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Abstract

Hurricane Katrina devastated the city of New Orleans in late August 2005, and debates are now underway across the country concerning strategies for reconstructing the City. A key to redevelopment involves encouraging former citizens and businesses to return. Both of New Orleans's professional sports teams, the National Football League Saints and the National Basketball Association Hornets, have taken up residence in other cities, and the question of what the city should provide in the way of financial accommodation to encourage them to return should be considered in devising a reconstruction plan.

Infrastructure to facilitate professional sports and mega-events constitutes a significant fraction of capital budgets for even the largest cities. New Orleans has hosted a disproportionate share of mega-sports events in the United States given its size and demographics. An important question concerns whether these events have contributed enough to the New Orleans economy to justify reinvestment in infrastructure to restore New Orleans's place as a leading host of professional sports and mega-events in the United States.

A careful review of the evidence suggests that the redevelopment efforts of New Orleans are better directed at first providing infrastructure that will encourage the return of its middle class citizenry and the restoration of its culture. Playing host to professional sports and mega-events does have symbolic significance, but it is arguable that the city cannot afford to invite guests until it has the means to accommodate them.

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I. Introduction

Hurricane Katrina devastated New Orleans physically and economically after making landfall on August 29, 2005. Full recovery, which generally follows natural catastrophes in the United States given the inflow of funds for reconstruction, seems less certain in the Crescent City. Citizens and businesses that abandoned New Orleans have exhibited a reluctance to return. The city's professional sports teams are included among those enterprises that left New Orleans in the wake of Hurricane Katrina. The National Football League (NFL) Saints played home games in three different cities during 2005; the National Basketball Association (NBA) Hornets have taken up residence in Oklahoma City for their 2005-2006 home games; and the Arena Football League's Voodoo have abandoned their entire 2005-2006 schedule.

Saints owner Tom Benson recently announced that the team would return home for the 2006 season, but their future in the city after the 2006 is unclear (Duncan, 2005). Benson and the city have had a contentious relationship due largely to the fact that the Superdome could not compete with the new generation of NFL stadiums as a revenue producer, prompting Benson to threaten relocation in the absence of a new playing facility. This relationship has soured further as a consequence of the damage Katrina inflicted on the Superdome making the need for a new or renovated stadium even more pronounced. The purpose of this paper is to analyze the extent to which the city of New Orleans should direct its development dollars toward its sports infrastructure. Has New Orleans benefited economically from its role as host to major professional sports teams and a disproportionate number of mega-sports events given its size and demographics?

Do commercial sport enable a rebuilding of New Orleans's storm-ravaged infrastructure or does it force civic trade-offs made even more painful by the storm?

Independent scholarship in general has not supported the thesis that professional sports induce significant increases in economic activity for host cities. New Orleans, however, may be different. The city is smaller and less affluent than other host cities in general, and it may be that the frequency with which large sports events are hosted by New Orleans makes the area an exception to the experience of most cities with regard to sports and economic development. The gravity of the city's economic situation in the wake of Katrina necessitates an individual and more complete appraisal as strategies for economic redevelopment are explored.

Answers to the questions raised in this introduction require a review, among other things, of the damage Katrina wrought, the amount of redevelopment money the city must commit, and the evidence with regard to the impact sports has on host city economies. Given the need for these assessments, the paper is organized as follows. The second section of the paper provides an inventory of Katrina's damage. Part three discusses a blueprint for the redevelopment of New Orleans and the role of the leisure industry in that redevelopment effort. The fourth part of the paper provides information on the cost of sports infrastructure and teams subsidies in New Orleans. The fifth part of the paper reviews scholarly work as it relates to the economic impact of sports in general. The impact sports and mega-events have had on New Orleans is the subject of the sixth part of the paper. The seventh part of this report assesses whether New Orleans can afford sports reconstruction. Conclusions and policy implications constitute the paper's final section.

II. Measuring Katrina's Devastation

Hurricane Katrina, which swept into New Orleans and the Gulf Coast on August 29, 2005, caused far and away the largest damages in real dollar terms of any hurricane in U.S. history, with uninsured losses topping \$100 billion (Bloomberg News, 2005) and insured losses estimated at \$34.4 billion (Powell, 2005). Its final death toll of over 1,400 also places it among the worst natural disasters ever suffered by the United States. New Orleans was particularly hard hit by the storm, as flood waters remained for weeks after Katrina while levies were repaired.

