# FLAWED FORECASTS:
## A CRITICAL LOOK AT
## CONVENTION CENTER FEASIBILITY STUDIES

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## EXECUTIVE SUMMARY

An increasing number of American cities are pursuing an economic development strategy aimed at boosting convention and visitor activities. From Boston to Atlanta, San Antonio to San Francisco, cities are mounting massive construction projects to provide new or expanded convention center space.

The rhetoric of convention center investment is drawn from "feasibility studies," generally developed by a national accounting or economic research firm. These studies lay out the (invariably positive) market analysis for more local convention space. On the basis of these studies, public funds are appropriated and increasingly enormous facilities are constructed. Yet for all their specificity in predicting outcomes, these studies have only rarely been subject to serious review and examination. This paper, based on review of more than 30 such studies, takes a hard look at each feasibility study component to gauge its utility to policymakers and others who rely on these studies to make public investment decisions.

Throughout the 1990s, forecasts of national convention and tradeshow demand made in consultants' feasibility studies have been consistently optimistic about demand growth and the economic value of conventions. Although most studies recognized the impact of the Gulf War and recession on the industry in the early 1990s, they regularly predicted a pattern of steady growth. These forecasts were essentially naive extrapolations of historical data; there were no underlying models of specific sectors of demand, or, indeed, of larger factors like changing travel costs, business restructuring, or family time demands. Thus even 1996 industry projections do not appear particularly reliable after a modest span of three years.

Close examination of data from *Meetings and Conventions, Tradeshow Week,* and the Center for Exhibition Industry Research (CEIR) refutes the assumption of regular annual growth, yet these sources are commonly cited as evidence for a positive trend. Declaring that "overall growth is expected to be strong," a 1997 study for Boston cited CEIR data, which predicted a total of 4,683 shows nationally by 1999. The actual 1999 figure was just 4,503 shows. The 514 million net square feet of exhibit space used in 1999 was below the predicted 522 million. And tradeshow attendance for 1999 proved a notable miss, with the actual figure of 102 million well below the predicted 129 million attendees.

The image of continued substantial growth in space supply is common to all recent feasibility studies. Supply data are commonly misrepresented and are used exclusively to promote building new facilities and expanding existing ones.

Two dominant methodologies are employed to estimate market appeal. One relies on surveys of convention and tradeshow meeting planners about their interest in meeting in a particular city, a kind of beauty contest in which they are queried as to the likelihood of using new convention space in a specific

city. The second approach quantifies a set of factors the consultant deems central to convention center success, including measures of airline service, the number of local hotel rooms, and size of the metropolitan area population. (In the second approach, the factors considered vary for different cities and are clearly chosen to skew the results in favor of increasing exhibit space.)

Estimates of likely new business are an input to the forecasts of attendance, job creation, and economic impact that are central to selling a new or expanded convention center. Some studies lay out elaborate calculations and deductions but include at least one component, such as "market capture rate," that simply reflects the consultant's judgment or perceptions. Other studies provide a list of "factors" but offer no explanation of how they combine to form estimates of future activity. Successive studies of the same city can also vary markedly.

The logic of calculating the direct spending generated by a convention center is quite reasonable and straightforward—multiply estimated attendance by estimated average length of stay by estimated average daily spending. Yet its validity depends on the strength and accuracy of its components. Studies often estimate the average length of a visitor's stay at four or more days, although available data show an almost one-to-one relationship between attendance and hotel nights.

Convention center feasibility studies generally stand alone, with little detailed comparative data on the performance of other centers or cities, and little evidence of the conclusions of the same consultant to a competing center just down the Interstate or across the state border. Plausible alternatives to adding space, including serving selective market niches, improving the quality or amenities of convention centers, or accepting a limited market share rarely, if ever, appear as market alternatives.

In an era in which both politicians and the public follow carefully gathered statistics on urban crime, student performance on standardized tests, and local property tax rates and values, they have access to little or no real data on what convention centers deliver for the public investment.

*Recommendations*

1. If the analytical marketplace held feasibility studies to a high standard, with regard to both methodology and forecasting, this would inform the public debate. Establishing a public record of predictions and actual convention center performance would bring their true economic value to light, but would take years to inform the decision-making process.
2. A long-term alternative is to oblige convention centers or sports facilities to finance capital costs out of their true fiscal impact (taxing the hotel rooms of only convention attendees, for example), rather than promoting such revenues as a fiscal boon while tapping other, more substantial sources unrelated to their performance. That would provide a clear market discipline and attach real world consequences to predictions.

3. A strategy to force capital investments to compete among themselves for political support is to issue legal debt restrictions, as many states did in the wake of localities' overabundant issuance of speculative debt for railroad construction in the nineteenth century. These typically limited the total size of local debt and required a majority (often two-thirds) public vote on any debt issue.
4. In combination with the previous recommendations, a fixed cap on debt and capital spending, such as the one already in place in Massachusetts, would impose a kind of fiscal and analytical discipline often lacking in public investment decisions. Regardless of purpose or backing, a project would be obliged to compete with others—the convention center against the stadium against the airport. Paired with an annual limit on the capacity to take on new debt, this would offer some real feedback from the political marketplace.

Adopting these recommendations would begin to give the public and policymakers the information necessary to choose the best public project and ensure that investments of hundreds of millions of dollars bring real economic benefit to the community.

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## INTRODUCTION

An increasing number of American cities are pursuing an economic development strategy aimed at boosting convention and visitor activities. From Boston to Atlanta, San Antonio to San Francisco, cities are mounting massive construction projects to provide new or expanded convention center space. The national total of convention hall exhibit space has grown as a result, from 40.4 million square feet in 1990 to 50.7 million in 1998, with industry data projecting the addition of some 11 million square feet of space in the next five years.[1]

The boom in convention center development has been sustained by a persistent rhetoric from city to city—more space means more convention attendees, producing more spending, new jobs, and private development. Thus in Louisville, former Mayor Jerry Abramson could boast that an expanded Commonwealth Convention Center would "bring with it 15 new conventions, 188,000 more overnight delegates, and an additional $48 million in direct tourist spending...boosting our travel and tourism industry."[2] And in Boston, local and state officials could confidently back a new Boston Convention and Exhibition Center with the promise of some 537,600 new convention attendees by the year 2012, with a direct economic impact of $436 million, and the generation of some 6,500 new jobs for the city and the Commonwealth.[3]

The rhetoric and promise of convention center investment is built on the foundation of bulky and number-laden "feasibility studies," generally developed by a national accounting or economic research firm. These studies lay out the (invariably positive) market analysis for more local convention space. Yet for all the specificity in defining results and outcomes, and the seeming certitude in calculating the need and demand for convention center space, these feasibility studies have only rarely been subject to serious review and examination. Their conclusions and forecasts are not routinely re-examined for accuracy and reliability. And their data, methodology, and substantive conclusions are effectively never subject to comprehensive or comparative analysis. Yet on the basis of these studies, public funds are appropriated and increasingly enormous facilities are constructed.

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[1] "Major Exhibit Hall Directory 1998," *Tradeshow Week*, Los Angeles, 1998, p. 13.
[2] Jerry Abramson, "The city's economic outlook is bright," *Business First of Louisville*, January 5, 1998.
[3] City of Boston and Commonwealth of Massachusetts, "Boston Convention & Exhibition Center: Technical Appendices, Volume 1," March 1997, Economic Impact, pp. 6, 9.

The analyses and forecasting presented in convention center feasibility studies rest in part on assumptions about future demand and supply of convention space at both the national and local levels, developed from data supplied by trade groups. Facility size, amenities, and location combine to give specific venues some degree of market appeal and perceived competitiveness. These attributes are quantified through surveys and other means and used to predict event bookings and attendance for each venue, given either current capacity or a planned expansion. These predictions, in turn, inform the calculation of likely direct and indirect economic benefits to the community of building or expanding a convention center. This paper takes a hard look at each feasibility study component to gauge its utility to policymakers and others who rely on these studies to make public investment decisions.

The analysis that follows is based on a review of convention center feasibility studies for Anaheim, Atlanta (2), Austin (3), Boston (4), Buffalo, Charlotte, Cincinnati (2), Cleveland, Denver (2), Detroit, Houston, Louisville, Los Angeles, Mesa (Arizona), Milwaukee, New York City, Philadelphia, Providence, San Antonio (2), San Diego (2), San Francisco, and Washington, DC (2). They cover a broad range of city size categories, regions, and character. The studies were completed by a variety of firms primarily from late 1990 through early 1999. And although they vary in length and substance, each recommended the construction of a new convention facility or the substantial expansion of an existing one.

## THE NATIONAL MARKET FOR CONVENTION SPACE

Feasibility studies seek to convey a picture of broad national market trends. In the convention and tradeshow industry, that means a linked examination of the demand for convention center space—the size and growth pattern of the exhibition industry—and the trends in convention center supply.

### *Demand*

National demand is central to the viability of a new or expanded convention center, and to its economic impact. Stable or declining demand might suggest a difficult competitive situation for any particular center, while growing or expanding demand would likely fill up new convention center space.

