signal should be negligible.

For comparison, Table 2.2 shows summary statistics for escorts based in Las Vegas and escorts based in five other randomly selected cities with similar numbers of escorts. As the table shows, the cities are all similar in terms of rates and escort attributes such as height and weight. Similarly, escorts in Las Vegas post the same average number of face pictures as those in other cities. In general, the Las Vegas market looks similar to the other markets shown in Table 2.2 and to the overall market, except for the fact that only 40 percent of Las Vegas escorts allow reviews.

Table 2.2 Escort characteristics for selected cities

| | Summary statistics by city | | | | | |
|----------------------|----------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | Las Vegas | Chicago | Atlanta | Houston | Dallas | Boston |
| Observations | 65 | 78 | 76 | 65 | 92 | 54 |
| Review allowed? | 0.40 (0.49) | 0.96 (0.20) | 0.93 (0.26) | 0.98 (0.12) | 0.95 (0.22) | 0.96 (0.19) |
| Price | 227.36 (66.95) | 231.79 (57.20) | 232.74 (86.38) | 209.9 (57.93) | 207.12 (62.65) | 232.13 (51.74) |
| No. of pictures | 6.44 (2.75) | 6.38 (2.57) | 6.52 (2.82) | 6.18 (2.69) | 6.46 (2.77) | 6.24 (2.97) |
| No. of face pictures | 2.80 (2.81) | 2.73 (2.77) | 3.43 (3.04) | 2.41 (3.09) | 2.15 (2.52) | 2.79 (3.42) |
| Age (years) | 28.75 (6.97) | 27.48 (6.02) | 27.33 (6.19) | 26.35 (6.29) | 29.31 (6.91) | 26.7 (5.88) |
| Height (inches) | 70.88 (2.70) | 70.62 (2.95) | 70.56 (2.59) | 70.06 (2.49) | 70.44 (2.67) | 69.76 (2.80) |
| Weight (pounds) | 172.23 (25.02) | 166.59 (30.16) | 166.46 (21.77) | 168.02 (23.48) | 169.41 (24.47) | 165.43 (31.31) |

Standard deviations in parentheses.

In Figure 2.7 I show estimates for the value of face pictures, where I replicate the regressions presented earlier for each city separately. In every other city I find a large and significant premium to face pictures that matches the population estimates discussed earlier. Both the dichotomous and continuous measures of face pictures yield estimates close to the overall values for each city – except Las Vegas.

While the value of signaling is reasonably stable across markets, the results for Las Vegas are striking. In the Las Vegas market there is no premium to posting face pictures in an advertisement. This is not merely an artifact of statistical significance, the point estimates for the value of face pictures in Las Vegas (−0.09 for the dichotomous measure, 0.007 for the continuous measure) are much lower than for every other city in Figure 2.7. In the one location where client policing is stymied by escorts who do not allow client reviews, the credibility of the signal is in doubt and market prices do not respond to the signal. There appear to be spillovers, as well – even among escorts who allow reviews in Las Vegas, the value of face pictures is not statistically significant.⁴⁷ This result conforms to the interpretation of the premium to face pictures in the market. It would be cavalier, however, to suggest that these results for Las Vegas are definitive. Since there is no other location in the data with the same information differences, it is not possible

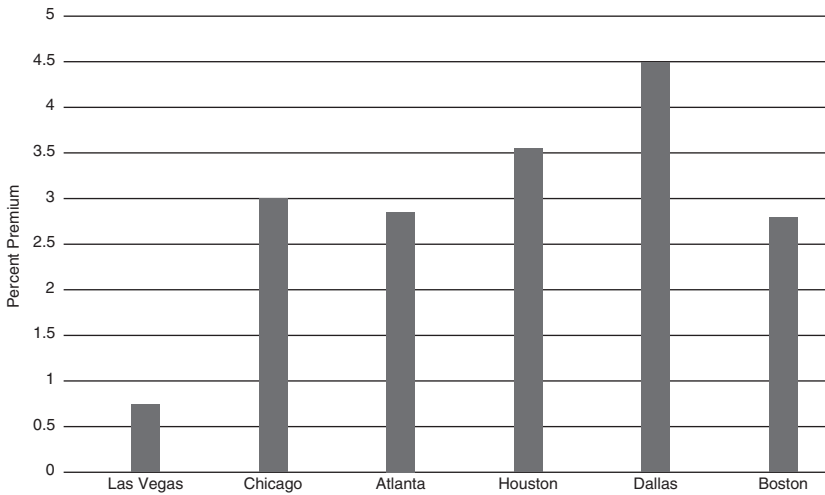


Figure 2.7 The face picture premium by city

to distinguish this effect from a location effect. While there is evidence that clients are aware of the increased probability of encountering low-quality escorts, it is unclear whether the escorts in Las Vegas are aware of the low value of information in their market. These results are inconsistent with either a beauty or true quality interpretation, unless one is willing to argue that escorts in Las Vegas are markedly less attractive than other escorts or are of uniformly different quality than escorts in other cities.

