The Hudson Yards Stadium/Convention Center Expansion: Why the Employment Multiplier Doesn't Justify It

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Executive Summary

This paper examines the merits and limitations of using the Location Quotient Proxy and Employment Multiplier to measure the potential economic impact of a proposed stadium and convention center expansion on the West Side of Manhattan. The facilities would be part of a new development district known as Hudson Yards.

The paper establishes a quantitative framework for analyzing the potential impact of the new facilities on New York City's economy. It does so by examining empirical data from similar facilities in St. Louis and Indianapolis.[1] It uses the Location Quotient Proxy (referred to from hereon in as the Location Quotient) and the Employment Multiplier to suggest that the leisure and hospitality services industry is an export industry in these cities. It then uses the Employment Multiplier and employment data to consider the contribution the facilities made to their cities' economies.

The paper then examines whether the leisure and hospitality services industry is one of New York City's export industries. It examines the merits of using a similar framework for applying the Employment Multiplier to measure the potential impact of the new West Side facilities on the New York City economy.

Finally, the paper suggests limitations to this analysis (including limitations to the data's applicability) and limitations to the Employment Multiplier's utility. It also makes recommendations for a more rigorous study.

Note: Two subjects, while important for a thorough examination of the subject, are beyond this paper's scope.

The first is New York City's bid for the 2012 Olympic Summer Games. The stadium would become a venue for the Games were they to take place in the city. However, because the stadium is being proposed independently of New York's bid for the Games, the Olympics are beyond the scope of this paper.

The second is the relationships among the New York Jets, New York State (which owns the Jacob K. Javits Convention Center), New York City and other participants in the Hudson Yards development district.

Framework and general background

The New York Jets, one of the National Football League's 32 clubs, have proposed building a new 71,000-seat stadium/exhibition facility as part of the new development district on the far west side of Manhattan known as Hudson Yards. The facility, with a retractable roof, would serve as both a venue for sporting events and an extension of the Jacob K. Javits Convention Center. New York State and New York City also plan an expansion (separate from the stadium) to the Javits Center, including a 40-story hotel. The broad development district occupies the area roughly between West 28th and West 42nd Streets and between 8th and 12th Avenues. The stadium, much of which would be privately financed, would be built on a platform over the West Side rail yards.

Since the team's founding in 1960 (as the New York Titans), the Jets have never had a true "home" stadium. In its early years the team played at the 50-year-old Polo Grounds on 157th Street at the Harlem River in Manhattan (the building was demolished in 1964). From 1964 to 1983 the Jets were a sub-tenant of the New York Mets baseball club in Shea Stadium in Flushing, Queens. Since 1984, the team has been a sub-tenant of the New York Giants football club in Giants Stadium, part of the Meadowlands sports complex in East Rutherford, N.J.

Since 1964 the Jets have shared or share ticket, parking and concession revenue with the primary tenant (and, since 1984, with the state of New Jersey in addition). Each lease also put restrictions on game scheduling and other operational factors.

Opportunities for the Javits Center are also constrained. The center's appeal is limited by the absence of mass transit and hotels in this area of Manhattan (both of which are part of the overall Hudson Yards development plan). But the facility's primary limitation is size. With 814,000 square feet of exhibition space, the Javits Center is only the 14th largest convention and exhibition center in the United States – far from commensurate with New York's appeal as a tourist and visitor destination. The Javits Center is too small to accommodate 43 of the 200 largest conventions in the country.[2]

The proposed facilities are designed to solve both problems. The Jets would be the stadium's primary tenant and primary financial beneficiary. The stadium (which could be configured for 130,000 square feet of exhibition space) and the Javits Center expansion would nearly double the center's exhibition space. The new exhibit space would make the Javits Center the third or fourth largest convention and exhibit center in the United States.

It's also worth noting that the stadium would provide incremental revenue to the city and state because it would accommodate events for which the city's current facilities are non-competitive. Besides hosting the Jets' 10 regularly scheduled games per year and providing additional exhibition space, the stadium would be designed to attract large-scale events such as the NFL's Super Bowl, NCAA college football post-season games, NCAA men's and women's Final Four basketball games, large plenary sessions tied to exhibitions or corporate meetings, and other events made possible by the stadium's movable seats.

Measuring the potential economic impact

The question is: What is a useful framework for measuring the potential economic impact of the new facilities on New York City's economy?

Two cities that have built similar facilities form a reasonable basis for the analysis. St. Louis in 1995 and Indianapolis in 1984 built indoor stadiums to accommodate NFL teams relocating from other cities. The facilities are also tied to convention centers.

St. Louis: Evidence of significant employment growth

The St. Louis Rams play their home games in the Edward Jones Dome, a 67,000-seat indoor stadium that also serves as the 162,000-square-foot Hall 6 of the America's Center. With the Edward Jones Dome, the America's Center contains 502,000 square feet of exhibition space.