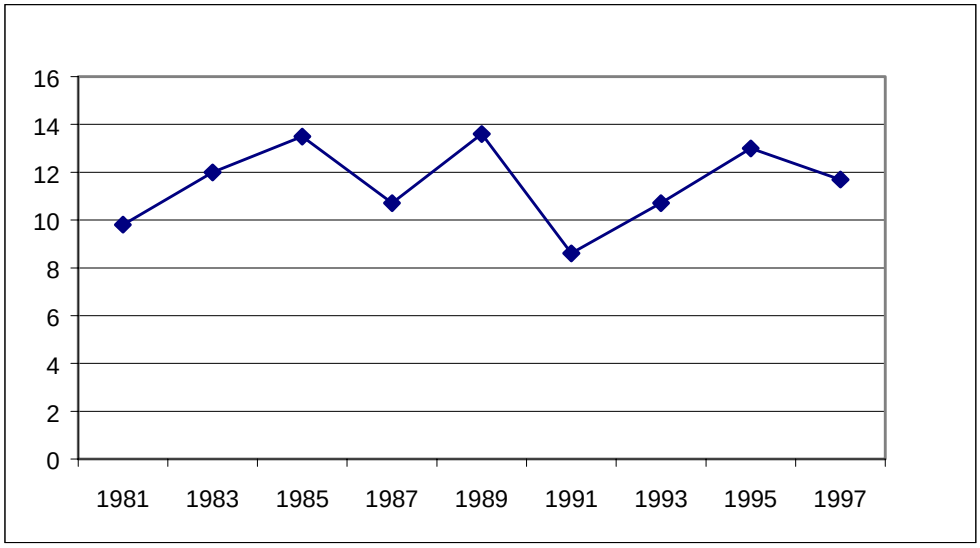
Throughout the 1990s, feasibility studies uniformly portrayed the convention and tradeshow market as one characterized by regular annual growth. The November 1990 study for the expansion of San Antonio's Henry B. Gonzalez Convention Center concluded that "overall, national demand for convention center space is growing between 5 percent and 8 percent per year."[4] The San Antonio study made particular use of biennial data on convention attendance compiled by *Meetings and Conventions* magazine, noting "The total number of delegates attending conventions increased at 5.45 percent per year

going from 8,000,000 delegates in 1979 to 13,600,000 in 1989."[5] A more recent (1997) study recommending a new convention facility for Boston also made use of updated information from the *Meetings and Conventions* biennial survey, noting that "The recent rebound of the meetings and conventions market has been attributed, in part, to a 19 percent increase in corporate profits. Since 1991, conventions have experienced the most dramatic growth, with a 16 percent increase in the number of events, a 24 percent increase in attendance, and a 41 percent increase in direct spending."[6] A market analysis for Milwaukee's Wisconsin Center in 1996 had not only come to the same conclusions, the wording was virtually identical.[7]

The September 1991 analysis of the San Diego Convention Center by Price Waterhouse, drawing on the same data series from *Meetings and Conventions,* contended, "During the 1980s, the convention and tradeshow industry experienced increases in number of events, attendance and required exhibit space," although "growth in both convention and tradeshow demand started to level off in 1988."[8] And a 1997 analysis of the market for an expanded center in downtown Denver concluded, "Beginning in 1993 and continuing through 1995, many of the primary measures of industry growth rebounded to pre-1990 levels. This trend is expected to continue, with industry growth ranging from three to five percent annually over the next five years."[9] The actual results of the *Meetings and Conventions* survey of number of conventions and convention attendance through 1997, the most recent year available, are shown in figure 1. Although total attendance did grow from approximately 8 million in 1979 to 13.6 million in 1989, that 1989 total represents the high water mark to date. Convention attendance is estimated to have fluctuated around 11 million since 1991, with a figure of 11.7 million for 1997.

[4] Arthur Andersen and Co., "Henry B. Gonzalez Convention Center Expansion Feasibility Analysis," November 1990, p. 32.
[5] Ibid., p. 25.
[6] City of Boston and Commonwealth of Massachusetts, "Boston Convention & Exhibition Center: Technical Appendices, Volume 1," Meetings Industry Overview, March 1997, p. 9.
[7] "The recent rebound of the meetings market has been, in part, attributed to an increase in corporate profits. Since 1991, the conventions segment of the meetings market has experienced significant growth with a 16% increase in the number of events, a 24% increase in attendance, and a 41% increase in direct spending." Stein and Company, "Financial Feasibility Study Prepared for Wisconsin Center District," January 1996, p. 4.
[8] Price Waterhouse, "San Diego Convention Center: Market, Financial and Economic Impact Analysis," September 1991, pp. 3, 4.
[9] Coopers & Lybrand, "A Market, Building Program, Financial and Economic Impact Analysis for the Potential Expansion of the Colorado Convention Center," January 1997, p. ES-i.

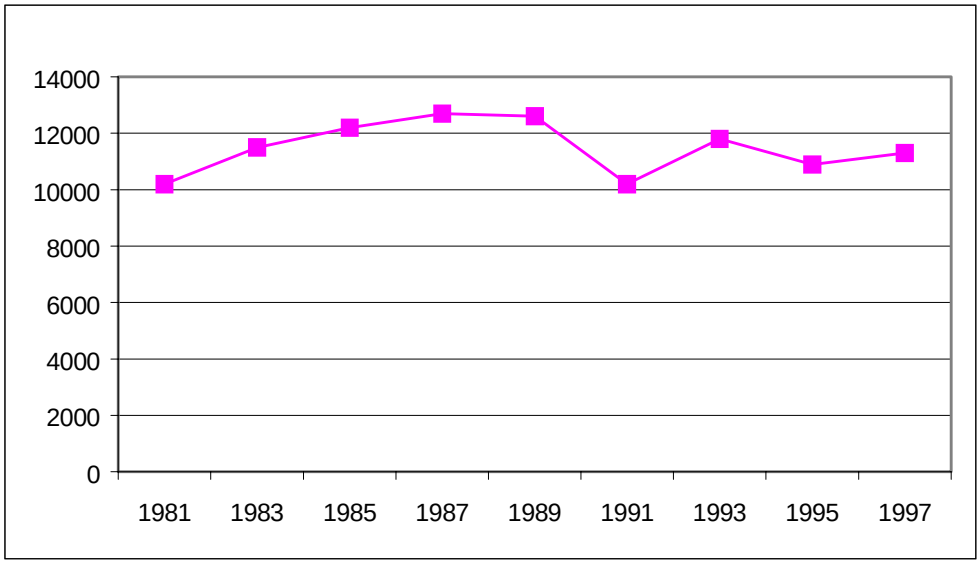
**Figure 1. Convention Attendance by Year (in millions)**




Source: Meetings & Conventions, *1998 Meetings Market Report.*

A similar pattern of essential stability with some annual fluctuation is apparent in the *Meetings and Conventions* data for total number of conventions over the same time period (figure 2).

**Figure 2. Convention Events by Year**



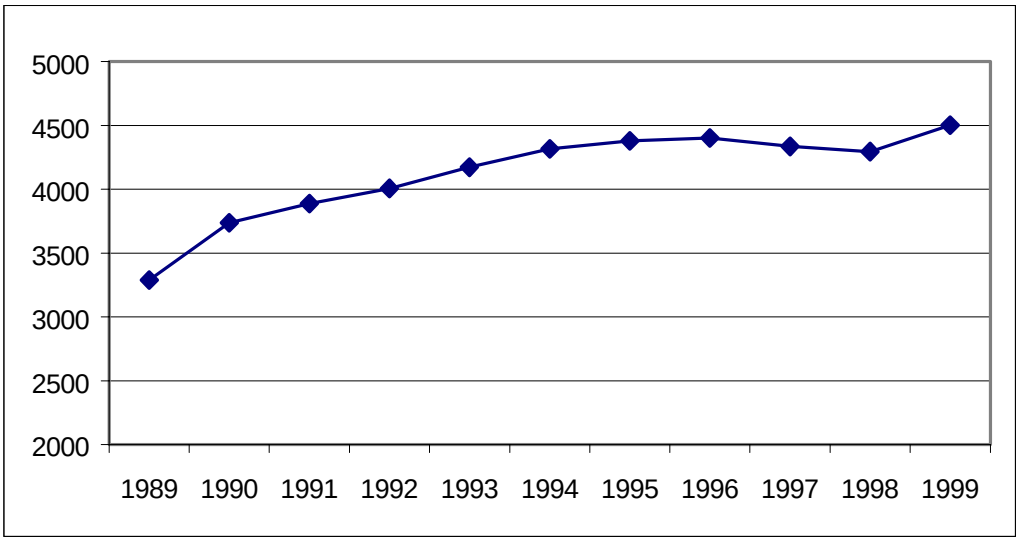

Source: Meetings & Conventions, *1998 Meetings Market Report.*

Two factors stand out in the studies' evaluation of national convention demand. First, a number of consultants have made use of essentially the same data from *Meetings and Conventions*. Yet their

forecasts, based on data from the late 1980s through the mid-1990s, have not followed the actual performance of the event count and attendance measures. Second, much of the analytical language is similar, and in some cases exactly the same, from study to study. The tendency to treat change over a relatively short time period as indicative of longer term demand performance is pervasive.

A number of feasibility studies also present demand figures based on data collected by *Tradeshow Week*. These data series cover two segments of the exhibition industry. The annual *Tradeshow Week 200* tracks the attendance and space utilization of the 200 largest shows each year, based on actual show performance. Unfortunately, the *Tradeshow Week 200* data have a clear upward bias, in that they follow the largest and most successful events each year. Tradeshows that lag or fail drop out of the compilation, while rapidly growing events are included as they reach an appropriate size. The annual turnover rate in recent years has been about 15 to 17 percent. A second issue with the *200* involves the location of the shows. These large tradeshows are concentrated in a handful of cities with large convention facilities. Thus in 1996, Las Vegas accounted for 36 shows, or 18 percent of the total, with Chicago second at 12.5 percent. The top five show locations (adding Atlanta, New York, and Dallas) accounted for 55 percent of the 200 tradeshows. While the performance of these major trade events has some relevance for Chicago or Atlanta, most cities will like host only a few, if any, of this size.