ROBUSTNESS

Prices

Thus far, all of the prices used are the prices in an escort's advertisement. Though the qualitative evidence suggests that the prices posted are the prices paid, it could be that escorts are more willing to price discriminate once they are alone with clients. If this is the case, the empirical strategy will yield biased estimates of the value of the signal. Fortunately, I have spot prices, specific transaction prices recorded by clients from the most recent text reviews of escorts, which I can compare to the prices that escorts post in their advertisements. Additionally, there are a small number of escorts who do not post their price, but have a spot price. As these are prices actually paid by clients in specific appointments, I can check the results with these prices.

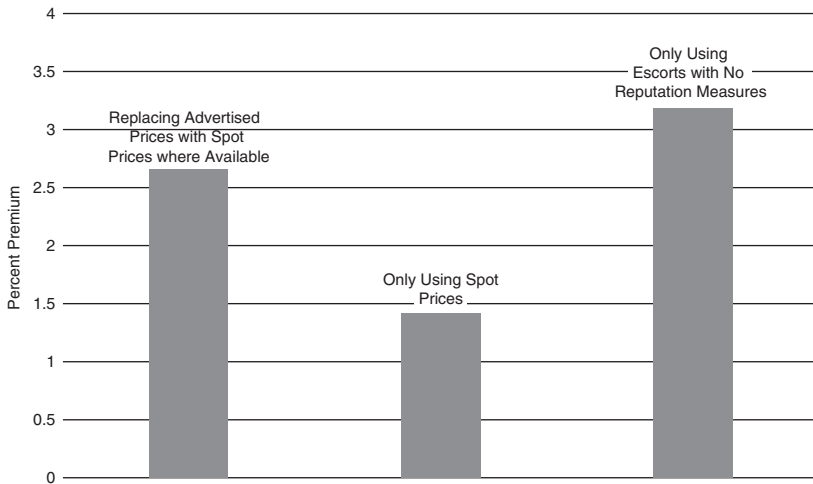


Figure 2.8 The face picture premium for selected types of escorts

Spot prices are well correlated with posted prices (the correlation is 0.89). Even so, I check the results with spot prices in two ways. First, I replace existing prices with spot prices where available. These results are reported in Figure 2.8. Even when actual prices paid replace advertised prices, this does not alter the results. As a more stringent test, I use only spot prices. Using only spot prices as the dependent variable reduces the size of the sample, but I still find that each face picture yields a premium of nearly 1.5 percent. The premium to each face picture is slightly smaller and may be due to the fact that the variation in the number of face pictures is much smaller for men with text reviews.

Another potential concern with the results is that they could be driven jointly by reputation and information. Although I have included measures of reputation in all of the specifications, it could be that men supply higher-quality information once their reputation is established, rather than the reverse. If the market is dominated by clients returning to the same escorts with whom they have had a good first encounter, that will drive the results.

I test for this reverse determination by looking at escorts who have no reputation to speak of; they have neither survey reviews nor text reviews. These could be new escorts in the market or old escorts who are abandoning an older profile. On the one hand, escorts with no reputation are unknown and could be more likely to signal against type. On the other hand, the only information a client can use to determine

the quality of these escorts is the information conveyed in their advertisement, so the signal may be particularly valuable for these escorts. In either case, those with no reputation can only disclose their type through the information in their advertisement – they have no reputation to exploit.

In Figure 2.8 I show the value of face pictures from the same type of regression for all escorts, where I regress price on the usual set of covariates for escorts with no reputation. The results show that face pictures matter *more* for escorts with no reputation. The premium to the presence of face pictures is more than 3 percent. This premium is slightly higher than the premium estimated for escorts overall. Therefore, it seems that when escorts do not have an established reputation, signaling may be even more important.