Rebuilding New Orleans is an epic undertaking matching in scope and expense in real terms the rebuilding of San Francisco after the 1906 earthquake or Chicago after the fire of October 8, 1871. The cost of reconstructing New Orleans has been placed at more than \$100 billion dollars (Tennessean News Service, 2005). Projects that were rejected prior to Katrina such as a sea wall south of the city to contain water from the Gulf of Mexico are now being seriously considered, but the estimated cost of this project alone is \$2.5 billion (Tennessean News Service, 2005). The damage to highway infrastructure has been monumental as a consequence of roads sitting under water for weeks following the storm. The housing stock experienced devastation that more closely resembles what has been associated with world wars than hurricanes. New Orleans according to the U.S. Census Bureau had 188,000 occupied housing units prior to the storm, and approximately 80 percent of that housing was severely damaged by the storm. Some of the extensive housing damage can be explained by the fact that more than half of the cities 100,000 owner-occupied homes in its 73 neighborhoods were built before 1950 (Tennessean

News Service, 2005). The replacement housing will be constructed with potential hurricane damage in mind, and that will escalate the cost of replacing residential infrastructure considerably.

The damage to middle class neighborhoods has substantial implications for the redevelopment effort both as it relates to production and consumption. Without a middle class New Orleans will not have the workers it needs to run the economy that existed prior to Katrina, and the spending necessary to restore the economy to pre-hurricane levels will be deficient. Katrina devastated the housing stock, schools, and other infrastructure vital to normal life for all socio-economic classes.

The extent of the damage to the social infrastructure must also be carefully assessed since the return of middle class workers and consumers is essential to the revitalization of the New Orleans economy. Even before Katrina, by nearly every measure of economic development, New Orleans lagged behind other large American cities. As seen in Table 1, for example, labor force participation rates and employment/population ratios in New Orleans are lower than the national average for most demographic groups.

Table 1: LFP Rates and Employment/Population Ratios in New Orleans compared to National Averages

Age (Gender)	LFP rate, Hurricane Damaged Areas (National %)	Empl./Pop. Ratio, Hurricane Damaged Areas (National %)
16-24 years (Men)	55.0% (65.0%)	46.1% (55.5%)
16-24 years (Women)	57% (62.0%)	46.0% (54.0%)
25-64 years (Men)	77.0% (82.0%)	72.9% (78.9%)
25-64 years (Women)	n.a.	64.4% (66.7%)

Source: Gabe, et al. (2005).

Hurricane damaged areas in Louisiana have poverty rates above the national average (21.4% vs. 12.4%), and New Orleans residents are less likely cities (55% vs.

66%) to live in owner-occupied housing than residents of other large cities (Gabe, et al., 2005). Finally, the educational attainment of younger adults (age 18 to 34) for storm-damaged areas is generally below that for the rest of the nation. For example, 22.9 percent of young adults in hurricane damaged areas had not completed a high school degree compared with 20.6 percent nationwide, while only 22.5 percent had completed a college degree compared with 29.3 percent nationwide (Gabe, et al., 2005).

These figures suggest several things worth noting that have implications for the likelihood that people displaced will return. First, Katrina hit the economically disadvantaged hardest. Statistics indicate that other places in the nation to which they have relocated will improve their opportunities for employment. Second, significant portions of the middle class were displaced in the storm-ravaged area; 47.4 percent of those displaced had education equivalent to some college or above (Gabe, et al., 2005). Third, 45 percent of those displaced did not live in homes that they owned indicating that a significant portion of the people displaced by Hurricane Katrina have weak financial ties to the communities they abandoned. A significant permanent displacement of the population affected by the storm will undermine or may substantially alter the socio-demographic character of neighborhoods mostly adversely affected by the storm. It should also be noted that virtually entire neighborhoods and parishes were wiped out by the storm, and devastation of that magnitude may well negate any pull that community loyalty and ties may exert in bringing people back. It has been estimated, for example, that Orleans Parish and St. Bernard Parish lost 65.9 and 89.8 percent of their populations over the period October 2005 to January 2006 (Greater New Orleans Community Data Center, 2005).

The report of the Bring Back New Orleans Commission recommended that all of New Orleans not necessarily be rebuilt. It might well be that if that recommendation is followed, the post-Katrina New Orleans will be smaller than the pre-Katrina New Orleans, and that has implications for the ability (willingness) of sports to serve as a catalyst for economic redevelopment. Prior to considering what sport potentially can contribute to the redevelopment effort, it is logical to identify a blueprint for redevelopment. That topic will be discussed in the next section of the paper.