**Figure 3. Convention and TradeShow Exhibitions**



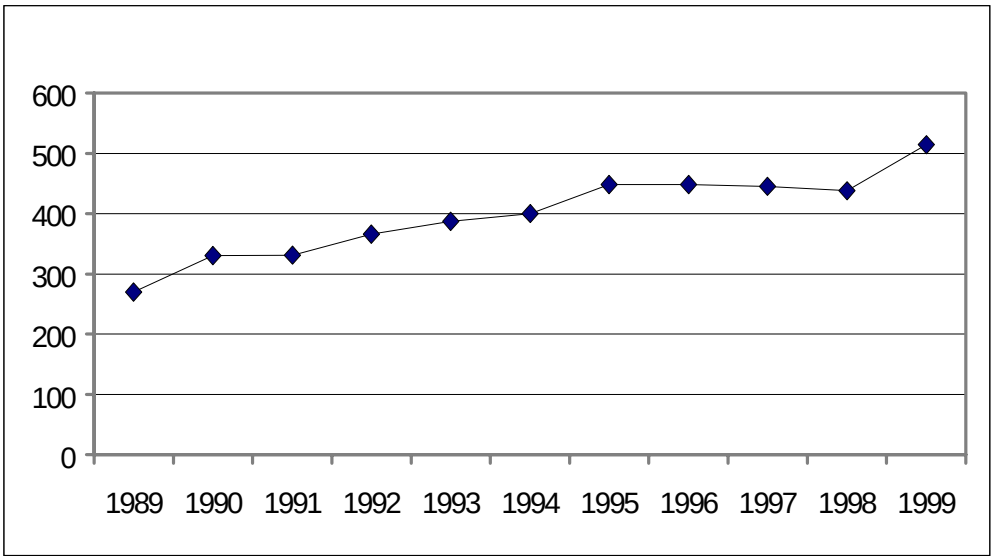

Source: *Tradeshow Week Databook* for selected years.

*Tradeshow Week* provides a broader annual measure of the tradeshow and convention market in its *Databook*. The *Databook* includes more than 4,000 exhibitions across a large number of cities and meeting sites, and thus provides a broader picture of overall demand than the *200.* Figures on number of

conventions and tradeshows, attendance, and estimated space used from the *Databook* undergird the market analysis for a number of studies.

A 1993 study of a proposed Boston convention center reads, "According to *Tradeshow Week*, North American trade shows have grown in terms of exhibition space required, number of exhibiting firms and attendance, at compound annual rates of approximately 6-8 percent over the past two decades," concluding that "there is currently no persuasive evidence that exhibition space demand growth for either trade shows or conventions will abate in the foreseeable future."[10] An analysis of Washington, DC's convention prospects the same year was also optimistic: "Although growth in the next decade is not expected to be as strong as in the 1980's, the industry is still expected to expand." The Washington study went on to indicate estimated annual growth rates for tradeshow size and attendance from 1991 to 2001 at 4.5 percent and 4.1 percent.

**Figure 4. Convention and TradeShow Net Square Feet Used (in millions)**



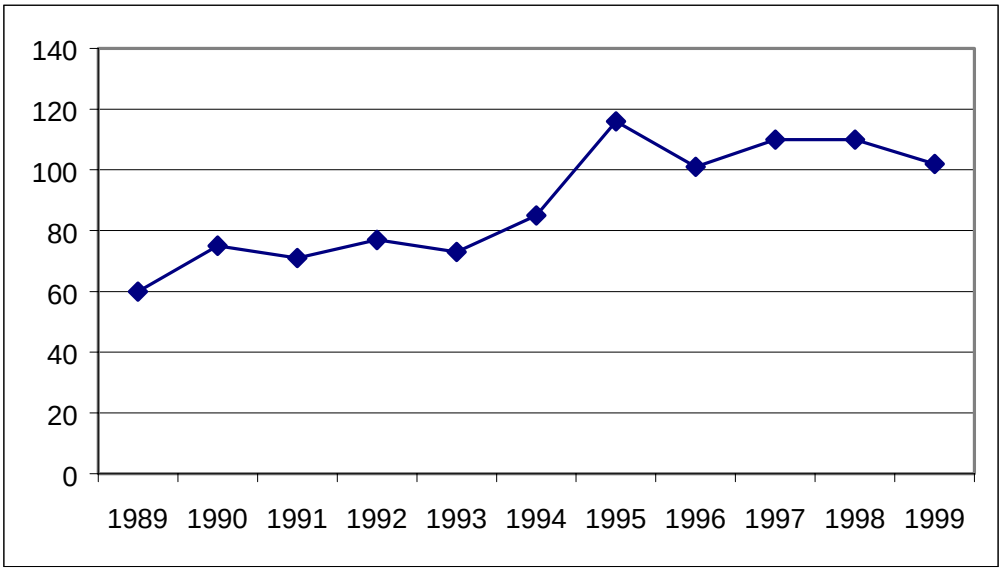

Source: *Tradeshow Week Databook* for selected years.

Figures 3 through 5 present the actual annual data on number of exhibitions, space, and attendance from *Tradeshow Week*'s annual compilation. There was a clear pattern of annual growth through the early 1990s, which appeared to slow about 1994 or 1995. Despite the growth in the national economy over this period, which was assumed to drive tradeshow growth, the number and size of shows remained relatively flat through 1998. For 1999, there is an upward spurt in both size and number.

[10] Price Waterhouse, "Expansion of Boston's Convention Center Facilities, Final Report, Phase I," July 1993, pp. 24-5.

Whether that is simply a "blip" or an indication of continued growth is unclear at this point. Tradeshow attendance, of vital importance to cities that hope to draw conventiongoers and boost their local economies, actually declined in 1999, to a level equivalent to that of 1996.

**Figure 5. Convention and TradeShow Attendance (in millions)**




Source: *Tradeshow Week Databook* for selected years.

The 1997 Boston study also made use of forecasts generated by the Center for Exhibition Industry Research (CEIR), an industry-backed group that uses the *Tradeshow Week Databook* data. Declaring that "overall growth is expected to be strong," the study predicted that by 2000 there would be 4,781 annual exhibitions using 550 million square feet of space and attracting some 140 million attendees.[11] Much the same analysis, with the same CEIR predictions, appears in a December 1997 feasibility study of a new convention center for Buffalo,[12] and again in a study for Cincinnati in 1999.[13]

Tradeshow growth in recent years clearly does not follow a simple pattern of 4, 5, or 6 percent regular annual increases. At the very least, the industry appears to be characterized by irregular spurts. Attendance has not followed a growth trajectory at all, remaining effectively flat since 1995. What of the specific projections made by the CEIR noted in the Boston, Buffalo, and Cincinnati studies? The organization forecast a national total of 4,683 shows by 1999, while the actual figure (after a large jump from 4,295 in 1998) came to just 4,503. The 514 million net square feet of exhibit space used in 1999 was

[11] City of Boston and Commonwealth of Massachusetts, "Boston Convention & Exhibition Center: Technical Appendices, Volume 1, March 1997," Meetings Industry Overview, p. 11.
[12] C. H. Johnson Consulting, Inc., "Convention Center Feasibility Study: Final Report," December 1997.
[13] Price Waterhouse Coopers, "Cincinnati Convention Center Expansion Study: Final Draft," 1999.

below the predicted 522 million. And tradeshow attendance proved a more notable miss, with a predicted 129 million attendees well above the actual figure for 1999 of 102 million.

The forecasts of national convention and tradeshow demand made in consultants' feasibility studies have been consistently optimistic about demand growth and the economic value of exhibits. Although most studies recognized the impact of the Gulf War and recession on the industry in the early 1990s, they regularly predicted a pattern of steady growth. These forecasts were essentially naive extrapolations of historical data; there were no underlying models of specific sectors of demand, or, indeed, of larger factors like changing travel costs, business restructuring, or family time demands. Thus even the 1996 CEIR projections do not appear particularly reliable after a modest span of three years. And projections based on the *Meetings and Conventions* survey data for conventions appear even less reliable.

*Supply*

Analyses of the supply of convention center space and growth rates have been quite similar over the decade. The 1990 study for the city of San Antonio described some 42.4 million square feet of national convention exhibit space in 1987, concluding, "Clearly, growth in conventions and meetings have (sic) caused not only new facilities to be built but existing facilities to expand."[14] San Diego's 1991 study presented a graph of the same growth, reaching some 54 million square feet of space by 1991. And the 1993 examination of Washington's convention center prospects documented "a 7.3% annual growth rate" in center space across the nation, warning, "Markets not increasing their supply of exhibit space to meet the increased size demands of expositions could fail to attract the lucrative business of the larger events."[15]

In December 1997, Washington, DC, officials received a second feasibility study, which reported continued growth reaching a total of 64.2 million square feet of exhibit space, with the projection of approximately 3.7 million square feet to be added to the convention center inventory by the year 2000. Yet even these inflated reports were not seen as portending an imbalance in supply. Rather, "these cities have generally recognized that larger facilities will be required to accommodate incremental growth in the convention and trade show industry, and that larger and more modern facilities will likely be necessary to attract incremental levels of even business, to remain competitive with other destinations in attracting these events, and to reap the associated benefits attributed to the industry."[16] In other words, as long as some cities were building or expanding, it was necessary to "keep up with the Joneses."

[14] Arthur Andersen and Co., "Henry B. Gonzalez Convention Center Expansion Feasibility Analysis," November 1990, p. 32.
[15] Deloitte & Touche, "Financial Feasibility Study of a New Convention Center in the District of Columbia," April 1993, pp. 36, 39.
[16] Coopers & Lybrand, "Analysis for the Proposed Washington Convention Center," December 1997, p. 10.