An examination of St. Louis' employment sectors compared with those of the total United States reveals the following:

ST. LOUIS COMPARATIVE EMPLOYMENT

% of Total Employment

Sector	**St. Louis**	**U.S.**
Construction	5.9%	5.2%
Durable	63.0%	62.0%
Non-durable	37.0%	38.0%
Transportation/Utilities	4.2%	3.6%
Wholesale Trade	4.3%	4.4%
Retail Trade	11.0%	11.7%
Information	2.3%	2.6%
Financial Activities	5.7%	6.0%
Prof. And Bus. Services	13.9%	12.4%
Educ. And Health Services	14.5%	12.5%
Leisure and Hosp. Services	10.0%	9.0%
Other Services	4.4%	3.9%
Government	12.3%	16.2%

Source: Précis: METRO 2003

Using the data for the leisure and hospitality services industry in St. Louis and the United States, we find the following Location Quotient:

$$\frac{\%E_{iu}}{\%E_{in}} = \frac{10.0\%}{9.0\%} = 1.11$$

where E_{iu} = industry employment in St. Louis and

E_{in} = industry employment in the United States.

The Location Quotient's value of 1.11 indicates that the leisure and hospitality industry is an *export* industry, or a basic sector of the St. Louis economy (based on the hypothesis that a value of 0.8 or higher signifies an export industry).

Applying the value of 1.11 to the Employment Multiplier produces the following formula:

$$TE = \frac{LQ_I}{LQ_I - 1} = \frac{1.11}{.11} = \mathbf{10.1} \quad x \quad EE$$

where TE = total incremental employment (resulting from incremental export employment),

LQ_I = Location Quotient for industry I,

EE = incremental export employment for industry I and

I = the leisure and hospitality services industry.

The next step in the analysis is to obtain data estimating the level of employment generated by the America's Center/Edward Jones Dome. The St. Louis Convention & Visitors Commission summarizes the employment figures this way:

SUMMARY OF DIRECT EMPLOYMENT IMPACT

OF AMERICA'S CENTER/EDWARD JONES DOME

America's Center operations	558
Convention & Visitors Center operations	168
St. Louis Rams staff	427
Leisure group staff	283
Consumer show staff	5,883
Total	*7,319*

Source: St. Louis Convention & Visitors Commission
and The America's Center

Applying the Employment Multiplier of 10.1 to the total incremental employment generated by the America's Center/Edward Jones Dome yields a theoretical increase in St. Louis' total employment of 73,922 (10.1 x 7,319).

A St. Louis Chamber of Commerce report indicated an increase of total city employment from 1990 to 1995 (the first year of operation of the total facility, including the stadium) of 51,264.

Although the numbers are of similar orders of magnitude, the discrepancy is significant. Many things can account for it. Three are worth noting here. First and most obvious is that not all the data in the exercise above are for the same time periods. A more rigorous examination would require that data be researched to arrive at a Location Quotient for 1995. (Note: Précis: METRO reports before 2003 do not contain a Leisure and Hospitality employment segment.) Two, there are discrepancies between the chamber's employment figures and those in the Précis: METRO report. Three, this analysis fails to take into account growth or reduction in employment in other export industries in St. Louis in the same time frame. Limitations of the analysis are discussed further in the "Limitations and recommendations" section of this paper.

Indianapolis: Incremental growth over several years

The RCA Dome in Indianapolis opened in 1984 (when it was known as the Hoosier Dome). At the time, the 60,500-seat stadium was an addition to the Indiana Convention Center, which opened in 1972. The convention complex has grown in several phases, the most significant of which occurred in 1998, when an addition of 100,000 square feet of exhibition space brought the facility's total to 403,700 square feet, including the RCA Dome's 95,000 square feet.

Additional expansion in 2000 and 2001 added new meeting space and a "skywalk" link to a new hotel, but did not add exhibition space.

An examination of Indianapolis' employment sectors compared with those of the total United States reveals the following:

INDIANAPOLIS COMPARATIVE EMPLOYMENT

% of Total Employment

Sector	**Indian.**	**U.S.**
Construction	5.7%	5.2%
Manufacturing	12.7%	12.0%
Durable	70.7%	62.0%
Non-durable	29.3%	38.0%
Transportation/Utilities	5.3%	3.6%
Wholesale Trade	5.6%	4.4%
Retail Trade	12.0%	11.7%
Information	1.9%	2.6%
Financial Activities	7.1%	6.0%
Prof. and Bus. Services	12.5%	12.4%
Educ. and Health Services	11.0%	12.5%
Leisure and Hospitality Services	9.6%	9.0%
Other Services	3.6%	3.9%
Government	12.9%	16.2%

Source: Précis: METRO 2003

Using the data for the leisure and hospitality services industry in Indianapolis and the United States, we find the following Location Quotient:

$$\frac{\%E_{iu}}{\%E_{in}} = \frac{9.6\%}{9.0\%} = 1.07$$

where E_{iu} = industry employment in Indianapolis and

E_{in} = industry employment in the United States.