III. A Blueprint for the Redevelopment of New Orleans and the Role of the Leisure Industry

The New Orleans economy serves the nation as a tourist center and transportation hub for water transport in particular, and therefore, any economic redevelopment effort should focus on those traditional industries, an opinion endorsed by members of an *ad hoc* committee of urban experts assembled under the auspices of the Urban Land Institute. Of course, commercial sport is one important aspect of the tourist/leisure industry, and could play a role in the economic revitalization of New Orleans. A logical predicate to a discussion sports tourism is to provide some background on the importance of the tourism industry overall to New Orleans. Much of the tourism industry in New Orleans is “high-ground” based in the French Quarter, the Central Business District (CBD), and the Garden District. The Urban Land Institute committee, which met on November 18, 2005 opined:

New Orleans should concentrate its rebuilding efforts on the sections of the city that occupy the high ground, while securing lower-lying areas for potential long-term rebirth...

...it's not practical to redevelop every acre of New Orleans in the short term, considering that 300,000 residents and 160,000 jobs have been lost. It's also not socially equitable to allow residents back into neighborhoods that do not have adequate levee protection and may be toxic... (Carr, 2005).

Prior to the storm New Orleans attracted more than 10 million visitors who spent in excess of \$5 billion per year according to the New Orleans Metropolitan and Tourism Bureau. Even though New Orleans is a relatively small city, it ranked fifth in the United States in the number of conventions hosted (Tennessean News Services, 2005). Tourists will not likely return to a city that cannot provide essential services, and in the absence of tourists, the New Orleans economy will flounder compared to pre-Katrina times. One part of the blueprint for restoration of the New Orleans economy will require restoration of housing and essential services for its middle class, followed by a reinvigoration of the tourist trade, followed by a revitalization of those businesses that cater to tourism.

The extent to which professional sports and mega-events contribute to the tourist trade must be assessed in determining the fraction of scarce capital resources that should be devoted to the restoration of the infrastructure necessary to accommodate professional and mega-sports events. The last few years before Hurricane Katrina struck, the city of New Orleans hosted two major league professional sports teams, several minor league teams, and a division one collegiate athletic program at Tulane University. In addition, since opening in 1975, the Superdome has hosted numerous sporting events of national significance including the NFL's Super Bowl in 1978, 1981, 1986, 1990, 1997, and 2002, the National Intercollegiate Athletic Association Men's Basketball Final Four in 1982, 1987, 1993, and 2003. In addition, the Superdome annually hosts the Sugar Bowl, one of

college football's top post-season matches and a game which has determined college football's national champion nine times since 1975.

Replacing the infrastructure for professional sports and mega-sports events can be justified if the benefits provided by the facilities exceed the costs incurred in the reconstruction. Both costs and benefits have to be measured over time since the facilities provided a stream of benefits as well generating costs associated with operations and maintenance (O&M). Comprehensive economic analysis would include not only the explicit benefits but also the implicit benefits and costs, which are difficult not only to measure but in many cases to identify.

Before proceeding with quantitative analysis of how much should be spent for infrastructure reconstruction, the analysis should be framed by considering the potential for economic development through hosting professional sports or mega-sports events that utilize the infrastructure New Orleans possesses to accommodate such activity. Data exist over a period of time for New Orleans and other metropolitan areas for the number of establishments, annual payroll, and number of employees, collected and arrayed according to the North American Industrial Classification System (NAICS). These data are presented at highly aggregated levels (NAICS 2-digit) all the way through to highly disaggregated levels (NAICS 4-digit) in Table 2. The more disaggregated are the data, the more incomplete the data set. These limitations compel the construction of a more aggregated picture of the potential contribution of professional sports and mega events than is optimal, but reasonable conclusions can be drawn based on the data that are available. In Table 2, information is recorded on professional sports' fraction of the three measures of economic activity previously identified.

Table 2: Aggregate Measures of the Fraction of New Orleans Economic Activity in Total Represented by Spectator Sports for 2003

Ratio/NAICS Number	NAICS 71: Arts, Entertainment, and Recreation	NAICS 711: Performing Arts, Spectator Sports, and Related Industries	NAICS 7112: Spectator Sports
Industry Employees/New Orleans Total	4.07%	1.16%	0.62%
Annual Industry Payroll/New Orleans Total	3.48%	1.39%	0.34%
Industry Establishments/New Orleans Total	1.74%	0.94%	0.20%

Source: *County Business Patterns*, (2003).

All data point to the fact that the economic activity accounted for through the “Arts, Entertainment, and Recreation” industry for New Orleans is small. The contribution of “Spectator Sports” is less than 1 percent by any of the measures identified in Table 2. The annual payroll percentage is not atypical for cities in the United States. The annual payrolls represented by spectator sports for Cook County, the county in which the Chicago is located, and for Fulton County, the county in which Atlanta resides, are 0.25 percent and 0.89 percent, respectively. Despite the hefty salaries paid professional athletes, the spectator sports industry typically accounts for less than 1 percent of a city’s payroll, and, by that measure, the industry is not economically vital to cities in the United States, including New Orleans.