The image of substantial growth in space supply is common to all recent feasibility studies, which almost invariably rely on *Tradeshow Week*'s annual "Major Exhibit Hall Directory." Yet despite the pervasiveness of the exhibit space data, it is also commonly misrepresented. The exhibit space totals reported in the Washington and San Diego studies, for example, include American convention centers of 25,000 square feet or more, hotel convention exhibit space, and Canadian convention facilities. Both the hotel and Canadian data series have shown decidedly smaller growth rates in recent years than major U.S. exhibit halls—17.1 percent for hotels and 16.9 for Canadian facilities from 1990 to 1997, compared to 39.4 percent for American convention centers only. With Canadian organizations limited to Canadian facilities, and hotel exhibit halls on average less than half the size of convention centers, the appropriate basis for judging supply is clearly U. S. convention centers alone. Beyond the inclusiveness of the convention center definition, it is clear that growth will be even more expansive in the near future.[17]

## THE LOCAL PICTURE: CENTER PERFORMANCE AND EXPANSION

No amount of national meeting boom may bring business to a poorly located or undesirable center, while a top-notch destination may survive even in a highly competitive environment. With cities from Atlantic City to Buffalo, Cleveland to San Diego considering or building more meeting space, the performance of the center and place will ultimately be crucial to future economic impact.

### *Measuring Success*

For some convention centers, business would appear to be booming. In 1991, the Atlanta center's occupancy rate was calculated to be 67 percent, compared to an average among "comparable and competitive facilities" of 53 percent, and equal to the highest occupancy rate for the group. And in 1996, after a 1992 expansion of more than 300,000 square feet of exhibit space, the consultant was no less complimentary: "Georgia World Congress Center has consistently achieved higher annual professional and trade show occupancy than most U.S. convention centers in gateway cities (greater than 20,000 hotel rooms in MSA)."[18] The center's 1995 occupancy rate for professional and trade shows was 50 percent, compared to an average of 42.7 percent for "Major U.S. Centers."[19]

If the drop in occupancy rate from 67 percent to 50 percent constituted a concern, it was not mentioned by the consultant. Noting industry growth rates and planned expansions in other cities, Price

[17] The 1997 "Major Exhibit Hall Directory" described a planned 4.8 million square feet of new exhibit space in the United States and Canada over the subsequent five years. The estimate of the 1998 "Major Exhibit Hall Directory" was for a total of 11 million square feet of new space over five years. The 1999 estimate, to the year 2004, now indicates 14.2 million square feet will come on the market.

[18] Price Waterhouse, "Georgia World Congress Center: Market, Economic & Fiscal Impact Analysis of Proposed Phase IV Expansion," October 1996, p. i.

[19] Ibid., p. 32.

Waterhouse in 1996 called for an additional 700,000 square feet of exhibition space, well beyond the 525,000 it had recommended in 1993.

Tying the need for more space to past success has not been limited to Atlanta. Price Waterhouse also studied a plan for a new center in Boston in 1993. There, the existing Hynes Convention Center "has been operating at close to capacity since it opened...the Hynes has experienced convention/trade show occupancies ranging from 56-68 percent in recent years, while occupancy averages have ranged from 43-45 percent for the primary convention centers in the nation's 24 largest convention destinations (which includes Boston)."[20] Two years later, the news was still good, with the Hynes operating "at near capacity, with convention/trade show levels of 60 to 65 percent annually."[21] And the consultant could comfortably recommend a new convention center with 650,000 square feet of exhibit space.

Price Waterhouse was also positive about Cincinnati, where a 1995 analysis judged the Sabin Convention Center to have "achieved practical maximum occupancy since it was expanded in 1987," with an "extraordinary rate of market capture," calculating a single year total occupancy of 74 percent.[22] In one of the rare cases in which center performance was followed over more than two or three years, Cincinnati's overall occupancy rate (including conventions, tradeshows, and consumer shows) reportedly fell from 68 percent in 1993 to just 50 percent in 1997.[23] For some that might indicate some problem with the city and its capacity to compete as a destination. But for the consultant, the lesson was clear: "Large groups have outgrown the existing center and smaller groups...have replaced them."[24]

Coopers and Lybrand had good news for a number of centers, albeit with a different and more generous method of calculating occupancy levels. New York City's Jacob Javits Convention Center achieved "utilization rates" of 73 percent and 79 percent for 1995 and 1996, leading to its description as "currently operating near capacity and expected to reach maximum functional capacity before the turn of the century."[25] Things were just about as good for Denver's Colorado Convention Center, with 72 percent utilization in 1995.[26] But the performance of the Washington, DC, Convention Center was remarkable in comparison, with Coopers reporting, "The utilization percentage was approximately 96 percent in 1994 and increased to 103 percent in 1996….Occupancy greater than 100 percent is possible given the

[20] Price Waterhouse, "Expansion of Boston's Convention Center: Final Report, Phase 1," July 1993, p. 1.
[21] Price Waterhouse, "Convention/Exhibition Facility Needs Assessment," May 1995, p. II.4.
[22] Price Waterhouse, "Sabin Cincinnati Convention Center Expansion Study," June 1995, pp. ES-1, 13.
[23] Price Waterhouse Coopers, "Cincinnati Convention Center Expansion Study: Final Draft, 1999," p. 22.
[24] Ibid.
[25] Coopers & Lybrand, "A Market, Building Program, Financial Operations and Economic Impact Analysis for Potential Expansion of the Jacob K. Javits Convention Center of New York," April 1997, pp. 1-1 and 4-7.
[26] Coopers & Lybrand, "A Market, Building Program, Financial and Economic Impact Analysis for the Potential Expansion of the Colorado Convention Center," January 1997, p. ES-iv.

methods…used to calculate exhibit space occupancy percentages."[27] That performance led Coopers & Lybrand to conclude that the Washington center "currently operates at near capacity levels...."[28]

How are these occupancy rates calculated? The occupancy rates for Atlanta, Boston, and Cincinnati are based on the total of each center's exhibit space used over a year, divided by the available space times 365. That provides a reasonable index of how full a particular center is, without necessarily specifying the kinds of events or exhibits that fill it. The Coopers & Lybrand studies, in contrast, use a denominator of the total exhibit space available times 365 days, less 30 percent. That downward adjustment of available space makes it entirely possible to have well over 100 percent utilization, while seeming to inflate the performance of the center. Thus for New York's Jacob Javits Center in 1996, a "utilization percentage" of 79 percent really translates into a total occupancy rate of 55 percent.

*Filling the Box*

The kinds of events drawn to a convention center are as important as the level of occupancy to the center's economic impact. Centers can be used for traditional conventions, which draw association members to a city from across the country, or with tradeshows, which typically exhibit new products or services to an industry and draw fewer out-of-town visitors. Centers can also house consumer or public shows, like the Auto Show, Home Show, or Boat Show, which attract local residents, or local meetings of professional organizations or groups. Fill a center with national conventions, and it draws visitors who occupy hotel rooms and spend their dollars in restaurants and shops. Fill a center with local events or consumer shows, and it may attract large numbers of area residents who drive in for some of the day, and may spend money on lunch. The major conventions and tradeshows that have drawing power and generate economic impact from imported dollars are the obvious plums of the convention center trade. But they may not be what fills up a center.

Take the case of the Washington, DC, convention center. Only 47 percent of the utilization days were for national or international conventions and tradeshows. Another 27 percent were made up of regional and local events, largely drawing residents of the metropolitan area. And another 25 percent were purely local public shows. Thus while the center was "operating at levels within or above its practical maximum capacity," more than half of its operating days were filled with local events.[29]

Cincinnati's Sabin Convention Center was also deemed to be operating at maximum occupancy in a 1995 study—about 68 percent. But conventions and tradeshows made up only 40 percent occupancy. The remaining 28 percent (or about 41 percent of the center's business) was made up of consumer shows.

[27] Coopers & Lybrand, "Analysis for the Proposed Washington Convention Center," December 1997, pp. 62-3.
[28] Ibid., p. 1.
[29] Ibid., p. 66.

Once again, Cincinnati's apparent success in "filling the box" was due in large measure to events designed to attract Cincinnatians, not out-of-town visitors.

Most of the New York's Jacob K. Javits Convention Center's space use in 1995 was by conventions and tradeshows, a total of 58 percent, with public shows adding another 15 percent. A feasibility study concluded that the Javits was operating "near capacity," a plausible argument for expanding a successful center to draw in even more business. But of the events held at Javits in 1995 and 1996, the majority used less than half the center's exhibit space. In fact only a handful of events—4 in 1995 and 7 in 1996—effectively filled the center. Still, the conventions and tradeshows at the Javits Center appeared to attract real crowds, with 1995 convention and tradeshow attendance at 1.1 million. Coopers and Lybrand calculated that the more than 1 million attendees generated only 191,000 hotel room nights. If the Javits is both full (in occupancy) and busy (in attendance), it would appear to be singularly successful in drawing people from the city and the metropolitan region, and those who visit for the day, and markedly less successful in luring out-of-towners to New York. In comparison, Washington's convention center, about half the size of the Javits, generated 220,500 hotel room nights in 1995.

The New York City case illustrates a central question of convention center development and expansion—the difference between generating attendance and actually increasing economic activity. Convention centers by themselves do little to create jobs or spending. Their impact is indirect and depends on the numbers and types of people they attract, how long those people choose to stay in the city, and how much they ultimately spend.

*Combating Failure*

For each of the centers, like Atlanta and Boston, that has performed above average in terms of occupancy or attendance, there is another with below average performance.