Selection

Escorts do not have to post their prices in their advertisements, although well over 85 percent of the men in the data do. For example, an escort can list that he provides a given service (incall or outcall), but may not post the price for that service. The results could overstate the effects of information if there is selection into posting prices that varies with the information content of the advertisement, which could lead to selection in either direction. It could be that escorts who post more pictures or more face pictures are more likely to post their prices since they have signaled their quality.

These types of arguments could be extended to the reservation wages of escorts who do or do not provide a certain set of information to the market, which itself could alter the estimate of the returns to signaling quality in the market. To test whether the number or type of pictures has any impact on the decision to post prices, I estimated a model where the outcome is whether the escort posts prices. If there is a difference in the likelihood of posting prices based on the presence of face pictures then this would need to be taken into account. The results of these regressions show that the number of pictures, the presence of face and body pictures, and the number of face and body pictures do not significantly predict the decision to post prices or not. This holds when I consider a number of alternative specifications and when I include or exclude additional controls. I take this as evidence that the decision to post prices is not influenced by the other information in the advertisement itself.

CONCLUSION

Male sex workers are unique in illegal markets: they price independently and without intermediaries, they use a rich information environment to solicit clients, and their large number creates a competitive setting where we expect markets to function as if the assumptions of neoclassical economic theory held. Unfortunately, two of those assumptions are that the underlying transaction is legal and that buyers and sellers have similar information. Since formal institutional enforcement is nonexistent, the market could be plagued with adverse selection. Before moving to more systematic analysis of the market, it is important to establish that this market functions well and reacts to information in a manner that suggests that it gets prices right. The illegal nature of online male sex work makes it theoretically unlikely that this market would be well functioning, however. Unlike street sex work, online sex work does not involve a face-to-face negotiation where reputations and personal interactions allow the market to work. Buyers are, in essence, purchasing on faith. This faith would be in short supply if all that clients had to go on were the “word” of a sex worker with whom they had never dealt with. To overcome this problem, buyers have developed a unique solution where they require a specific type of information, face pictures, from male sex workers, which they interpret as a signal of escort trustworthiness.

I find that escorts do convey a great deal of information through their advertisements and that the market rewards this information. Empirically, the reward to face pictures is substantial; it is the driving force behind the premium to information in this market. Not only do I find a sizable information premium in this market, but the magnitude is similar to the premium seen in legal markets. Sex workers who signal their credibility via face pictures earn roughly \$10,000 more per year than those who do not. Overall, the result is consistent with a market that functions well despite its illegal nature.

It is important to note some caveats to these results. First, although it would be tempting to argue that the results show that informal institutions such as client-policing are close substitutes for formal institutions such as courts, it could well be true that the premium to information I observe is due entirely to the complementary effects of informal institutions. Even in markets with formal contracts and enforcement, the types of forums created by the clients of male sex workers are common (e.g., *AngiesList.com*). As I documented, client communication dramatically raises the costs of deception because detection is likely. A dishonest escort may swindle

one or two clients, but the possibility of doing so frequently is unlikely. Informal policing is critical to this market. Indeed, without the extensive policing by clients it would have been impossible to identify the signal used by escorts.

Second, although the market does respond positively to information here, it is not necessarily true that the response is of the correct size. For example, the face pictures may be a weak signal to which the market over-responds because there is little additional information to go on. In such a case, the returns to showing a face picture would be larger than the actual value of information it provides. For example, while showing a face picture may increase the likelihood of encountering a high quality escort, it may not increase the likelihood enough to justify the significant price premium. While the theoretical predictions held that the market would not respond to information, client demand could be such that the market responds too much to the relatively sparse information contained in face pictures.

The relationship between formal and informal institutions is inherently complex. I can say little about their interaction, since formal institutions play no role here. More empirical research is needed on the interaction of formal and informal institutions to estimate the degree of substitutability or complementarity between the two. While the results do not address how much the premium to signaling would change if there were formal enforcement in this market, this market shows that rich information environments alone allow escorts and clients to overcome the problems of asymmetric information.

The male sex market functions well despite its illegal nature. While it is easy to see that face-to-face interactions would minimize fraudulent activity, the analysis of the market for male sex work shows that even in online settings illegal markets can function well. The information that one would naturally seek out in face-to-face transactions is substituted with face pictures in the online market for male sex work. The fact that near-anonymous encounters between sex workers and clients takes place in a market where signals of both basic and service quality are well-correlated with prices suggests that the market for male sex work is, in fact, well developed.