

Report on the Fiscal Impact of Truist Park and The Battery

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I. Introduction

I was asked by the Atlanta Braves' organization to evaluate two previous reports on fiscal impact of the Truist Park project on Cobb County and to perform a new analysis. Braves' CEO Terry McGuirk told me: "We want to know what the reality is."

In brief, I conclude that the 2018 report out of Georgia Tech's Center for Economic Development Research (CEDR) was unrealistically optimistic and that the March 2022 report by J.C. Bradbury was too pessimistic. What follows is my discussion of how I came to these conclusions and how I developed a new model that finds an intermediate and fiscally positive outcome.

I begin by reviewing the scholarly literature on the economic impact of sports facilities. I then turn to discuss Bradbury's critique of the CEDR report, followed by my critique of Bradbury's report. Next, I present my model with an alternative assessment. Finally, I conclude.

II. Discussion of the Scholarly Literature on the Economic Impact of Sports Facilities

Over the forty-year span between 1970 and 2010, the average public share in financing professional sport stadiums was 70.1 percent, while the median was 79.6 percent. It is noteworthy that with Truist Park, the public share is approximately 45 percent¹ and this share does not include additional investments in the ballpark, and the \$1 billion-plus that the Braves' organization has already invested in developing real estate and property in The Battery. Nor does it include estimates of projected investment already planned or the ongoing property and sales tax payments from The Battery to the county, the school system or the CCID (Cumberland Community Improvement District).

While it is certainly true that the scholarly literature concludes that public funding for standalone sports facilities is not a good economic investment and that a sports facility by itself cannot be

¹ The 45 percent figure is based upon the division of the initially agreed upon investments. The total cost of the stadium was projected at \$672 million, with the Braves covering \$372 million and Cobb County covering \$300 million. Thus, before cost overruns which were covered by the Braves, the Braves accounted for 55.4 percent of the initially projected cost and Cobb County accounted for 44.6 percent. When the cost overruns of \$63 million are included (mostly a result of unanticipated costs for the ballpark plaza, some parking and IT expenses at the stadium), the Braves' investment in Truist Park increased to \$435 million, while the county's costs remained at \$300 million. As a result, the Braves' share of total ballpark construction costs rose to 59.2 percent and the county's share fell to 40.8 percent.

expected to generate higher employment or higher per capita income, the literature also finds that some sports facilities have produced salutary financial outcomes. For instance, one study by Feng and Humphreys noted that sports venues built during the 1990s are associated with a median increase in property values of \$254 million versus a construction cost of \$339 million. If the public share of construction were 75 percent for these facilities, then the public's investment would be \$254 million and its return in increased property values alone would equal its investment.²

Table One

Shares of Public Funding on Stadiums by Decade

	Average Public Share	Median Public Share
1970-79	88.2%	100.0%
1980-89	49.9%	56.7%
1990-99	78.4%	91.8%
2000-09	64.0%	70.0%
2010-19	46.2%	44.2%

Almost all of the scholarly studies on the employment or income effects of arena or stadium construction are based on the period 1970 to 2010, when the average public share exceeded 70 percent. The general conclusion from these studies is that a city should not anticipate an increase in employment or per capita income as a result of the stadium construction. This inference is based on panel (utilizing both cross sectional and longitudinal data) studies over numerous years and across numerous facilities. The coefficient in the panel regressions on a binary variable indicating the construction of a sports venue typically is found to be outside the range of statistical significance, leading to the conclusion that a city should not expect a positive economic

² Feng, Xia and Brad R. Humphreys (2012) "The impact of professional sports facilities on housing values: evidence from census block group data," *City, Culture and Society*, 3 (3), 189–200. Also see, Feng, Xia and Brad R. Humphreys (2018) "Assessing the economic impact of sports facilities on residential property values: a spatial hedonic approach," *Journal of Sports Economics*, 19 (2), 188–210. Data in Table One is from a communication from Brad Humphreys based upon new research he has conducted.

return from stadium building. Note that this coefficient represents the average case and does not directly speak to individual cases which may have modestly negative or positive economic or fiscal impacts.

With the average public share dipping below 50 percent during the 2010s, it is reasonable to expect that fiscal and economic outcomes might improve in the general case. The same expectation would apply to the case of Truist Park where the public share was below 45 percent.

The additional fact that The Battery project included a privately-financed mixed-use development, at the southern edge of Cobb County on 82 acres, reinforces the expectation that this project could have a more positive fiscal and economic impact than a typical sports facility built between 1970 and 2010. While the CEDR report overstates the case in representing the Truist/Battery model to be unique in that a surrounding mixed-use development provides substantially enhanced private investment to stimulate economic activity and fiscal gain, The Battery component nonetheless represents a substantial economic and fiscal stimulus. And though still not unique, the fact that the Braves' organization invested its own capital to guarantee the development of The Battery, as opposed to hoping to lure third party investment as has been the case in most projects, places this project in a select group.