Louisville. The 1992 study of Louisville's Commonwealth Convention Center showed that convention and tradeshow "use days" from 1986 through 1990 averaged just 78, and "since 1986, only three major events used the entire facility including all exhibit and meeting space."[30] The study went on to compare Louisville's record of "market capture" of conventions and tradeshows to a group of six competing centers. "In general, the Commonwealth Convention Center's level of activity is well below that of Baltimore, San Antonio, Cincinnati, Kansas City and Indianapolis."[31] Indeed, its "capture rate" was just half of Kansas City's and a third of Baltimore's or Cincinnati's. The consultant forecast that with a larger Commonwealth Center, "Louisville could enhance its market capture of convention and trade

[30] Economics Research Associates, "Market and Economic Feasibility Analysis for Expansion of the Commonwealth Convention Center," February 1992, pp. II-12, II-13.

show activity that is regional and national in scope," double its capture rate and more than double its attendance.[32]

Cleveland. The Cleveland Convention Center's utilization days by conventions and trade shows "ranged from 68 days in 1995 to 49 days anticipated in 1997."[33] In comparison, its competitors' utilization ranged from 150 to nearly 300 event days annually. Convention and tradeshow attendance was just 42,300 in 1996 and about half that the previous year—well below the 53,000 attendance even Louisville managed for 1990. The 1997 feasibility study nonetheless recommended that Cleveland expand to a total of 400,000 square feet of exhibit space (a 43 percent increase) and projected the number of conventions and tradeshows would grow from 17 to 50, and attendance would rise from 42,000 to almost 216,000..[34]

Buffalo. The Buffalo Convention Center hosted 32 conventions and tradeshows in 1995 and 21 the following year. But attendance only amounted to 32,709 in 1995 and 22,725 the next year, beneath even Cleveland's figures. C. H. Johnson Consulting concluded in 1997, "Compared to most convention facilities, convention and meeting attendance at the BCC is relatively low. The lack of a well functioning facility is a major reason for the small share of convention events."[35] Despite the center's historical performance, Buffalo's consultant was upbeat about its prospects: "The meeting industry is highly segmented and Buffalo can appeal to many segments," and "Buffalo is strategically located, especially for regional events."[36] Armed with the conclusion that "Buffalo has certain qualities not found in many other peer cities" and deeming a new 125,000-square-foot convention center "a leading-edge investment," the study predicted a total of 50 conventions and tradeshows by 2005 with a total attendance of 106,050—boosting business by a factor of four.[37]

For centers that have a track record of substantial performance, the logic of the feasibility studies is that they risk being outgrown as conventions expand. For centers that have performed below average or poorly, the arguments stress the need to have newer, larger facilities in order to compete. Thus there would appear to be no situation in which past performance suggests anything other than expansion and more space.

Will expansion to keep up with the competition or to match the growth in the exhibition industry necessarily bring a proportional increase in attendance? Atlanta's Georgia World Congress Center, long viewed as a successful and attractive venue, drew 637,000 convention and tradeshow attendees in 1991. In 1992 it expanded by some 46 percent, adding 300,500 new square feet of exhibit space. After the

[31] Ibid., p. V-7.
[32] Ibid., p. I-2.
[33] Coopers & Lybrand, "An Analysis of Cleveland's Major Convention Exhibit Facilities: Executive Summary," 1997, p. 5.
[34] Ibid., p. 14.
[35] C. H. Johnson Consulting, Inc., "Convention Center Feasibility Study: Final Report," December 1997, section 5, p. 4.
[36] Ibid., section 3, pp. 15-6.

expansion, in 1994 and 1995, it averaged 815,000 attendees, a 28 percent increase. More space clearly enabled greater attendance. But the attendance boost was far more modest than the growth in space.

The Morial Convention Center in New Orleans added some 373,000 square feet of exhibit space in 1991, an increase of 114 percent. In the years prior to the expansion (1986-1990), attendance averaged 511,224. Attendance grew after the expansion, to an average of 748,669 from 1992 to 1997. The 114 percent increase in space thus yielded only a 46 percent increase in attendance. And despite the persistent argument that the convention and tradeshow business is steadily growing each year, there has been no pattern of regular attendance increases for New Orleans, with the 1997 figure of 784,441 just slightly over the average.

## COMPETITIVENESS AND MARKET APPEAL

The focus of any feasibility study is its judgment about future performance—the estimation of the likely appeal of a new center or more space to meeting planners, the competitive position of a particular city or site. The relative appeal of a city will shape its ability to draw new business independent of the changes in the national market. Estimates of likely new business are an input to the forecasts of attendance, economic impact, and job creation that are central to selling a new or expanded convention center.

Two dominant methodologies are employed to estimate market appeal. One relies on surveys of convention and tradeshow meeting planners about their interest in meeting in a particular city, a kind of beauty contest in which they are queried as to the likelihood of using new convention space in Cleveland or Washington. The second approach quantifies a set of factors the consultant deems central to convention center success, including measures of airline service, the number of local hotel rooms, and size of the metropolitan area population.

### *Survey Results*

One major consulting firm employs the survey approach to "assess the likelihood that event organizers would plan an event" in a particular city, and to provide "a detailed understanding of potential user needs and their willingness to use the proposed convention facility" in the city under study. Employing a sample of 200 to 250 events (but without indicating the number of actual respondents), this consultant poses the question of whether the city would be considered as a destination and then sums those who answer "definitely yes," "highly likely," and "possibly" to generate a positive response percentage.

[37] Ibid., section 3, pp. 16-17.

A 1995 study of Anaheim, California's convention and tradeshow prospects illustrates the survey approach. The consultant established a population of events requiring over 100,000 gross square feet of exhibition space, with attendance of 1,000 or more, and then took a sample of 190 of these events. Based on the responses, the study concluded that "it is estimated that approximately 60 percent of the 621 national/regional events in the marketplace would consider Anaheim as a destination assuming that no facility size constraints existed. These percentages compare favorably with studies conducted for other successfully operating facilities across the country."[38]

The 60 percent positive response was then applied to the population of events, yielding a total potential market of 372 events. With an average rotation cycle among convention locations of just over three years, they next generated an annual market of 106 events. The consultant then applied a "market capture percentage" of 23 percent to reflect regional competition, yielding an initial total of 25 events for an expanded Anaheim center, gradually increasing to 32 by 2007.

The Anaheim analysis concluded that the 60 percent positive response compared favorably with other cities. But for observers concerned about the other 40 percent, the consultant offered some heartening news. Some event organizers cited geographic preferences, competitive shows, or poor historical attendance in the area as negatives for Anaheim. But "approximately 46 percent of the reasons given for not rotating to Anaheim can be mitigated with marketing, facility management and/or area development initiatives."[39]

The same survey approach was employed in a December 1997 study of a proposed new center for Washington, DC, with a population of possible events totaling 700. Washington appeared just slightly more attractive than Anaheim: "Based on the weighted average of the responses received, approximately 68 percent of the international, national and regional events in the marketplace surveyed would consider a new, state-of-the-art convention center in Washington, D.C. as an event destination assuming that no facility size or commitable convention-quality hotel room constraints exist."[40]

Just as in Anaheim, the consultant probed the possible reasons for not considering Washington. The primary concerns were locational, including climate and cost. But once again, there was some positive news: "...it appears that some of the reasons cited could be overcome with advertising and marketing promotions. These include perceptions that Washington, DC, may be too cold or too

[38] Coopers & Lybrand, "Feasibility Analysis Related to the Potential Expansion of the Anaheim Convention Center," August 1995, p. 43.
[39] Ibid., p. 47.
[40] Coopers & Lybrand, "Analysis for the Proposed Washington Convention Center," December 1997, p. 36-7.

expensive, or that the city lacks entertainment or family activities. These reasons account for approximately 40 percent of the total negative responses."[41]

If Anaheim, the home of Disneyland, Knott's Berry Farm, and some 18,000 hotel rooms appears to be a desirable destination, and the nation's capital with some 24,000 rooms appears equally interesting to meeting planners, the survey approach has generated comparable results for other cities as well. The analysis of Cleveland's convention and tradeshow future found that event planners provided an overall positive response rate of 58 percent, "similar to the response rates experienced in previous studies for comparable communities," although the survey respondents did find Cleveland "lacking in the area of commitable hotel rooms."[42] Denver, in a 1997 study, came in just a hair behind Cleveland at 57 percent.

The survey results for Washington, Anaheim, Cleveland, and Denver were thus remarkably close. Indeed, meeting planners would have very little incentive to indicate lack of interest in a destination, since the response to the survey carried no real cost or obligation, and more convention space in any city would likely improve their capacity to bargain over rates and space. Still, there were two cities in which meeting and tradeshow planners were decidedly less interested.

As part of a 1993 study of a proposed convention center/stadium "megaplex," Coopers and Lybrand surveyed 315 planners about their interest in going to Boston and Massachusetts—only 33 percent gave a positive response. If compared to the results for other cities, the Boston results might seem a telling index of the area's likely failure to draw future business. But the megaplex study did not provide comparative data. None of the individual city studies did. The Boston analysis did admit that "these positive response percentages are not particularly high compared to other similar markets."[43] Yet a discussion of the negative responses was still encouraging: "Approximately 40 to 50 percent of the negative responses could be attributable to region and weather factors. Many of the other factors such as a lack of event history, cost, union issues, familiarity and other such items could be mitigated to some degree through marketing efforts."[44]

Boston's mediocre survey performance was effectively matched a few years later by New York City. New York's overall positive response was just 36 percent, with almost all those responses (86 percent of the total positives) in the lowest, "possibly" category. But New York's consultant had an explanation: "This relatively hesitant response appears to be based on an unfamiliarity with the facility, or product, as association conventions is a market that has not been aggressively pursued by JKJCC [Javits

[41] Ibid., pp. 37-8.
[42] Coopers & Lybrand, "An Analysis of Cleveland's Major Convention Exhibit Facilities: Executive Summary," 1997, pp. 6, 10.
[43] Coopers & Lybrand, "Megaplex, Convention Center, and Stadium Feasibility Analysis: Final Report," February 1993, p. 25.
[44] Ibid., p. 40.

