

## CREATING A FUTURES MARKET FOR MAJOR EVENT TICKETS: PROBLEMS AND PROSPECTS

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In a 1995 article in this journal, we discussed the legal, economic, and ethical concerns in trying to prevent “free-market” ticket scalping.<sup>1</sup> Since the time that article appeared, the Internet has become a source of information as well as a business and contract formation tool. Knowledge, products, and negotiations move in far more efficient manners because of the facilitation of inexpensive communication and interaction via the Internet. Major event tickets—those that attract national audiences such as the NFL’s Super Bowl, the PGA’s Masters, the NCAA Final Four, or even a Bruce Springsteen concert—are traded openly on eBay and other Websites.

Yet, despite the vast amount of personal wealth in the United States and the relative ease with which consumers can travel to any event site in the country, the availability of this new technology that facilitates national and international exchanges of price information and tickets has not created a nationally organized futures market for major event tickets. This paper explores this “market failure” and considers the likelihood of correcting it. The first section examines the character of tickets, exploring their nature as call options. The following section looks at the ticket resale statutes of 50 states along with various municipal statutes and describes the current legal environment surrounding ticket sales. The third section considers the different distribution channels open to potential consumers of major ticket events. The fourth section reviews recent microeconomic studies of event pricing and ticket scalping that have appeared since the time of our previous article. The final section explores the reasons

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<sup>1</sup>Various magazine and newspaper columnists have concurred. For instance, Seligman (1999), in listing the 10 dumbest ideas of the 20th century, writes, “We are smart enough to send men to the moon, yet we still have laws against ticket scalping.”

that the major entertainment event ticket market remains fragmented and examines whether a nationally organized national market will emerge in the near future.

## Major Event Tickets as Call Options

For major events held in stadiums, arenas, amphitheaters, or concert halls with limited seating capacity, tickets are normally put on sale weeks or months in advance. They are initially sold at a printed face value (plus, at times, an allowable service charge). The usual explanation for a printed face value is a preassigned value for purposes of possible refunds despite the reality that refunds from event organizers are quite rare. In fact, event tickets often indicate on their faces that (1) they are a revocable license; (2) admission may be refused; (3) promoters and organizers are not responsible for lost tickets; and (4) the stated face value may only be repaid under certain conditions with some tickets actually having NO REFUND printed on the front. Given the lack of administrative purpose, the real reason for a printed face value is perhaps the same as the reason for placing a par value on a common stock or option—the face value is simply a starting point that provides a legal measure of what is “fair” or “equitable.”

Tickets to major events share other characteristics with call options. Because event sponsors do not typically require identification to enter the event, the tickets become bearer instruments once they are sold. Like a call option, the holder has the right, but not the obligation, to occupy (or call in) a certain seat over a certain period of time.

If tickets as traded today are essentially call options, then it would follow that such bearer instruments of value could be exchanged, just like stock options, in a nationally organized futures market. Likewise, ticket markets could have standard rules of order and trading behavior that are specified for licensed brokers. In such a market, the NFL could, for example, take the seats designated for the “general public” for the Super Bowl and have a public offering the day after this year’s Super Bowl using the tools, access, and customers of the national exchange. Bid/ask prices could be posted every trading day until the following Super Bowl. As the game approaches and the two teams are chosen, those fans entitled to team-based tickets could bring those tickets into the market and also trade them openly on the national exchange. A similar approach could be taken for NCAA Final Four

tickets, major concert tours by high-demand artists, or for that matter the Masters golf tournament.<sup>2</sup>

The creation of such a market is, however, dependent on a number of factors. First, the laws of each state must permit such sales and resales of tickets. The patchwork quilt of regulations demonstrates how difficult uniformity of approval for a national futures market would be. Second, there is the possibility that the market dynamics and value of major event tickets could change with the ease of access. While the comparison to call options and the futures market is logical and major event tickets meet the definition of bearer commodities in a high-demand market, the actual market for tickets and ticket resales has unique psychology and composition that can affect traditional economic solutions with a free market.

### U.S. Ticket-Scalping Statutes

There are no federal laws imposing national restrictions or rules on ticket scalping. In 1998, Congressman Gary Ackerman (D-NY) tried to introduce the Ticket Scalping Reduction Act, which, if passed, would have prohibited the sale of five or more tickets in a single transaction at a markup in excess of \$5.00 or 10 percent of the printed face value (whichever is greater). In a rare example of collective economic intelligence on both sides of the congressional aisle, no cosponsors came forward and hearings were never held on the Ackerman bill.