The Location Quotient's value of 1.07 indicates that the leisure and hospitality industry is an export industry, or a basic sector of the Indianapolis economy.

Applying the value of 1.07 to the Employment Multiplier produces the following formula:

$$TE = \frac{LQ_I}{LQ_I - 1} = \frac{1.07}{.07} = \mathbf{15.3} \times EE$$

where TE = total incremental employment (resulting from incremental export employment),

LQ_I = Location Quotient for industry I,

EE = incremental export employment for industry I and

I = the leisure and hospitality services industry.

Employment data from the Indiana Convention Center & RCA Dome show:

SUMMARY OF DIRECT EMPLOYMENT IMPACT

OF INDIANA CONVENTION CENTER & RCA DOME

Staff affiliated with convention center	
Capitol Improvement Board	145
Food services	35
Security	30
Staff affiliated with Indianapolis Colts	
Capitol Improvement Board	40
Food services	1,000
Security	450
Indianapolis Colts staff	70
Total	*1,770*

Source: Indiana Convention Center & RCA Dome

Applying the Employment Multiplier of 15.3 to the total incremental employment generated by the Indiana Convention Center & RCA Dome yields a theoretical increase in Indianapolis' total employment of 27,081 (15.3 x 1,770).

A report on the Indianapolis Metropolitan Statistical Area by Integra Realty Resources indicates that total employment growth in Indianapolis between 1997 and 1998 (the latter being the year in which the stadium/convention center achieved its current form) was 28,500.

Although the numbers are remarkably close, conclusions should be drawn with caution. As in the St. Louis case, not all the data above are for the same time frame. Although the Précis: METRO report indicates that employment levels in Indianapolis changed by only 1.3 percent between 1998 and 2003, the data used to derive the Location Quotient are from 2003, not 1998. As in the St. Louis case, this analysis fails to take into account growth or reduction in employment in other export industries in Indianapolis in the same time frame. Limitations are discussed further in the "Limitations and recommendations" section below.

New York: The case is not so clear

Despite the limitations, the examination of the St. Louis and Indianapolis stadium/convention center complexes suggests there is some validity to using the Location Quotient and the Employment Multiplier to help assess the effect of incremental export industry employment on overall employment and hence a city's economy. But as with most things in New York City, the issue is more complicated.

An examination of New York City's employment sectors compared with those of the total United States reveals the following:

NEW YORK CITY COMPARATIVE EMPLOYMENT

% of Total Employment

Sector	**N.Y.C.**	**U.S.**
Construction	3.6%	5.2%
Manufacturing	4.2%	12.0%
Durable	34.3%	62.0%
Non-durable	65.7%	38.0%
Transportation/Utilities	3.3%	3.6%
Wholesale Trade	4.2%	4.4%
Retail Trade	8.0%	11.7%
Information	4.8%	2.6%
Financial Activities	11.6%	6.0%
Prof. and Bus. Services	14.9%	12.4%
Educ. and Health Services	18.1%	12.5%
Leisure and Hospitality Services	7.1%	9.0%
Other Services	4.1%	3.9%
Government	16.0%	16.2%

Source: Précis: METRO 2003

Using the data for the leisure and hospitality services industry in New York City and the United States, we find the following Location Quotient:

$$\frac{\%E_{iu}}{\%E_{in}} = \frac{7.1\%}{9.0\%} = 0.79$$

where E_{iu} = industry employment in New York and

E_{in} = industry employment in the United States.

With the same method of analysis used for St. Louis and Indianapolis, we find that the Location Quotient fails to reach even the minimal value of 0.8 required for the leisure and hospitality services sector, in this scenario, to be considered an export industry in New York City. In fact, based on this calculation, it is an *import* industry.

There are several possible ways to interpret this seemingly counter-intuitive finding. One is that New York's economy is more diversified and complex than those of the other cities. Therefore the leisure and hospitality services industry, despite New York's reputation as a worldwide tourist and business destination, is actually a relatively small sector of the city's economy, at least compared with the other two cities this paper examines.

Another interpretation is that some of the services that could be considered part of the leisure and hospitality services industry might in fact be found in other employment classifications. The trade show industry in particular employs skilled laborers and professionals who might fall under categories such as Construction, Manufacturing or Professional and Business Services. A critical examination of the Précis: METRO methodology is beyond the scope of this paper.