Center] management in the past."[45] Beyond New York's unfamiliarity as an event location, it posed notable problems of cost for hotels, transportation, and space rental. Despite the fact that the city's 1995 average hotel room rate of $226.50 was the highest among comparable cities (and more than double the rates in Orlando or Las Vegas), the study concluded that "perceived high costs" and "crime perceptions" were among the "approximately 61 percent of the reasons given for not rotating to JKJCC [that] could potentially be mitigated with facility management, marketing, and/or area development initiatives."[46]

The survey method used in the Anaheim, Washington, and New York cases offers the possibility of an empirical validation of a city's potential appeal that can be directly compared to other cities and centers. Yet the studies avoid making any direct comparisons, and destinations with sharp differences in historical performance (like Anaheim and Cleveland) end up appearing quite similar in survey results. That Anaheim, Cleveland, and Denver are equally rated as destinations seems implausible.

Those cities that do appear sharply different in terms of positive appeal, like New York, have their relative failure simply explained away. Despite New York's low ranking, Coopers and Lybrand argued that "there appears to be a significant opportunity for New York to solidify and enhance its standing as a major trade event destination," and called for a doubling of the Javits Center's exhibit space to between 1.5 and 1.75 million square feet.[47]

*Comparative Rankings*

Some studies seek to establish a convention center's appeal relative to competitive cities and centers by rankings based on a series of relevant factors. The 1991 analysis of San Diego's meeting potential provides an example: "Price Waterhouse has developed an analytical model which measures a community's relative attractiveness as a meetings destination. Over 60 percent of a city's meeting activity is correlated with three factors: Population; Number of hotel rooms; and Number of inbound airline passengers."[48] Among a group of 11 major cities (including Las Vegas and San Francisco), San Diego ranked 9th on the basis of the three variables. Although the model of meeting activity might appear to suggest a rosier future for Anaheim (ranked second) or San Francisco (ranked third), the consultant nonetheless argued that "expansion of the San Diego Convention Center will create a significant benefit to the economy of San Diego, enhance the value of Port District property and further advance the economic health of the downtown area."[49]

[45] Coopers & Lybrand, "A Market, Building Program, Financial Operations and Economic Impact Analysis for Potential Expansion of the Jacob K. Javits Convention Center of New York," April 1997, p. 5-4.
[46] Ibid., pp. 3-7 and 5-5.
[47] Ibid., page ES-i.
[48] Price Waterhouse, "San Diego Convention Center: Market, Financial and Economic Impact Analysis," September 1991, p. 7.
[49] Ibid., p. 2.

Price Waterhouse elaborated on the three-variable model of "dominant site selection criteria" in a 1993 study of Atlanta's prospects. Atlanta ranked sixth among a group of 13 cities on the number of metropolitan area hotel rooms, ninth in number of inbound passengers, and sixth in terms of metro area population. Those rankings would appear to place Atlanta at about the midpoint of its competition, particularly in comparison to Chicago (ranked fourth, third, and second), Las Vegas (ranked second, fourth, and thirteenth), or New York (ranked third, first, and first). Yet the consultant's analysis estimated that "GWCC would achieve compound annual growth of approximately 12 percent" with a 525,000-square-foot expansion, boosting its market share from 9 percent to 13 percent.[50]

A second study of Atlanta's prospects three years later applied the same logic of competitive position, with some amendments. Rather than measuring air service in terms of inbound passengers, the 1996 study employed a measure of the number of cities connected by direct flights. As a major hub, that measure ranked Atlanta second of 15 major destinations. The newer analysis also added two measures of downtown office space—total class A space and occupancy rate—because "the strength of a city's downtown commercial office market usually affects its success as a professional and trade association destination."[51] On the office measures, Atlanta ranked fifth and sixth among 15. Thus, "with a healthy downtown office market" and "the city's high ranking in terms of air access [as] a significant advantage in terms of attracting national trade association events," and despite downgrading Atlanta's projected market share from 13 percent to 10 percent, the 1996 analysis called for a larger, 700,000-square-foot expansion as "most beneficial in preparing Atlanta and the GWCC for the next decade."[52]

When the comparative approach was applied to smaller Boston, it was amended in some significant respects. Boston was compared to a group of 11 "primary competitors," which excluded such major meeting destinations as Chicago, Las Vegas, and New Orleans. And the measures were somewhat different as well. Boston ranked but sixth on the number of metropolitan area hotel rooms. But an alternative measure—rooms within two or three blocks of the convention center—boosted its position to first. Tapping the number of hotel rooms close to Boston's existing Hynes Center would be irrelevant to plans for a brand new center on an undeveloped site with no hotels nearby, but it did help support the conclusion that Boston would capture more than its fair share of business.

Boston's comparative position in terms of air access was also relatively modest, measured by the number of inbound passengers (ranking fifth). An alternative, the number of non-stop flights, boosted Boston's position to fourth. And the Boston study added two more measures: the volume of occupied

[50] Price Waterhouse, "Georgia World Congress Center: Market and Economic Impact Analysis of Proposed Phase IV Expansion," January 1993, p. 45.
[51] Price Waterhouse, "Georgia World Congress Center: Market, Economic & Fiscal Impact Analysis of Proposed Phase IV Expansion," October 1996, p. 38.

office space (Boston placed third) and the residential population close to the downtown core, because "The strength of a city's downtown commercial office market and residential population usually affect a downtown market's success as a convention/trade show destination, since a strong residential and commercial office base spur growth and maintain stability of restaurants, shopping, night life and other attractions which contribute to a downtown destination's attractiveness to out-of-town delegates."[53]

In contrast, Atlanta's downtown was described by Price Waterhouse in 1996 as experiencing "a net out-migration of residents and businesses," leaving a "lack of residential neighborhoods and deteriorating, vacant buildings scattered throughout the downtown area" and "a current negative image with respect to crime and homelessness... recognized not only locally, but also nationally."[54]

The three-variable model of hotel rooms, population, and air access was also stretched to accommodate Cincinnati. A 1995 feasibility study for Cincinnati compared that community to a group of 12 competitors, largely regional centers in places like Columbus, St. Louis, Nashville, and Kansas City. Cincinnati placed seventh in population and ranked fifth in terms of air access, although in terms of direct flights rather than passengers.[55] And for metro area hotel rooms, the city came in eighth. As for Boston, Price Waterhouse emphasized nearby hotel rooms, boosting Cincinnati's relative rank to third. These factors put Cincinnati about in the middle of the pack of its competitors. Finally, the amenities and attractiveness of the downtown core became a central factor. This time, the consulting firm counted the number of restaurants and retail stores within one mile of the center. With 330 stores and restaurants, Cincinnati ranked third.

The Price Waterhouse study of Cincinnati also noted a different causal link in the relationship between downtown and the meeting business. Without increased convention business, Cincinnati faced civic doom:

> However, Cincinnati is doomed to further declines in its market share of convention delegates and continuing declines in center city retail and restaurant sales if it does not expand its convention center. Retail shops and restaurants will close if sales continue to decline and Cincinnati will lose its enviable high ranking in its attractiveness for convention site selection. Loss of these unique enterprises will create a compounding effect causing further declines in not only the City's currently larger share of a growing market but its share of the market determined by its capacity—its rate of occupancy by conventions will begin to erode. This is not a hypothetical "doomsday scenario." We all know of downtowns that were interesting, attractive, crowded destinations in the 1970s or

[52] Ibid., pp. 39-40, 68, 70.
[53] Price Waterhouse, "Expansion of Boston's Convention Center: Final Report, Phase 1, " July 1993, p. 21.
[54] Price Waterhouse, "Georgia World Congress Center: Market, Economic & Fiscal Impact Analysis of Proposed Phase IV Expansion, " October 1996, p. 41, 43.
[55] As a hub for Delta Airlines, the direct flight measure was probably more favorable to Cincinnati than a measure of inbound passengers.

'80s that have, in the 1990s, become ghost towns by comparison.[56]

The argument about the role of a convention center in saving downtown Cincinnati can readily be extended to St. Louis and Milwaukee, Washington and New Orleans. Every city wants the increased retail and restaurant sales, and the additional tax revenues, promised by more convention attendees. Every city seeks to avoid the doomsday scenario laid out for Cincinnati, regardless of their ranking.

The Price Waterhouse ranking approach would appear to be based on the logic that a city with a higher level of hotel rooms, population, air service or perhaps downtown character should attract more convention and tradeshow business with a new or expanded center. But it can be adapted to support expansion in any city.

The original 1991 San Diego study, which laid out the Price Waterhouse dominant selection criteria, ranked a total of 12 cities. Presumably, those in the bottom third or quarter would likely face the worst business future and the poorest return on investment in convention space. Yet Denver, ranked tenth on the criteria, New Orleans, ranked eleventh, and San Antonio, ranked twelfth and at the bottom, are all either building or planning expanded convention centers today, each backed by a feasibility study that projected abundant new meetings, attendance, spending, and public revenues.

## FORECASTING THE FUTURE

The judgments of national supply and demand, local competitiveness, and attractiveness to meeting planners are merely the foundation and predicate to the forecast of a city's presumed convention future and business. Each feasibility study makes explicit predictions of a new or expanded center's likely event count, attendance, and larger fiscal impact. And those numbers—tens of thousands of new attendees and millions of new visitor dollars—provide both the justification for public investment in convention space and the rhetorical ammunition for selling elected officials and the larger public.