IV. The Cost of Sports Infrastructure and Team Subsidies in New Orleans

The competition to host sports mega-events and/or a professional sports team is often as fierce as the competition among athletes on game day. Sports infrastructure is

vital in not only attracting commercial sport but in retaining teams or events. Prior to Hurricane Katrina, New Orleans appeared to be on the verge of losing their NFL franchise, the Saints. Tom Benson, the owner of the Saints, had rejected reportedly the state's final offer to keep the Saints in New Orleans in late April of 2005. Details of the offer to keep the Saints in New Orleans were revealed by Superdome Commission Chairman Tim Coulon shortly after Benson nixed the state's proposal. A newspaper story reported that:

In their "final" offer, state negotiators, led by Coulon, asked the Saints to pay \$40 million – or a little less than 25% -- of a Superdome renovation now estimated to cost around \$174 million. The state also offered to continue to pay the current annual cash subsidy – totaling \$50 million – until completion of the first phase of renovation for the 2007 season. After that, under the state's proposal, the cash payment would have dropped to \$14 million, then to \$9.5 million when the renovation was complete for the 2008 season, but rising 2% annually from there. (USA Today, 2005)

That plan would have required the state to raise \$12 million in new taxes.

The Saints wanted the new schedule of cash payments to begin at \$13.5 million in 2008, Coulon said.

"It's beyond the threshold of pain," Thornton (Superdome General Manager Doug Thornton) said of the Saints latest offer, which would require \$4 million in new taxes over what the state offered even if the Saints also agreed to pay \$40 million toward renovations. "What we were trying to do is reach a framework of an agreement, and to get any taxes passed would be a Herculean effort." (USA Today, 2005)

The state's offer to the Saints to include the annual cash subsidy would place the team in the top half of the financial standings in the NFL. The fact that the state required that the Saints pay \$40 million, or less than 25 percent of the total cost of Superdome renovations, places the Saints below the average, 27.2 percent, for team contributions for NFL stadiums built since 1995 (Baade, 2004). The fact that Benson would reject such an

offer speaks volumes about the financial realities of the NFL and the inordinate transfer of business risk from teams to their host cities. The acute aversion to financial risk practiced by NFL teams has consequences for host cities, and they have achieved tragic proportions in the case of New Orleans. The behavior of the Saints follows a well worn financial path, and the behavior of Tom Benson is rational and understandable in light of the incentive structure he and his fellow owners have authored. Indeed, Mr. Benson “acknowledged a challenging economic marketplace but cited the increasingly competitive economics of the NFL,” as the reason for turning down the state’s April 2005 offer (ESPN, 2005).

The risk for Tom Benson is the \$81 million he is required to pay if he breaks his Superdome contract, which he can do following the 2006 season (Konigsmark, 2005). The \$81 million represents the subsidies that the Saints have received since 2001. That risk pales in comparison to the \$1 billion written offer Benson claims to have received for the team in 2005, a 1,400 percent increase over the \$70 million price Benson paid for the Saints in 1985 (Robinson, 2005). The lucrative offer Benson received for the team reflects at least in part the money-making potential of NFL teams, which is explained in large part by the subsidies cities extend to attract a supply of teams that is limited by the NFL and its owners.

Why would Benson consider leaving New Orleans? The answer, of course, is a more lucrative offer or better economic prospects by locating in another city such as Los Angeles, which has been without a team since 1995. The fans in New Orleans have done their part as they sold out the Superdome 36 straight times before that streak ended late in 2004 (AOL, 2005). But the financial resources of New Orleans fans are limited, and so is

the number of corporations. Prior to Katrina, among NFL cities, New Orleans was the fourth in population trailing only Jacksonville, Buffalo, and Green Bay, and the fourth poorest, trailing Buffalo, Tampa Bay, and Phoenix. Even if New Orleans' per capita income were to recover to its pre-Katrina levels, if as few as 25 percent of the population were to not return, New Orleans would be smaller than any other host city except for Green Bay, Wisconsin in any of the big four professional American sports leagues.

Corporations play a major role in keeping a team financially competitive. It is one thing to provide luxury seating; it is another thing to fill those seats. New Orleans does not serve as a headquarters for many major corporations, and there is not the market for loges and club seats that can be found in the other NFL cities with whom New Orleans competes. One writer somewhat whimsically stated the NFL financial equation in the following way:

Instead of fans, the NFL seeks corporations...While the NBA and Major League Baseball have guaranteed contracts for their players, the NFL with its exorbitant TV rights deals and corporate backing has practically given their owners guaranteed dollars...