Presently, 20 states have no statutes regulating the resale of entertainment tickets, 3 have only minor location restrictions, and 5 have enabling statutes that confer regulatory authority over the issue to local governments.<sup>3</sup> Within these so-called “open” states, major municipalities including Anaheim, Ann Arbor, Cincinnati, Cleveland, Dallas, Denver, Las Vegas, Madison, Milwaukee, Richmond, Roanoke, Seattle, and Virginia Beach have enacted ordinances restricting the resale of tickets in some manner.

Strikingly, “the land of the free and the home of the brave” has 22 states that continue to adhere to legal price controls. Those price controls take on various forms such as mandating allowable markups on all entertainment tickets (12 states), outlawing scalping for particular events (8 states), or restricting profitable resale to a limited

<sup>2</sup>In May, 2001, the Salt Lake Organizing Committee for the upcoming Olympic Winter Games took the first positive step in this direction by conducting an Internet ticket auction for the Winter Game’s most popular events such as figure skating, hockey, and ski jumping.

<sup>3</sup>A listing of state statutes on ticket resale is available from the authors upon request.

segment or segments of the public, such as sales by licensed brokers (2 states). New York State, the very epicenter of financial markets, presently has one of the strictest anti-scalping regulatory schemes in the country (New York has regulated resale prices of tickets since 1822). In 2001, New York made it illegal for any person, firm, or corporation to resell a ticket for more than \$5.00 or 20 percent above face value, whichever is greater (from 1984 to 2001 the markup was \$5.00 or 10 percent, and prior to that, \$2.00 a ticket). Resale of tickets is prohibited within 1,000 feet of a place of entertainment having a permanent seating capacity of 5,000 persons and ticket brokers must be licensed. Lastly, the practice of “ice” (insider trading where box office employees channel tickets to brokers and scalpers for a fee) was changed from a misdemeanor to a felony in 2001.

These statutes will be revisited in June 2003, due to sunset provisions. The attorney general of New York, Eliot L. Spitzer, indicated in the *New York Times* that if the problem of brokers illegally obtaining large blocks of tickets could be eliminated, his office would consider supporting the removal of price restrictions on ticket resales and going to a free market (Tierney 2000: B1) Laissez-faire advocates can only hope that New Yorkers finally see the light after 80 years of price restrictions.

Our previous work differentiated “first-generation” scalping laws, those representing the early wave of ticket regulation that attempted to curb the relatively confined activities of on-site scalpers, from “second-generation” laws, those that were part of the next wave of the regulatory trends that recognized the segmented markets in secondary ticket sales. The second generation of anti-scalping statutes carefully segmented street scalpers from ticket agents/brokers. Many of these “second-generation” laws remain in effect because of the support from the public on the emotional aspects of controlling what is perceived to be pushy and price-gouging scalpers.

Throughout the past decade, the law review literature (e.g., Rabe 1991, Zankel 1992, Criscuolo 1995, Kandel and Block 1997, Gibbs 2000) has uniformly called for more extensive ticket market legislation to protect the public from extortion and control of the market by sellers. Some of the specific problems cited with street scalping include: creation or aggravation of traffic congestion, drug dealing, fraudulent sales of bogus tickets, and misrepresentation of seat locations. The articles also approach the issue from the egalitarian argument of ensuring public access to entertainment and sports events as well as the generic arguments on public welfare. Uniformly, those writing in the field support the rights of promoters, owners, and artists to decide on both pricing and distribution mechanisms.

There is little variation in the analysis from the perspective of legal scholars: consumers of major event tickets are “innocents,” and brokers and scalpers are “evil manipulators.” This perspective had been carried through to the regulations, statutes, and ordinances of both generations of laws. No state or local statutes impose fines or jail sentences on the buyers of tickets, only on the sellers. Illinois even provides a civil remedy for a ticket purchaser who purchases a ticket at an “overcharge” price: “Whoever feels himself aggrieved or injured by paying for such tickets in excess of the advertised price or printed rate has a right to recover for each ticket for which an overcharge was made contrary to the provisions for the act, a sum of \$100.00.”

While the second generation laws and ordinances continued their popularity in adoption and enforcement, there was one notable exception to heavy-handed regulatory controls of on-site ticket scalping on event days. In 1995, the Phoenix City Council held open hearings on the issue of on-site scalping to explore alternatives to regulation. Following the hearings, the council passed an ordinance that herded all street scalpers into one location in the city, an empty lot across from the main entrance to the Phoenix Suns arena. Used first for the NBA All-Star Game that year, under the terms of this ordinance, anyone could sell tickets at any price within the designated location with no license required.