The methodologies for making forecasts are varied and quite general. Some consultants lay out a detailed map by which future attendance figures are derived. Others merely state that they interpret available evidence on the basis of their own knowledge and experience. Thus no dimension of the feasibility analyses is more open to scrutiny.

### *Estimating Events and Attendance*

The most basic approach to estimating future convention business is to simply extrapolate from a baseline attendance figure. The Arthur Anderson study of San Antonio's expansion prospects began with a 1989 attendance total of 336,966. That figure was then "expanded at rates of growth of 4, 7 and 10

[56] Price Waterhouse, "Sabin Cincinnati Convention Center Expansion Study, " June 1995, p. ES-2.

percent per year."[57] The consultant chose "the 7 percent solution of approximately 660,000 attendees" as representing "a reasonable solution consistent with projected national growth rates."[58] The next calculation determined that an expanded center with double the exhibit space could accommodate those attendees. There was no attempt to assess competition from other expanding centers; the study simply assumed that a "nearly full" Henry B. Gonzalez Convention Center would fill up again.

Analyses performed for other cities have commonly sought to "build up" figures for future events and attendance out of a national universe of conventions and tradeshows, adjusted for the comparative appeal of a particular city and center. In a study for Louisville, the consultant estimated a total population of conventions and tradeshows with more than 500 attendees of 4,970. With a "market capture rate" before expansion of 0.2 percent, doubling Louisville's exhibit space to 200,000 square feet would result in a doubling of its market share of 0.4 percent, or 20 national or regional events. Adding another eight state events yielded a total of 28 convention and tradeshows, with a total attendance of 146,100, neatly doubling the 73,500 attendees housed in 1990. The Louisville example provides a clear logical path for a forecast of future activity. Yet it rests entirely on the dubious assumption that doubling space will double market share.

The Anaheim analysis that relied on the survey of meeting planners employed a similarly elaborate logic for deriving future convention and tradeshow business. Yet it ended with a figure of 25 large national and regional events—exactly the same number hosted on average by the existing Anaheim Convention Center. The only real increase in business was a product of the seven new events attributed to "growth" and "increased market capture." The consultant's final prediction was that a 16 percent increase in space would generate a 15 percent increase in direct attendee spending.

Other studies present a forecast without any formal calculus. The 1993 study of Atlanta's Georgia World Congress Center declared that "Estimates were based on the following factors, which were explained in the previous sections:

- Historic performance and future bookings at GWCC;
- Survey responses of past, future and potential convention executives, trade show producers and consumer producers;
- An analysis of competitive and comparable facilities in terms of historic occupancies, facility expansion plans and other factors peculiar to certain facilities/markets which may affect GWCC's performance;

[57] Arthur Andersen and Co., "Henry B. Gonzalez Convention Center Expansion Feasibility Analysis," November 1990, p. 32.
[58] Ibid.

- A comparison of Atlanta's level of community resources to competitive and comparable markets (such as hotel room supply, level of air access, population, attractions, marketing resources);
- Future development plans for the City of Atlanta which will affect the marketability of Atlanta for conventions and trade shows; and
- Trends in the convention/trade show industry in terms of growth in supply of and demand for exhibition space."[59]

Based on this array of inputs, the consultant then specified that the World Congress Center's estimated attendance of 775,000 in 1997 would grow to between 950,000 and 1,025,000, a 40 percent increase in attendance, with a 55 percent increase in exhibition space. The difference in proportional increase was explained as a function of the attendance at larger size shows: "Typically, the ratio of attendees per occupied square foot of exhibit space decreases as a show's exhibition space requirements increase.… Therefore, GWCC's growth in attendance will not be proportionate to growth in exhibition space."[60] The study laid out no other logic or calculus.

This assessment of the performance of an expanded Georgia World Congress Center would prove open to review. Convention center officials commissioned a second study from the same consultant three years later, and although a major expansion was once again recommended, the study conclusions were somewhat different. Rather than add a mere 525,000 square feet of exhibit space to the center, they now backed an expansion of 700,000 square feet, because "it is the desire of Center management to accommodate 2 to 3 shows simultaneously...."[61] They had in the first study concluded that a half million square foot expansion would add some 212,000 convention and tradeshow delegates. In 1996, they argued that such an expansion would add 350,000 attendees. But the new proposed addition of 700,000 square feet would boost attendance by 550,000. Despite the absence of any detailed justification of the attendance or occupancy figures, the bigger expansion was predicted to be far more productive in generating attendance relative to its size. The number of new attendees per square feet of added space grew from 0.40 in 1993, to 0.70 for the smaller expansion in 1996, to 0.79 for the full 700,000 square foot addition. By arguing that a bigger expansion could handle more simultaneous meetings, the problem of decreasing relative attendance for larger meetings was neatly dismissed.

The combination of simplicity in forecasting and malleability of results was demonstrated in a pair of studies of an expanded center in Cincinnati. In 1995, Price Waterhouse concluded that

[59] Price Waterhouse, "Georgia World Congress Center: Market and Economic Impact Analysis of Proposed Phase IV Expansion," January 1993, pp. 43-4.
[60] Ibid., p. 46.
[61] Price Waterhouse, "Georgia World Congress Center: Market, Economic & Fiscal Impact Analysis of Proposed Phase IV Expansion," October 1996, p. i.

Cincinnati's "extraordinary rate of market capture" and the threat of a doomed downtown warranted the addition of 200,000 square feet of exhibit space to the existing Sabin Convention Center, bringing it to 360,000 square feet—an increase of 125 percent. That expansion, based "on the market study results," was projected to bring in an additional 110,000 professional and tradeshow attendees, a boost of 69 percent.

Four years later, with no progress on an expansion of the city's center, Cincinnati had "lost major groups" and was "hosting fewer 'high economic impact' attendees."[62] This time, the recommendation was to add 238,000 square feet of exhibit space, yielding a total of 400,000 square feet—a 147 percent increase. But the most dramatic change came in the estimation of attendance. The previous baseline was 160,000 attendees in the existing center, reaching 270,000 in a larger facility. Now the existing center was judged to generate just 141,000 annual convention and tradeshow attendees. The bigger expansion would bring that to 302,500, an increase of 115 percent. Now the estimated growth in attendance was both larger, by 32,500 people, and more in line with the growth in size, and the larger proposed center would achieve a higher convention and tradeshow occupancy rate.

Studies that lay out an elaborate set of calculations and deductions invariably include at least one component, such as "market capture rate," that simply reflects the consultant's judgment or perceptions. Other studies provide a list of "factors" but offer no explanation of how they combine to form estimates of future activity. Still other studies provide no estimates whatsoever.

The April 1997 analysis of expansion prospects for New York City's Jacob K. Javits Convention Center covered 100 pages and argued for increasing the center's size from 788,000 square feet of exhibit space to between 1.5 and 1.75 million. Yet despite an elaborate analysis of projected occupancy rates at alternative sizes, the report offered no estimate of the increase in events or attendance it might bring. And while the Javits study promised the expanded center would generate precisely $568.3 million annually in direct spending, it offered no estimate of current spending and no basis for comparing the $568 million figure to spending without an expansion, or spending in any other city.

## ESTIMATING ECONOMIC IMPACT: THE BIG BOTTOM LINE

Few politicians or the public would appear to embrace new convention centers for their architectural wonder or their civic grandeur. The promotional rhetoric and sales pitch for public investment in ever more exhibition space invariably involves dollars and economic impact, the product of importing thousands of conventiongoers to a city on a regular basis who spend on hotels, taxis, restaurants, souvenirs, and assorted retail goods. A panel of urban development experts told Denverites in

1987 that the proposed Colorado Convention Center would be "the strong economic generator that Denver and the state of Colorado need now, and its development should proceed as a matter of urgency."[63]

A more recent proposal for a combined domed stadium and convention center in Mesa, Arizona, the "Arizona Exposition and Convention Center," was endorsed by the *Arizona Republic* with the argument that it "could attract an estimated 500,000 visitors a year, pouring millions of dollars into the economy and generating millions more in tax revenues.…[It] would do more than solidify Mesa and the Valley as a major destination for conventioneers and tourists. It would provide an unparalleled economic dynamic."[64]

Hundreds of millions of dollars in new visitor spending, leading to hundreds of thousands in new tax dollars and new local jobs, are persuasive arguments for public spending on more convention space. Yet like all the other data and estimates presented in feasibility studies, these figures are open to question.

The typical economic impact estimate begins with a figure for convention and tradeshow attendance at a new or expanded center. The attendance number is multiplied by an estimate of the average length of stay in the city, then by a dollar figure for average daily spending. The final product of attendance, stay, and spending is termed total direct spending. Total economic impact is predicted by applying to this direct spending figure a local economic multiplier to account for the recirculation of new dollars within the community.

The logic of calculating direct spending is quite reasonable and straightforward. Yet like any other estimation process, its validity depends on the strength and accuracy of each of its components. If the average length of a visitor's stay is assumed to be four days, and most conventiongoers actually spend only two days in a community, the visitor spending estimate will be twice what it should be. If the actual average stay is closer to one day per convention attendee, spending will be overstated by a factor of four. And if the estimated number of attendees is also high, the spending forecast can be overstated manyfold.

The 1991 feasibility study by Price Waterhouse for an expanded San Diego Convention Center began with an estimate of 160,000 new attendees. The consultant then figured an average length of stay of 4.1 days, based on both national survey data and San Diego's experience. Adjusting for doubling up on hotel rooms and San Diego residents attending these events, the study concluded that the expanded center would generate 705,000 total delegate days (an additional 262,000)—about 1.64 days per additional attendee. Multiplying that delegate-day figure by average daily spending of $164, again based on national survey data, yielded a total $116.1 million in direct delegate spending for the expanded center. The San

[62] Price Waterhouse, "Sabin Cincinnati Convention Center Expansion Study," June 1995, p. 32.
[63] Urban Land Institute, "Colorado Convention Center, Denver, Colorado," Panel Service Advisory Report, August 1987, p. 9.