The way business is done now is the owner convinces his buddies who own the largest businesses in their respective cities to buy majority (sic) of the season tickets and luxury boxes. The result: a term exclusive to the NFL, the guaranteed sellout. Saints owner Tom Benson can't do that in New Orleans because there are no major corporations other than Entergy to back him. (Terrebonne Parrish Courier, 2005)

Whimsy aside, New Orleans is at a considerable disadvantage in supporting and, therefore, retaining an NFL franchise or any franchise in one of the four major professional sports leagues in the United States. The lack of financial capacity creates a relative shortfall in team revenues, which explains the cash subsidies and tax concessions New Orleans has had to provide to retain the NFL Saints and the NBA Hornets. New

Orleans had a total capital budget of \$74,627,540 in 2002 (City of New Orleans, Ordinance #23,957, November 2001). The estimated cost of replacing the Superdome is \$600 million. Spreading that cost over 30 years would constitute 27 percent of the capital budget for 2002 without considering debt service on the bonds to finance replacing or renovating the structure.

Following Katrina any plans for replacing the Superdome have been scuttled, but the city will have to provide for a portion of the costs involved in repairing the facility and the adjacent New Orleans Arena. It is unclear how much the State of Louisiana will be spending to renovate the dome. Following Katrina, state officials made clear that they intended to update the facility so that it would be competitive with the newer structures that exist in the NFL. There will be new audio and visual equipment, more luxury seating, concession stands and wider concourses. The Superdome was one of many buildings damaged by the storm and Louisiana had a \$500 million insurance policy on state buildings along with \$100 in flood insurance. The Federal Emergency Management Agency (FEMA) will also contribute to the rebuilding effort, but the funds will have to be efficiently allocated.

Given the very small percentage of economic activity in New Orleans accounted for by the sports industry, it may not be prudent to devote a disproportionate share of scarce redevelopment funds to that sector. An even stronger argument can be made against refurbishing the Superdome to accommodate the financial needs of the NFL Saints since their owner has consistently sought economic concessions from a city and state that were financially stressed even prior to Katrina. The economic incentive for the Saints owner to keep the team in New Orleans has been severely compromised by

Katrina. Lacking the financial wherewithal to support professional sports following Katrina, it is not reasonable to expect that the team will make the financial sacrifices that are necessary as New Orleans attempts to rebuild. There exists no motivation to recoup fixed or sunk costs by the Saints since their investment in infrastructure has been minimal. This points to a larger problem with the financial structure of the professional sports industry throughout the United States. The existence of substantial subsidies for infrastructure undermines the team commitment to their host cities. Absent any meaningful risk to their own capital, what incentive do teams have to stay in a city that experiences a catastrophe on the scale wrought by Hurricane Katrina? There is no question that the financial risk accompanying hosting professional sports in the United States is disproportionately borne by the host community. Katrina provides striking testimony to the reality of how subsidies for sports infrastructure have contributed to that financial vulnerability.

The argument for subsidies for professional sports has been based on the economic impact it provides. The “public good” argument that has been used as a rationale for subsidies is critiqued in the next section of this report.

V. Theory Regarding the Economic Impact of Sport

Independent scholarship arguing against sports as a catalyst for economic development is abundant. See Noll and Zimbalist (1997) for examples. The debunking of the theory that commercial sport serves as a catalyst for economic development is based on economic realities based on budgetary fundamentals and substantial leakages from the inflow of funds that provide the basis for those who assert sport teams and mega-events

stimulate the host economy to a nontrivial extent. The often spectacular economic impact estimates advocates for subsidizing sports infrastructure advance fails to accurately estimate the economic impact sport has for at least three reasons. First, often the costs associated with hosting the event, building the structure, or accommodating the team are treated as expansionary expenditures. Such a tactic ignores the budgetary reality that money spent on such endeavors precludes spending that money on something else. The benefit from the use of that money for some other purpose, for example building a levee as opposed to a stadium, represents a cost to the community and should be considered in evaluating the efficacy of any project.

Second, the money spent on attending a sports event by residents of the home team community necessarily precludes them from spending that money on other things. Furthermore, local expenditures on professional sports may actually reduce total spending in the economy as opposed to simply reallocating money among competing ends. Professional sports, which use national resource markets as opposed to locally owned and operated resources for alternative entertainment or recreational activities, may foster a net outflow of money. Most of the money spent on a night at a professional sports event goes to the athletes and owners of the team who may not live in the community in which they play. Value created in the community by the event or team play may not be value that the community recognizes in the way of increased incomes, which are spent again in the community as might be the case with locally owned and operated entertainment. Professional sports may be a model better described as the circus coming to town for a temporary stay and leaving with a portion of the income spectators created through their economic activity within the community.