The ordinance remains in effect because it addresses problems that are the focus of the legal literature. Since those selling tickets are in one location, street congestion caused by consumers searching for tickets sellers is avoided, fans are not hassled on the way to the game, and the area is easy to police. The Phoenix experiment also has shown that *long-standing* street scalpers do not knowingly trade in counterfeit or stolen tickets and report any such activity to the police. The Phoenix free-market alternative not only created a competitive pricing atmosphere, it overcame nuisance effects. It functioned well during the 2001 World Series, with ticket buyers witnessing declining prices as game times neared.

### Consumers Acquiring Tickets and the Extent of the Primary and Secondary Markets

For those who wish to attend a major entertainment event, a series of options exist for acquiring tickets. One is to simply go to the official (team) box office, stand in line, and then pay the printed face value (plus taxes) for tickets. A slight modification of this option is available

when the “box office” allows phone-in or e-mail orders that are subsequently picked up at the will-call window.<sup>4</sup>

For some events (e.g., the Super Bowl or the NCAA Final Four) no “box office” exists prior to the event. Instead, the general public plays the odds by submitting names for the possible award of tickets. A small number of names are randomly chosen and the winners are permitted to buy tickets for such events at face value. A random system is also used when local radio stations stage promotional giveaways that offer consumers the opportunity to win tickets through a game or drawing.

Another option for consumers is to purchase tickets from an officially designated ticket agent. The largest such ticket agent in the United States is Ticketmaster, with Tickets.com a distant rival. Agents sell tickets through retail outlets, by telephone, or through secure online sites, adding a service fee (roughly \$4.50 per ticket for an inventory that carries an average ticket face value of \$33.00) for their role in matching consumers to events. According to the Kelsey Group (1999), Ticketmaster represents 94 of the 118 professional teams in baseball, basketball, football, and hockey, and has 4,300 exclusive worldwide relationships with local event venues and promoters, while Tickets.com claims 4,000 such relationships. Ticketmaster’s ticket revenues in 1998 were \$316 million (\$70 million of which were online sales), with Tickets.com’s revenues in 1998 being \$29.8 million (\$5.3 online sales). Ticketmaster Group accounted for 16 percent of all tickets sold in 1998.

The forgoing options constitute the primary ticket market for sporting and entertainment events. Using data from *U.S. Statistical Abstracts*, *Variety*, *Newsday*, *Amusement Business*, *Team Marketing Report*, and the League of American Theaters and Productions, TicketAmerica (1998) derived an estimate of \$7.2 billion spent through primary ticket channels in 1997. The Kelsey Group (1999) gives estimates and forecasts of total ticket sales from 1999 to 2004 as \$14.5 billion, \$16.25 billion, \$18.1 billion, \$19.9 billion, \$21.9 billion, and \$24.4 billion, respectively. LiquidSeats (2001) estimates the face value of all tickets sold in the United States for live events and attractions in 1999 to be \$16.7 billion. In contrast, TickAuction.com (2000) finds the primary ticket market to be over \$41 billion in 2002, and EventTixx finds the “Tier 1 Event Marketplace” (major league

<sup>4</sup>The A-List music acts (e.g., Madonna, NSync, the Backstreet Boys, and Aerosmith) are increasingly selling concert tickets on the Web in advance—conducting presales—largely to members of online fan clubs or subscribers to Internet-access services like MSN and America Online (Peers and Mathews 2001).

sports, college football and basketball, concerts, Broadway theater, select golf and tennis tournaments, etc.) to have ticket sales in excess of \$60 billion in 2000. The disparity among the estimates is best explained by the fact that they encompass different segments of the entertainment industry. However, all the estimates establish that the size of the primary ticket market is massive.

Because entertainment event tickets are sold in advance, a secondary (resale) market naturally develops. Sellers in this market include relatives, friends, business acquaintances, travel agents, tour group operators, concierges, auctioneers on the Internet, brokers, and scalpers.

Estimates for the number of recognized U.S. ticket brokers range from 800 (EventTixx 2000) to over 1,000 (LiquidSeats 2001). These brokers typically serve only a single metropolitan area or geographic area. The broker industry is highly fragmented, comprised primarily of small businesses that, on average, have 10 to 15 employees and annual sales revenues of \$3 to 4 million. No single broker controls more than 1 percent of the secondary market (EventTixx 2000). Tickets are acquired through every legal means possible (standing in line, hiring others to stand in line, staging mass telephone calls and e-mails for soliciting tickets, making special arrangements with season ticket holders or players and artists, infiltrating fan clubs, and trading with other brokers). Some 25 to 40 percent of all broker ticket sales involve “try and get” tickets, advance sales not in current inventory that must be secured (often from other brokers). Approximately 50 percent of all brokers have a Web site and 95 percent of them default to a model that has them advertising tickets on a “by-area” basis for specific events.