A third interpretation is that the data are fairly accurate and that New York City is in fact a net importer of leisure and hospitality services. This supposition would support the longstanding claim of many city and state officials that the city's convention facilities do not adequately serve the city and that many trade show and exhibition organizers who would hold events in New York are forced to go to other markets with larger facilities.[3]

Certainly in the case of professional and college football and other large-scale events (elements of the leisure and hospitality services industry) New York City can be seen as an importer. Both NFL teams that use the New York name play in New Jersey, and New York has long been unable to attract large-scale events such as the Super Bowl and world-class NCAA football and basketball events.

One conclusion that seems inevitable is that the Location Quotient and Employment Multiplier are limited in their ability to measure potential impact, at least in the case of the West Side stadium/convention facility.

Limitations and recommendations for further analysis

As noted earlier, this analysis is limited by the less-than-pristine nature of the data and the absence of consistent time frames. Also, the data supplied by primary sources (i.e., the convention center and football team staffs) do not necessarily measure the same factors. Furthermore, the data from the Précis: METRO reports, chambers of commerce and other sources need to be validated and confirmed more rigorously. All of these points would need further investigation and clarification for a valid estimate of these facilities' impact on economic growth.

In the end this analysis is more an examination of the two economic tools than a true analysis of the stadium/convention center expansion's potential impact on New York's economy. Such a bona fide estimate would require more analytical tools.

In addition, studies far more extensive than this paper have observed that the multiplier effect in and of itself can distort reality. Mark S. Rosentraub calls the multiplier effect "some of the magical mystery tour of any economy. If abused or misrepresented, the multiplier can produce estimates of impact that are nothing more than a mythical expectation of growth."[4] (Interestingly, although Rosentraub, like others, concludes that sports stadiums by themselves do not provide much economic benefit to cities, he says, "as part of an overall plan or strategy, a stadium could be helpful and useful."[5])

Two final points are worthy of consideration: One, it seems counter-intuitive that the new stadium/convention facility would have *no* effect on the New York City economy, despite the Location Quotient value. Such a conclusion seems invalid in light of the employment projections resulting from the stadium, below. (These figures do not include the Javits Center's estimated "several thousand" new jobs resulting from the expansion.)

Two, like the St. Louis and Indianapolis numbers, the numbers below do not include "indirect" employment. These are jobs created in ancillary businesses such as hotels, restaurants and other facilities that, presumably, would add to New York's leisure and hospitality employment. It would be worth investigating whether the *total* incremental employment would push the Location Quotient significantly higher, thus transforming New York City's leisure and hospitality industry into an export industry in the context of this paper's methodology.

STADIUM/EXHIBITION CENTER		
Direct Employment Impact:		**Total**
Stadium:		
Operations	*319*	
Visitor staff	*<u>1,159</u>*	
Total stadium		1,478
Large-scale events		1,517
Plenary sessions		1,262
Arena operations		206
Expo Center		
Operations	*161*	
Exhibitor staff	*56*	
Visitor staff	*<u>2,053</u>*	
Total Expo Center		2,270
Total Annual Employment Impact		***6,733***
Annual Impact with Super Bowl*		***7,297***

*Assumed to occur once every 5 years

Source: N.Y. Jets, Ernst & Young calculations using IMPLAN model.

An additional recommendation is to research older data and produce Location Quotients for St. Louis and Indianapolis based on comparative employment *before* their stadium/convention center facilities were built. It would be useful to determine the extent to which those facilities by themselves transformed their cities' leisure and hospitality services industries from import industries to export industries.

If they had that effect, it would be reasonable to surmise that the projected stadium/convention center expansion in New York, especially in light of the incremental employment noted in the table above, would have a similar effect.

Lastly, a genuine feasibility study of the stadium/convention center addition would also require a qualitative analysis, which is beyond the scope of this paper. Decisions on projects of this magnitude and with this potential effect on the quality of the community's life and the economic future of the city and its environs, obviously depend on much more than a strictly quantitative study.

NOTES

1. Because the data obtained from sources in St. Louis and Indianapolis are not identical in scope, an attempt has been made to "normalize" them based on assumptions. St. Louis data included employment at hotels affiliated with the convention center, while Indianapolis data did not. The hotel figures were therefore removed from the St. Louis total.

2. Andrew Geller, "Javits makeover: a $1.5B expansion planned for center," *New York Post*, November 3, 2003, p. 12.

3. Anne Michaud. "*Javits* sets $1.5 billion plan," *Crain's New York Business,* November 3, 2003, p. 1.

4. Mark S. Rosentraub, *Major League Losers: The Real Cost of Sports and Who's Paying for It* (New York, 1997) p. 163.

5. *Ibid*., p. 205.

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