Third, to properly gauge the benefit to the public sector, the incremental tax revenues collected should be net of the incremental explicit costs incurred in hosting the event or team. The Super Bowl, for example, places a heavy security burden on the host city, and that cost needs to be identified in estimating the net benefit to the city from hosting the event.

Taken together the implication of the three qualifiers noted is that the appropriate measure of the benefit imparted by the subsidy is the measure of **net value added**. The inability or unwillingness to recognize the difference between gross expenditures in conjunction with an event and the net value added it induces explains the substantial disagreements relating to the economic impact of sports teams and mega-events on host community economies. Once the economic impact economic of sport is properly measured, independent scholarship indicates that most teams and mega-events fail to increase net value added for the host community.

Previous research indicates that the New Orleans Superdome has had a statistically significant, positive impact on economic activity in New Orleans, but that positive impact has been offset by a statistically significant, negative impact induced by the NFL Saints (Baade and Dye, 1990). This result is not surprising. The utilization of the Superdome has increased over time, and it has been successful in providing a venue that accommodated events that brought visitors and spending to New Orleans from outside the metropolis. Professional football, on the other hand, induced substitute spending that ultimately deflected resident spending to areas outside New Orleans. The team, furthermore, drained scarce city resources through subsidies that became income for non resident players, coaches, and owners. The team, as the primary tenant,

influenced Superdome scheduling and effectively prevented the facility from being utilized for other events that could have expanded the New Orleans economy.

The spectator sports industry, in light of the preponderance of scholarly evidence, is properly viewed as a lagging rather than a leading economic activity. Sports yields hedonic value, in other words, and the quality of life benefit it imparts is a luxury affordable in affluent communities rather than an activity that helps a community achieve affluence. Sport for the most part is properly viewed as a luxury good and not a productive resource.

New Orleans has had an ongoing debate about how much it should spend on sports infrastructure and to what effect. Katrina has already had an impact on those deliberations, as it should, because the risks and substitution effects associated with subsidizing commercial sports activities have been enhanced by the storm for reasons that are discussed in the next section of the paper.

VI. Spectator Sport and the Revitalization of New Orleans

The damage wrought by Katrina on New Orleans exceeded that of any other hurricane and rivals in destructive scope the most significant natural disasters in the history of the United States. What separates the disaster in New Orleans is the extent to which human failure contributed to the storm's destructive force. The forty-two breaches of levees coupled with the failure of government to adequately respond have elevated the perception of risk. That heightened perception will have implications for the redevelopment of New Orleans because the extent to which the investment vital for reconstruction will occur is in part dependent on the risk assumed by investors. A part of

the reconstruction debate will focus on the Superdome and New Orleans Arena, and it is important to assess, therefore, what the public can expect in the way of a return on those investments.

The devastation of the middle and lower-middle classes has a profound impact on the professional sports industry in New Orleans. These classes provided workers for the leisure industry as well as other industries, and their abandonment of New Orleans has impaired the ability of the City to adequately meet the needs of service establishments in the French Quarter and CBD that cater to the needs of tourists. The loss of the middle class has diminished consumption in New Orleans, and businesses that serve the retail needs of this class as well as the tourist industry has been acutely stressed.

The labor shortage makes it doubtful that the Superdome could host a major event at this juncture. Each event at the Superdome requires approximately 2,500 workers, but work at the Superdome and New Orleans Arena is occasional and seasonal in keeping with their events calendars. Family income is augmented by work undertaken in conjunction with Superdome and New Orleans activity. The massive destruction of the housing stock in New Orleans in neighborhoods such as the Lower Ninth Ward, Gentilly Terrace and Woods, and Lakeview requires income to restore that far exceeds that which can be provided through working events occasionally hosted by the Superdome and New Orleans Arena. The lack of housing in New Orleans has significant implications for the ability of the leisure industry in New Orleans in general and the spectator sports industry in particular to function. A good fraction of the workers at the Superdome and the New Orleans Arena, even if an event could be physically hosted in those facilities now, would very likely have to come from some place other than the most devastated areas of New

Orleans where the middle class lived. The leakage of money from New Orleans through athletes repatriating their incomes to their primary residences would further be enhanced by ordinary workers doing the same thing in some appreciable amount because of a lack of housing in many New Orleans neighborhoods. Post-Katrina, it is even less likely that income generated through commercial sports activities would remain in the City.