TicketAmerica (1998), using its primary market estimate of \$7.2 billion for 1997, assumes that brokers resell 10 percent of the primary market and double their prices, which leads to an estimate of \$1.4 billion for the secondary broker market. Similarly, EventTixx (2000) believes that brokers currently have a \$2 to 3 billion slice of the \$60 billion “Tier 1 Event Marketplace.” However, LiquidSeats (2001), using a larger estimate of the primary market and assuming that brokers resell some 20 to 30 percent of the top-tiered seats and then employ a 50 percent mark-up, estimates the secondary market to be in the \$10–14 billion range in 2000.

Because the ticket broker market is not an integrated one, TicketAmerica attempted to fill the void in 1998 by undertaking efforts to organize brokers into a national exchange. Founded by individuals with extensive experience in both business-to-business and retail electronic transaction processing and the ticket brokerage in-

dustry itself, TicketAmerica worked with trade groups like the East Coast Ticket Brokers Association and the National Association of Ticket Brokers to link brokers around the country in the “first vertically integrated portal for reselling premium tickets for high demand sports and entertainment events.” TicketAmerica’s goal was to be the primary Internet retailer, making an inventory of the best seats available to the general public at the click of a mouse. In addition, TicketAmerica hoped to be the first Application Service Provider for the ticket broker community, offering the independent ticket brokers a fully integrated e-business solution site. Yet even though “few brokers have the infrastructure necessary to efficiently run their own business and none have the ability to make the infrastructure investment required to “organize” the market,” TicketAmerica did not succeed.<sup>5</sup> The same is true for TickAuction.com, another venture to create a broker-to-broker network in the late 1990s. Trying to organize the fiercely independent group of ticket brokers is like herding cats.

The secondary market also has offered the Internet as a direct option for consumers. The overwhelming consensus among those analyzing and consulting for the event ticket market is that online sales will continue to skyrocket. EventTixx (2000) reports that the number of Ticketmaster tickets sold on the Web relative to traditional retail and telesales channels had grown from less than .1 percent in 1996 to 24.8 percent by the 2nd quarter of 2000; and Ticketmaster now faces increasing competition from niche players, such as Culture.Finder.com, that sell tickets online for smaller events. The Kelsey Group (1999) projects that the share of total U.S. ticket sales revenues that occur online will increase from 2 percent in 1999 to 17.5 percent in 2004. LiquidSeats (2001) anticipates that online sales of event tickets will grow at a 58 percent compound annual growth through 2006.

While 50 percent of ticket brokers in the secondary market have Web sites offering seats, few are doing significant ticket sales via e-commerce. In aggregate, LiquidSeats (2001) estimates that the Internet accounted for less than 4 percent of secondary market sales in 2000. Buyers in the secondary market are not going to brokers online. Instead, they are heading to auction sites.

Local newspaper, radio, and television station Web sites provide ticket buyers and sellers direct access to trade through an auction format. Tickets.com and OpenSeats.com, attempting to be full service providers, provide auction service as well. eBay has recently expanded its offerings to include major event tickets. While event ticket busi-

<sup>5</sup>Quotes are from TicketAmerica’s prospectus.



ness remains a small percentage of total auction sales, its sports-tickets auctions grew 200 percent from July 2000 to March 2001 (Walker 2001). Accordingly, the company is anticipating very strong growth over the coming decade.

The secondary Internet market underwent radical change starting in 1999. Firms with highly refined software packages approached major sports teams and event promoters with an offer to resell (season) tickets at designated Web sites. In exchange, the owners or promoters would receive a set fee. While SeasonTickets.com and LiquidSeats were in business before June 2000, what captured national attention was the San Francisco Giants Double Play Ticket Window rolled out that month (*Sports Illustrated* 2000).

The way it works is that a season ticket holder logs onto the official Giants Web site and sets a fixed price for excess seats (here the price had to be above face value because the Giants did not want to alienate other season ticket holders by underselling tickets). After fans buy the tickets, they are picked up at the will-call window at the stadium, thereby avoiding delivery and counterfeit problems. The Giants, through their licensed agent, receive a fee of 10 percent from both the seller and the buyer, getting revenues that would otherwise go to brokers and scalpers.

SeasonTickets.com, currently the biggest player in this type of trading, and LiquidSeats operate in a similar fashion with their clients, the only difference being that their Web site prices are not necessarily set above face value. TicketMaster entered this market in January 2002 and expects significant revenues through strategic partnerships.