Diego study also added in additional spending by tradeshow exhibitors, associations, and exposition service contractors, bringing the total direct spending impact to almost $311 million a year. Of that total, the increment in spending due to the expansion would be $115.6 million.

The San Diego Convention Center Corporation commissioned a second economic impact analysis from a different firm a year later. And while the beginning figure of 160,000 new convention attendees remained the same, each of the other elements changed. Arguing that the center's bookings in its first two years had included "a fairly high proportion...of delegates [that] were from Southern California," the new study focused only on attendees from national conventions, rather than from local or regional meetings.[65]

These new results boosted average daily spending from $164 to $198. And rather than assuming that some of the attendees drove in for the day, the new study calculated an average stay of 4.1 days for everyone, for a total delegate spending of $830.

By shifting to a focus on national rather than regional meetings, the second San Diego study managed to boost the apparent spending of each new convention visitor. From a total direct spending estimate after expansion of $310.7 million in the first study, the total now reached $425.9 million—a 37 percent increase. Thus, a seemingly subtle change in one assumption about how long conventiongoers stayed in San Diego created a substantial boost in the purported economic impact of an expanded convention center.

The 1993 study of Atlanta's Georgia World Congress Center had proposed an additional 525,000 square feet of exhibit space for the center. The bigger facility was forecast to draw about 987,500 annual attendees, with total direct spending of $811.5 million. The incremental spending, due to the expansion alone, was estimated to be $174.6 million. Three years later, Price Waterhouse laid out two expansion options, one for an extra 500,000 square feet (about the same as before) and another of 700,000 more. Now the smaller space increase would bring in 295,000 more new attendees. Yet it would also appear to generate far more spending. The 1996 estimate of new, incremental spending came to $295 million, almost double the previous estimate. And the larger expansion effort was judged to boost spending by $424 million, to a total of $1.36 billion. How could the same consultant's spending estimate increase from $175 million to $295 million?

First, the 1996 study did project a higher attendance figure by about 39 percent. But the real boost came, as in the San Diego case, by changing the picture of who uses the center. In 1993, the spending estimate was based on the assumption that "overnight attendees are assumed to comprise approximately

[64] "Rio Salado: Give it 'yes' vote," editorial, *Arizona Republic*, May 2, 1999.
[65] CIC Research, "An Economic Impact Analysis of the Existing and a Proposed Expanded San Diego Convention Center," October 1992, p. 13.

45 percent of total convention/trade show attendance (based on historic percentages)."[66] Overnight attendees were assumed to stay for 4.25 days, spending a total of $710.59. The other half of attendees, the day trippers, would spend one day at the center and spend a total of $55.22. In terms of spending, events that lured out-of-towners who would stay over nights were to be preferred. In the later analysis, "Based on [International Association of Convention and Visitor Bureaus] survey results, [Atlanta Convention and Visitors Bureau] room night information and GWCC event data, it is estimated that approximately 95 percent of incremental professional association, 85 percent of trade association, and 90 percent of SMERF delegates are overnighters while the remainder are day-trippers."[67] With that simple paragraph, the fraction of overnight attendees roughly doubled from the percentage in the first study, producing a sharply higher estimated spending figure.

The San Diego and Atlanta cases effectively demonstrate how malleable direct spending numbers can be. Seemingly modest and plausible changes in assumptions can generate substantial changes in projected total spending and economic impact. And in a political environment in which promises of more jobs, greater economic impact, and a "strong economic generator" are persuasive rhetorical tools, ever larger dollar figures seem to provide stronger justification for convention center space. Neither case provides an answer to the question of which estimate, 90 percent or something closer to 50 percent, provides the more accurate picture of convention attendee behavior. For that we have to turn to evidence from other cities.

The Philadelphia Convention and Visitors Bureau tracks the convention and tradeshow bookings for the Pennsylvania Convention Center, estimating local attendance on the basis of the volume of hotel rooms booked for each meeting. For 1996, the bureau estimated local attendance at 52.4 percent. The following year the local fraction came to 52 percent.[68] Other cities do not attempt to separate out local from non-local attendance, but they do collect statistics on hotel stays. In San Francisco, the Moscone Convention Center hosted 628,564 attendees in fiscal 1996, generating 655,000 hotel room nights, or a ratio of 1.042 to 1.[69] For fiscal 1997, the ratio came to 1.16. And for fiscal 1998, the room night to attendance ratio came to 1.06. Washington, DC's data tell the same story. In 1996, the Washington Convention Center attracted 308,200 convention and tradeshow attendees, who consumed 337,807 hotel room nights—1.096 to 1. And over the previous four years, the ratio of room nights to attendees averaged

[66] Price Waterhouse, "Georgia World Congress Center: Market and Economic Impact Analysis of Proposed Phase IV Expansion," January 1993, p. 54.
[67] Price Waterhouse, "Georgia World Congress Center: Market, Economic & Fiscal Impact Analysis of Proposed Phase IV Expansion," October 1996, p. 74.
[68] For an extended discussion of the Philadelphia case and other cities, see Heywood T. Sanders, "Challenging Convention(al) Wisdom," White Paper no. 2, Pioneer Institute for Public Policy Research, Boston, Massachusetts, May 1997, pp. 16-21.
[69] SMG, "Annual Report, The Moscone Center, 1995-1996 and 1996-1997," San Francisco, California, p. 3.

out to just 0.975 to 1.[70] These results are mirrored in Chicago's McCormick Place convention center, the nation's largest, as well as in Louisville.

The almost even relationship of total hotel nights to attendance is seemingly difficult to reconcile with feasibility study estimates of attendees each staying three or four nights for a meeting. It reflects the fact that half or more of attendees, particularly for industry tradeshows, are either regional residents or choose to commute to a meeting just for the day. Many shows, like MacWorld in Boston and San Francisco, are specifically targeted at regional residents. And with hotel rooms in major destinations now $150, $200, or more per night, brief stays and daytripping are becoming the norm. As a result, the economic impact estimates that assume lengthy hotel stays for effectively all convention and tradeshow attendees are likely to overstate spending by a factor of two or three or more.

## CONCLUSIONS

Convention centers are almost invariably public projects. They are decided on by public officials. They are discussed and debated in the public arena. In that arena, the consultant studies are far more than internal documents, little tempered by the statement that "actual results achieved will vary from those described, and the variations may be material."[71] The studies provide the data, arguments, and rationale for the investment of hundreds of millions of public dollars in building large boxes rather than enlarging museums, fixing roads, or investing in public education. As such, they must be held to a substantial standard of analysis and quality. Yet they are often lacking—in the quality of evidence and interpretation and the substance of forecasts.

The consistent over-estimates of convention and tradeshow growth in recent years suggest that the competitive situations of new or expanded centers may be more difficult than predicted. A second, parallel, problem involves the estimation of both national aggregate trends and local performance, in terms of convention activity and attendance. The consultants' errors in forecasting national trends should raise questions about the accuracy of local forecasts made five to ten years earlier. Predictions of national convention and tradeshow demand have regularly over-estimated growth, and ignored evidence of slowdown or decline. The analysis of data on the national supply of convention space has been little better. Often selective in their use of information, study after study simply repeat the notion that expansion by some cities requires expansion by others in order to keep up. Plausible alternatives,

[70] Coopers & Lybrand, "Analysis for the Proposed Washington Convention Center," Washington, D.C. Hotel Market Analysis appendix, December 1997, pp. 2, 12.
[71] Coopers & Lybrand, "A Market, Building Program, Financial Operations and Economic Impact Analysis for Potential Expansion of the Jacob K. Javits Convention Center of New York," April 1997, cover letter, p. 1.

including serving selective market niches, improving the quality or amenities of convention centers, or accepting a limited market share rarely if ever appear as market alternatives.

Thus in an era in which both politicians and the public follow carefully gathered statistics on urban crime, student performance on standardized tests, and local property tax rates and values, they have access to little or no real data on what convention centers actually do and what they deliver for the public investment.

## RECOMMENDATIONS

1. If the analytical marketplace held feasibility studies to a high standard, with regard to both methodology and forecasting, this would inform the public debate. Establishing a public record of predictions and actual convention center performance would bring their true economic value to light, but would take years to inform the decision-making process.
2. A long-term alternative is to oblige convention centers or sports facilities to finance capital costs out of their true fiscal impact (taxing the hotel rooms of only convention attendees, for example), rather than promoting such revenues as a fiscal boon while tapping other, more substantial sources unrelated to their performance. That would provide a clear market discipline and attach real world consequences to predictions.
3. A strategy to force capital investments to compete among themselves for political support is to issue legal debt restrictions, as many states did in the wake of localities' overabundant issuance of speculative debt for railroad construction in the nineteenth century. These typically limited the total size of local debt and required a majority (often two-thirds) public vote on any debt issue.
4. In combination with the previous recommendations, a fixed cap on debt and capital spending, such as the one already in place in Massachusetts, would impose a kind of fiscal and analytical discipline often lacking in public investment decisions. Regardless of purpose or backing, a project would be obliged to compete with others—the convention center against the stadium against the airport. Paired with an annual limit on the capacity to take on new debt, this would offer some real feedback from the political marketplace.

Adopting these recommendations would begin to give the public and policymakers the information necessary to choose the best public project and ensure that investments of hundreds of millions of dollars bring real economic benefit to the community.

## ABOUT THE AUTHOR

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