Likewise, the devastation in New Orleans has made it less likely that professional athletes would remain in the community to spend their money. The lack of social services and the physical destruction which has transformed New Orleans physically would compel many with the financial wherewithal to live elsewhere. Thus, Katrina likely enhanced the size of the substitution effects noted in the previous section of the paper and enhanced the risk of investment in sports infrastructure substantially.

The money spent on professional sports infrastructure in this environment of acute housing shortages can only lengthen the restoration of the housing stock and ultimately frustrate the financial interests of the sports establishment. Some form of housing has to be provided for workers, and the speed with which housing requests have been met has been painfully slow. Nearly six months after the storm, of the 135,000 requests for FEMA trailers, only about half have been filled (Steinhauer and Lipton, 2006). Money spent on sports infrastructure is money not spent on housing. Less housing means fewer local residents working at the Superdome and New Orleans Arena. Reconstructing the sports facilities, furthermore, at this point deflects construction work from where it is needed most. The scarcity of habitable houses in New Orleans for people of relatively modest means has resulted in a significant increase in the prices of such housing.

Restoring the Superdome and New Orleans Arena sends the message that New Orleans is on the road to healing. The message, however, is a tease if those renovated facilities cannot host events for which local residents provide the necessary labor. A better reconstruction strategy would be to repair and replace the damaged housing stock first.

It is hard to imagine the benefit to the city of New Orleans of repairing sports facilities that the owners will not use due to the compromised economics of events hosted by those structures, especially for commercial sport. If there are few residents, there will be few fans. Few fans translates into little spending, and since tax dollars are derived from the demand for goods and services, tax revenues generated by governments through activities at the facilities will be less, perhaps appreciably less, than before Katrina. Indeed, declining business activity following the terrorist attacks on 9/11 had already resulted in deficit spending by the Louisiana Stadium and Exposition District to meet its cash subsidy obligations to the Saints and Hornets. The shortfall had led to serious discussions about tax increases for car rentals and hotels in addition to sales tax and cigarette tax increases prior to Katrina's arrival. Under present conditions no tax increases are possible, and it is better from the city's point of view to have the teams play elsewhere rather than assume those obligations. If the Saints and Hornets fostered deficit state spending pre-Katrina of approximately \$15 million,¹ surely those deficits would increase substantially following Katrina. The costs to continuing to host professional sports outweigh the benefits and will continue to do so until the economy can be reinvigorated beyond pre-Katrina levels.

¹ It is interesting to note that the size of the deficit that existed in 2004 of about \$19 million approximated the cash subsidies extended the Saints and Hornets annually (Barrett Sports Group, 2004).

The professional sports teams in New Orleans would have to be motivated by something other than their financial self interest to help New Orleans move beyond Katrina. The evidence is overwhelming that the owner of the New Orleans Saints has operated pre- and post-Katrina out of financial self interest. Prior to the storm, Benson sought a new stadium. The evidence indicates that he was reluctant to accept a refurbished Superdome because Benson apparently believed that an updated Superdome could not generate sufficient income to allow him to be financially competitive in New Orleans. When evaluating the nature of the negotiations between Benson and city, the problem for Benson is New Orleans and not the Superdome. Benson has the option to move the team to Los Angeles, but Paul Tagliabue, the Commissioner of the NFL, and the League would have a massive public relations problem if he allowed that move. While the NFL may share revenues, cities that host teams are hardly given a free ride. The *quid pro quo* for having access to revenues generated by NFL teams playing in the New York and Chicago markets is to build state-of-the-art stadiums that allow each team to contribute as much as they can to the pool of stadium-generated revenues. Eventually the NFL will find a way to move the Saints out of New Orleans rather than have the team become a ward of the League.

VII. Can New Orleans Afford Sports Reconstruction?

The massive destruction of the housing stock in New Orleans is the single largest obstacle to the restoration of the New Orleans economy to pre-Katrina levels. The middle class labor force fled New Orleans in substantial numbers, and absent a labor force, restoration of productivity activity to pre-Katrina levels is impossible. Absent

productive activity and the income it generates, spending cannot occur that will support businesses that cater to consumer needs. State and local government tax revenues have fallen sharply, but, as is true following most natural disasters, the funds for rebuilding come from the federal government and from private citizens throughout the United States and world. Clearly those funds should be directed toward housing, but the risks associated with replacing the housing stock are substantial. The middle class that abandoned New Orleans has to be convinced that it is safe to return, and they need to have assurances that the water surrounding the New Orleans bowl is contained. Insurance companies will have to be convinced as well so that home insurance can be provided at affordable prices. How to do that with a dependable system of levees and the reclamation of wetlands is beyond the scope of this report. The focus here is on where the reconstruction of sports facilities fits into the redevelopment blueprint. The conclusion is that New Orleans cannot afford the reconstruction of sports facilities on a scale that will keep the Saints in New Orleans at this time.