Going a step further is Global eTicket Exchange. GEE proposes to conduct IPO-like auctions for tickets in the primary market rather than selling tickets at face value. All tickets are electronic, whereby the buyer uses a special device (e.g., a smart card) to enter the event, so tickets are no longer general bearer instruments that can be readily traded after the initial purchase. Instead, if the buyer wants to resell the ticket, it must be done through GEE's secondary market Web site, thus pushing aside brokers and scalpers. GEE also proposes to increase concession and team-shop sales by providing detailed spending profiles of its ticket buyers and formulating integrated pricing strategies and promotions. At the time this article was written, GEE had not raised the requisite capital for startup, but it had submitted six business pricing processes to the U.S. Patent Office.

Finally, for those buyers who do not have the need to purchase tickets days, weeks, or months in advance, or who decide at the last minute to attend, there is the original secondary market of street scalpers who operate near the stadium or concert hall on event day.

Without this secondary market timed to coincide with the event, consumer options will remain restricted. The market for these types of events does not deepen until just before the event, and on-site trading facilitates clearing of the market at its peak.

## Pricing Issues

A distinguishing characteristic of the major entertainment industry until recently has been a lack of extensive price discrimination. While symphony and opera houses often have 25 or more different ticket prices depending upon seat location and quality of the event, major rock concerts may have only two or three ticket prices. Indeed, when the Rolling Stones tour the United States, the same printed face value is charged in all venues for all seats. Similarly, major sports leagues have rules that for a given seat, the same price (printed face value) is normally charged for each game over the season regardless of the quality of the opponent. Four microeconomic explanations are possible for the lack of price discrimination at major events.

The first explanation is that symphony and opera producers understand the preferences and economic characteristics of their fan bases far more completely than major league sports teams or national performance artists whose fan base consists of thousands of potential fans who span all socioeconomic groups. Symphony and opera producers are able to capitalize on well-recognized differing elasticities of demand for alternative seat locations in their venues.

A second explanation for the lack of price discrimination is the possibility that for events like the Super Bowl or Bruce Springsteen concerts, most potential attendees place a much greater value on getting into the event than on occupying a particular seat. Tickets for these concerts are perceived to be relatively homogeneous goods by much of the concert-buying public. In opera, seeing the emotion on the face of a singer may be important and a seat that permits that close examination is worth more. At football games and rock concerts, large screens visible from all seats in the arena permit such close examination. Further, the magnitude of the sound experience may make a seat's location irrelevant. The same cannot be said about the experience of hearing a tenor or soprano. Sensory differences, differences among customer bases, and the nature of these events preclude extensive price discrimination.

A third explanation is that complementary concession sales at the event are much more lucrative for major sporting events and concerts than for symphonies and operas. General admission seats are priced uniformly low as a loss leader in order to attract a sell-out crowd that

will produce concession revenue that the promoter is able to predict with accuracy in advance of pricing tickets for the concerts. The large sums expended by attendees at the concession stands are characteristic of sporting and concert events, but not operas.

A final explanation is that certain artists such as U-2, Pearl Jam, and Garth Brooks assuage their fan bases with the notion of charging a “fair” price for their concert tickets. Billy Joel and Bruce Springsteen have stated that they keep their ticket prices low because their “true fans” are important to them. Such pricing stances are an attraction to an event in and of itself; indeed, dedication to low ticket prices completes the aura of “blue collar” some of these artists have cultivated. If such artists scale the house, they risk creating a public perception as price gougers, thereby hurting their reputations and long-run box office sales.

Regardless of the specific explanations for not scaling the house in the past, the primary market appears poised to make a sharp change. The slowing economy, increased competition for the public’s entertainment dollar, and better information will allow promoters to engage in a more cautious but thorough form of price discrimination.

In recent microeconomic literature on pricing, Steven Landsburg’s 1993 insightful piece, “Why Popcorn Costs More at the Movies and Why the Obvious Answer Is Wrong”, has important implications for sports owners, artists, and promoters. Landsburg’s fundamental theme is that owners and promoters are selling a package that encompasses the ticket to enter and the complementary purchases that take place at the movie.

Suppose consumers, broadly speaking, have some total amount in mind that they are willing to pay for the package deal of ticket and complementary items. Profit-maximizing sellers are going to think first about attracting those consumers who are willing to pay the most for the overall package. Promoters and producers are going to try to discover the prices different customers will pay.

When a consumer chooses to watch a movie and buy a box of popcorn, assume that he or she is indifferent to paying \$7 for the admission ticket and \$1 for the popcorn or \$5 for the ticket and \$3 for the popcorn. While the consumer may be indifferent, the seller or theater owner is not. The cheap popcorn attracts popcorn lovers and makes them pay a higher price at the door. But to take advantage of this, movie prices may become so high they drive away nonsnackers who come only to see the movie.