Expenditures on the sports facilities that are undertaken should be consistent with attracting those Superdome related activities that have contributed to the New Orleans economy. The evidence indicates that the Superdome did account for significant net value, but the Saints did not. It should be kept in mind, however, that the reconstruction of the Superdome in the short run should be undertaken only after spending on housing. Indeed, for a short time longer at least the workers who maintain the hotels and provide restaurant and bar business are housed in the hotels. A Superdome and convention center that is up and running tomorrow would bring in guests who displace the workers that provide guest services. Labor supplies would be forced to come, perhaps, from outside

the metropolis, and these non resident workers would spend the income they earn outside New Orleans. The appropriate development strategy for the short and long run is to replenish the housing stock where appropriate and then rebuild those businesses that attract nonresident spending. Providing physical accommodation for professional sports teams does not advance the economics interests of New Orleans in the short term. Doing so would exacerbate the economic problems that currently exist.

VII. Conclusions and Policy Implications

Hurricane Katrina induced a massive outflow of residents and businesses from the city of New Orleans. Included among those businesses that fled are the city's two major professional sports teams, the NFL Saints and NBA Hornets. The capital costs necessary to encourage the return of the Saints and the Hornets for the long term are substantial. The images of the NFL and NBA will be damaged if the Saints and Hornets do not at least make cameo appearances, but in the longer term, the teams and their leagues will demand greater revenue streams than can be generated in their current facilities. The fact that New Orleans and the State of Louisiana were directly subsidizing the teams indicates that pre-Katrina the teams were not generating revenues in their venues that allowed them to be financially competitive in their leagues. This paper has concluded that it would be singularly unwise in the post-Katrina world to direct substantial funds at refurbishing the Superdome and New Orleans arena to make the teams financially competitive. This conclusion applies to both the short and longer term. Team financial needs cannot be accommodated until after the New Orleans economy progresses beyond pre-Katrina levels, and it is unclear if that will ever happen.

Capital expenditures on the Superdome replace capital expenditures on housing and schooling and other middle class amenities that will bring the middle class back. That is obvious to anyone viewing the situation in New Orleans. What is not so obvious is the fact that professional sports teams do not contribute in a net sense to a city's economy. Scholarly evidence indicates that while the Superdome did contribute to the New Orleans economy the Saints did not as a consequence of powerful substitution effects. Those substitution effects would only be enhanced if the city and state tried to make financial accommodations in an effort to retain the Saints and Hornets in both the short and longer terms.

Cities in general should be mindful of the fact that subsidies for professional sports teams eliminate the financial incentives teams would have to remain in the community following a natural or manmade disaster. Businesses that have risked their own capital and built infrastructure have a financial stake in their host community. There is an incentive to recoup their fixed capital costs. The Saints and Hornets have no such incentive, and the incentive is limited for most professional sports teams throughout the United States. Paradoxically, cities have contributed in a very substantial way to the incentive for teams to abandon a city in the face of a disaster on the scale of Katrina. Given the fact that calamities of the scale of Katrina compromise economies for a very long time, demographics will not support retaining a team no matter how state of the art a renovated playing venue the city offers. The owner of the New Orleans Saint, Tom Benson, was making his way out of New Orleans before Katrina, and the storm has undoubtedly increased his perception of risk and diminished his financial prospects in New Orleans to a point that it is not in his financial interest to stay there

New Orleans will be rebuilt at the grassroots home by home and business by business. The rebuilding of New Orleans will not occur purely out of economic incentive but because people are attached emotionally to their city. The economic motivation comes from recouping their fixed costs. If businesses cannot cover their variable costs of operation in relatively short order, they will leave. The best way to cover the variable costs is to encourage consumers to return to the community, and therefore, government's role should be to do what they can to encourage the return of the middle class. To this end, the order of capital expenditures in New Orleans should be levees, housing, middle class amenities, infrastructure for nonresident businesses, and last those industries that cater to the entertainment needs of the middle class.

The role of sports in the economic recovery of the city is dubious other than serving as a symbol that the city remains vital. The repair of the Superdome and the New Orleans Arena is an expensive tease in that regard, but does little to provide what is needed for the community to recover from the storm. Sports and the hosting of mega-events may actually undermine longer term recovery through deflecting capital spending from where it is needed most and crowding out those workers and residents who are involved in the essential rebuilding process. Any activity which contributes to an increased outflow of funds must be avoided. The cost of leisure options is too great. Sport may provide hedonic value, but at this juncture hedonic value and the economic interests of the sport elites must, out of financial and developmental necessity, take a back seat in the interest of the greater good.

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