In contrast, expensive (\$3) popcorn allows sellers to extract different total sums from different customers. Popcorn lovers, by having more fun at the movies, are ultimately charged more in total than

nonsnackers. Indeed, as Landsburg notes, “expensive popcorn makes sense *only* if popcorn lovers are really willing to pay more than other people for their evenings at the theater.”

Extending the argument to major entertainment events, those consumers sitting in particularly good seats may appear to be buying the seats at a price below market value, but they spend so much on concessions that total profits are maximized. Relative ticket prices do not decline markedly for the lower quality seats because the pure watchers (nonsnackers) are attracted to the event. For the very worst seats, those that would often go unused at “standard” prices, sellers may practically give them away as part of a marketing tool because some of the consumers of lower quality seats will purchase the relatively expensive snacks. Owners and promoters who have achieved a delicate balance between ticket prices and concession prices across groups with different elasticities are loathe to make any changes that upset their complex pricing equilibrium.

In 1994, DeSerpa took the property rights of ticket holders explicitly into account in examining the pricing decisions by sellers, the nature and extent of product differentiation, and the relative importance of audience participation in major events. For professional sports leagues, he found that team anticipation of a high number of sellouts, combined with unexplained variance in the markets of specific games, gives rise to a relatively simple solution to promote season ticket sales and a strong secondary market. Assuming a perfect resale market, the rational seller can apply the same pricing structure to all games: relatively low-demand games will be overpriced and relatively high-demand ones will be underpriced.

However, in the absence of a strong resale market (due to anti-scalping legislation), teams may attempt to anticipate price fluctuations and charge different prices for each game. Even if such a pricing approach were feasible and inexpensive, adverse fan reaction would likely make the gains small compared to uniform pricing. If sellers instead try to maximize expected revenue relative to a uniform price constraint, season tickets must be discounted because those unable to attend would, at best, recoup what they paid and, at worst, be left with an unused ticket for the events they cannot attend.

For the playoffs, sellers do not “exploit” their season ticket holders by charging very high market-clearing prices because, if they did, they would sell far fewer season tickets thereafter. Season-ticket priority rights would become worthless. As DeSerpa (1994: 513) notes, “If the seller does not charge the static monopoly price and buyers ‘knew’ (or expected) that he would not, the payoff ‘windfall’ is already internalized into the price of the season ticket.”

Turning to concert tickets, DeSerpa (1994: 515) points out that one-time concerts are the archetype “mob good” wherein audience reactions and participation are consumed jointly with the performance itself. He argues that the appropriate theoretical analogy is the set of externalities created by a club in which individual members consume the characteristics of other members. Sellers can put a price tag on one part of the transaction, but not on the other. Thus, highest-demand buyers in terms of money price are not typically the “best audience,” and the result of excess demand is a change in the expected audience reaction (the noise level) by expanding the “population” from which the actual audience is drawn. By allowing relatively low-demand, raucous buyers a chance of admission, demand prices increase for all potential buyers, with the maximum price reflecting a balance of “the various continuums of economic forces” (DeSerpa 1994: 517).

The econometric work by Williams (1994) on the economic impact of anti-ticket scalping laws on ticket prices across the National Football League (NFL) is also instructive in understanding event pricing. Individual teams price their tickets according to competition (what other entertainment events in the area and other NFL teams are charging combined with what is perceived to be the entertainment value of the players being fielded).

The dependent variable in the NFL ticket-pricing equation is the average 1992 season ticket price for each NFL team. Concession-pricing issues are ignored. The independent variables in the regression equation include team-specific variables (average player salary, team quality as measured by recent conference standings and Super Bowl performances, stadium capacity) and economic variables (population of a team’s market, per capita income in the market, whether two NFL teams play in the same market). Dummy variables are used to divide the sample into cities with relatively vigorous anti-scalping laws and those with relatively weak or nonexistent laws.

Anti-scalping laws are found to affect pricing. When fans can freely and easily resell their tickets, NFL teams charge higher prices. Williams’ explanation for this finding is that legal scalping provides the team whose tickets are resold an active secondary market with better information about market-clearing prices. Indeed, the secondary market in those team locations provides a dollar measure for the magnitude of underpricing. Looking strictly at cross-sectional season ticket prices, Williams concludes that if NFL owners followed their economic self-interests, they would vigorously oppose any laws that prevented or interfered with the scalping of tickets above face value.

Marburger (1997), like Landsburg, starts with concessions as complementary products to the actual product of performance goods like movies or sporting events. Because the number of available seats is fixed, the variable costs associated with the number of tickets are assumed to be virtually nil. These factors suggest a standard model of rent in which the profit-maximizing price is the revenue-maximizing price at unitary elasticity. However, because a ticket buyer gains access to both the performance and the concessions, tickets are priced below unitary elasticity in the inelastic region to increase the number of concession patrons. This conclusion provides a theoretical foundation for empirical studies in the 1970s, 80s, and 90s cited by Marburger that produce point elasticity estimates in the inelastic range.

Rosen and Rosenfield (1997) use the theory of classes-of-service price discrimination to analyze some commonly observed practices of ticket sellers under conditions of deterministic demand. Their work illustrates how catering to any subset of customer tastes in one class constrains the revenues that can be extracted from groups in other classes. While discriminatory price differentials separate buyers into somewhat homogeneous groups, substitution opportunities in other classes invariably limit the surplus that can be extracted from them.

The model employed assumes sellers offer two kinds of seats, high-quality and low-quality, and then subsequently choose the number of seats, the quality of each class, a pricing policy for complementary goods sold on the promises to ticket holders, along with the prices of tickets themselves. All customers prefer the high-quality seats, but their willingness to pay varies. Sellers know the frequency of demand prices distributed over the population but cannot identify the specific tastes of individual buyers. They also know how the reservation-price distribution changes as seat quality and the prices of complementary goods vary. Finally, sellers are assumed to be extremely selfish and do not wish to allow others to gain financially from the resale of tickets, thereby precluding secondary markets.

The pricing problem in this model is solved in two steps. First, given the quantities and qualities of the two seat classes and the price of complements, sellers choose ticket prices to maximize revenue. Second, given the optimal pricing policy, sellers decide on the quantity and quality of seats and on the price of complements. The conclusion is that the joint distribution of reservation prices for different quality categories is an important determinant of an optimal price schedule.

For example, discrimination is greater in high-quality than low-quality categories when the marginal variance of demand prices is

greater for the high-quality category. Similarly, theater-size constraints require repeated production, a kind of “batch processing” of audiences of given size until all demand is served. Class of service broadly corresponds to rank in the intertemporal queue: attending earlier performances is high quality and later performances is low quality. Prices decline over time to sort customers by tastes, with sellers finding more ardent customers buying earlier if prices are declining slowly enough to keep them from waiting but quickly enough to keep ardent buyers from purchasing too early. In a sense, customers with the most intense preferences for the service are the most “exploited,” as measured by price-cost margins. Ticket prices are lowered and complement prices are set above marginal costs when the average customer buys more complements than the marginal customer.

Leslie (1999), relying upon the Broadway play *Seven Guitars*, formulates a model that includes both second- and third-degree price discrimination to analyze the welfare implications of such behavior. The marginal cost of every ticket sold for a given performance is assumed to be effectively zero, and capacity constraints are not a binding issue. The goal of the firm is simply then to maximize revenues from ticket sales. Moreover, because there are no subscriptions, concerns about ticket bundling for series of different shows are precluded.

Distinctions are made between full-price sales (those for a specific area of seating ranging from orchestra to standing room) and discount sales (those available only to individuals receiving coupons in the mail or at given restaurant locations) that result in relatively high-quality seats being purchased. Consumers must physically present themselves on the day of the performance at the discount booth to obtain a discount ticket, and the number of such tickets made available at the booth varies day by day and is inversely related to the demand for tickets in the other categories.

Among Leslie’s findings, the observed price discriminations may improve the firm’s profit by approximately 5 percent compared to uniform pricing, while the difference for aggregate consumer welfare is negligible. Also, the gain from price discrimination depends significantly on the magnitude of the discount offered at the booth on the day of the performance. And in the face of capacity constraints for each of the different seat-quality regions within the theater, high demand for some performances implies rationing that leads certain consumers to purchase their second (or worst) preferred ticket option.

Swofford (1999) begins by citing McCloskey (1985) as the typical textbook analysis of ticket scalping, whereby scalpers reallocate tick-

ets that owners and promoters planned to sell on a first-come-first-served basis at set prices to those who are most willing to pay for them. Even if ticket scalpers are able to perfectly price discriminate, no one pays more for a ticket than their reservation price. Allocative efficiency is thus enhanced, but consumer surplus is reduced and, in the limit, eliminated.

Swofford then turns to the issue of why a profit-maximizing firm would allow the purchase of its product (tickets) for speculation and arbitrage. At least three explanations are possible. One is that uncertainty and risk on the part of primary sellers provides opportunity for speculation and less risk-adverse brokers. For example, the producer of a new play sells many seats to early performances to brokers and scalpers (serving as underwriters) to cover costs in case the show opens to less-than-stellar reviews.

A second reason is that primary sellers' producing costs may be driven up substantially if they try to prevent the secondary market. The ticket scalper is more an arbitrageur than a speculator in this case. The scalper is able to arbitrage because of lower information costs, lower transaction costs, or lower taxes. Local scalpers may simply know more about the local market for a concert than performers or their agents.

A third reason is that revenue functions are different. The ticket scalper may be a superior price discriminator when compared to the primary seller. In addition, the primary seller may be more identified with the product than the scalper. The scalper examines static profits while the primary seller looks at dynamic profits. The present value of long-run profits from repeat business in different shows may be greater than the static gain from higher revenues on a particular show.

Courty (2000) provides an extensive overview of ticket pricing in the entertainment industry over the past several decades. He concludes that existing microeconomic theory has been successful in explaining price variations observed in ticket markets. At the same time, prices do not vary as much as researchers would predict under either a competitive or monopoly assumption.

## A Nationally Organized Futures Market?

Extensive wealth and relative ease of travel in the United States have created a national market for major sporting and entertainment events. Given the advances in information technology and the nature of tickets, some format analogous to the Chicago Board of Options seems logical for the secondary ticket market. Yet no such market has evolved. The question is why.



Technical reasons may provide a partial explanation. For extensive futures trading, products must be homogeneous, but tickets to most major events may not be perceived as such. Another explanation is that the market is not “deep” enough because very few tickets will actually be traded on a day-to-day basis. More decisive is the widespread opposition by many sellers of tickets. While extensive secondary markets help owners and promoters by providing greater information on seat prices, concession sales are stripped away from the entertainment package. The delicate pricing balance that owners and promoters seek to achieve between ticket price and anticipated complementary sales is upset. In addition, owners and promoters may be loathe to allow others to make any profits in which they have no share.

Many small ticket brokers and street scalpers are opposed to a nationally organized market as well. Such a market would mean that local customers are no longer highly dependent on them to secure good seats for special events. In fact, the general trend does not look promising for small, highly localized sellers, except perhaps on event day, even if a nationally organized market does not arise. Online trading, where secondary sellers and buyers can interact directly, is a powerful and growing force that reduces the need for the small broker to serve as a middleman in the advance market.

Finally, there is the general public’s opposition to highly organized, day-to-day futures trading. Current distribution schemes of the NFL for the Super Bowl, the NCAA for the Final Four, and the Masters Golf Tournament do allow an average person to get into those events occasionally without having great wealth or knowing the right people. Such attendance may become a watershed moment in a person’s life. A nationally organized market, rightly or wrongly, is perceived to create a ticket market in which those who can afford to pay end up with all the seats. Cries of price gouging become the passionate concern for those who want fair prices and access.

A secondary market may disturb the psychological factors in major event attendance. A secondary market changes the delicate pricing mechanism arrived at by event promoters and team owners. The partnership format appears to satisfy the primary market sellers while not alienating the potential customers in the secondary market with perceptions of price gouging. As this market format takes hold, ever more complicated pricing models lie in wait for the microeconomic literature as complementary and intertemporal factors are weighed both directly and in relation to hedging opportunities by various business concerns.

Given present technological and market constraints, there are several paths the development of a secondary market could take. One

path is that a technologically savvy company captures much of the secondary market and offers a national mechanism whereby sellers and buyers can use a service for ticket sales and purchases. However, such an approach would require that any company providing the market would hold a substantial number of tickets for a variety of events, including sports, concerts, and other one-time events.

Another possibility is that ticket sellers could create a nonbearer ticket instrument, akin to airline e-tickets, a type of instrument that could be traded only through the promoter's organization or Web site. Such an approach would permit the owners and promoters to capture the secondary market because of the inability of secondary market participants to overcome the nonbearer quality of the tickets. Owners and promoters would enjoy the benefits of the secondary market sales and the distinction between the primary and secondary markets could disappear.

The creation of an ideal futures market for tickets would be one operated in a technologically advanced fashion that provides full access to tickets and prices as well as open access for all buyers and sellers, including event promoters and team owners. Such an open market would require bearer types of instruments because the use of e-tickets by the promoters and owners would create the secondary market usurpation noted earlier. Additionally, the on-site trading remains a critical part of the ideal futures market because the nature of these events and buyer psychology is such that the market does not fully deepen until the event is imminent. The ultimate decision to attend an event occurs at varying times during the event and ticket cycle, but the full market effect is not captured unless those final hours and moments of trading are also captured.

One of the possible results of such a market is the potential for hedging among promoters and owners, particularly with sports. Owners could hedge some of the risk associated with season failures that could come from terrorist types of attacks, weather, and other *force majeure* events that could delay, interrupt, or shorten the season in one sport.

It is impossible to predict the reaction of the public to such selling approaches. The psychological factor remains a wild card in the evolution of the secondary market, and its success is dependent upon consumer comfort with and acceptance of such a market.

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