III. Bradbury Critique of CEDR/Meek 2018 Report

Although the CEDR/Meek report makes some improvements on the typical promotional study and provides some thoughtful analysis, I agree with Bradbury that the report is insufficiently rigorous and unrealistically exuberant. Further, Meek does not provide an adequate explanation of the so-called LOCI methodology that he employs. Nor does Meek offer a compelling justification for his Halo Effect, which seems random, inaccurate and excessively expansive in its geographical delineation. The existing scholarly literature generally locates any Halo Effect to property within one or two miles of the facility. While I believe that there is evidence of such an effect with Truist Park and The Battery,³ Meek's Halo Effect territory appears amorphous, if not gerrymandered, and extends beyond the typical one- or two-mile radius. The Meek report also assumes, without evidence, that the 18.4 percent of Truist Park attendees who come from more than a two-hour drive from the ballpark stay overnight at a Cobb County hotel and spend money

³ See, for instance, <https://atlantaagentmagazine.com/2022/05/19/investor-sells-two-apartment-communities-for-224-million-after-major-renovations/>. Also see the citation in footnote 19 below for evidence of a more recent impact.

at local eateries. There is no inquiry into the possibility that such fans drive home after the game, stay with friends in Cobb or a contiguous county or have their visit paid for by a business or friends in Cobb County.⁴

Nonetheless, while Bradbury maintains a professional and dispassionate tone through most of his report, some of his critiques are excessive in substance and in tone. For instance, Bradbury properly critiques Meek for including some items as revenue generated by the Truist/Battery project that come from generic taxpayers and not from the project, yet he laces his critique with hyperbolic and derogatory language that is uncalled for. For example, Meek counts the Cumberland CID self-imposed .5 millage rate on commercial business property and the \$3 per hotel night tax as revenue generated by the project. In his report Bradbury refers to this accounting as “egregious,” “specious,” and “incomprehensible” (pp. 38-39). While Bradbury may disagree with Meek’s accounting choices, in my view they are neither egregious, nor specious, nor incomprehensible. Meek is simply noting these tax revenues would not exist were it not for the Braves’ project. Bradbury, in contrast, notes that these are levies on taxpayers in Cobb County and that part of their impact may affect the consumers of and workers in these businesses. Bradbury does not note that the extent to which these business taxes impact consumers and workers in the county will depend on the elasticity of demand for the related products (such as hotel rooms) and the elasticity of supply of labor; nor does Bradbury attempt to quantify these effects. In reality, both Meek and Bradbury are correct and there is a reasonable discussion about how these factors should be weighed in assessing the fiscal impact of the project. In either case, I find the argument that this revenue from the taxes in the CCID would not be available to the county if there were no Truist Park and Battery to be largely persuasive.

The counterfactual claim` that without the Braves’ development, the land would be developed by another company without the county subsidies, of course, cannot be disproven. However, the project land sat idle for over three decades and required the Braves to obtain approval for pipeline relocation and to make an initial \$14.5 million investment to divert the pipeline that ran directly underneath the property. Thus, while eventually it is not unlikely that some new

⁴ Along the same lines, the Meek report does not adjust its estimates for the possibility that some out-of-town fans are casuals or time-switchers.

development would have occurred on the project land, it is not knowable whether it would have taken ten or twenty years or some other period of time before the land was remediated and developed and it is not knowable what kind and magnitude of development it would be.

IV. Critical Discussion of Bradbury's March 2022 Report

Despite his criticism of Meek for the absence of clear and detailed explanation of his methodology, Bradbury provides no foundation, either methodological or empirical, for his claim that Cobb County's sales tax revenues grew by \$3 million on average, while sales tax revenue generated by The Battery was \$4.6 million, during 2017-19. This claim forms the basis for his estimate that 34 percent of sales in The Battery (including Truist Park) crowds out spending elsewhere in the county and, hence, the net impact of the spending and property taxes is only 66 percent of the direct payments in net terms. Bradbury, however, simply asserts these numbers without explaining their provenance or his methodology. Moreover, his discussion of what the \$3 million and \$4.6 million actually represent on pages 50-51 and 68-69 is very confusing, as he switches between referencing sales taxes from the stadium and from The Battery.

Bradbury's estimate of the crowding out percentage is important to understanding the fiscal impact on Cobb County of the stadium project, so it makes sense to try to unpack what he did. His logic is reasonable. If The Battery and Truist Park together paid \$4.6 million in sales taxes to Cobb County and the county's sales tax revenue increased by only \$3 million, then it is plausible to contend that as the Battery's sales went up, sales at other retail venues in the county went down. That is, Cobb County residents spent money at the ballpark and The Battery instead of spending at restaurants, movie theaters, bowling alleys or other entertainment venues elsewhere in the county.

Since Bradbury does not provide a clear explanation, one is left to deduce where his numbers came from. There are three possible explanations. The first explanation is that he compared changes in total county sales tax revenues with estimates for the amount of sales taxes paid by The Battery (including Truist Park). While this would be straightforward, it does not appear that it is what Bradbury did. County data on total sales tax collections indicate that these grew

by \$5.54 million in 2017, by \$6.97 million in 2018 and by \$6.77 million in 2019, constituting a three-year average of \$6.43 million, or more than double the figure asserted by Bradbury.⁵

A second possible explanation is that Bradbury deployed the synthetic control methodology to estimate the counterfactual growth in sales taxes. If he performed a synthetic control exercise to arrive at his \$3 million estimate for counterfactual growth in sales tax revenues, then he should have stated so explicitly and provided details on the donors and co-variates.

The third possible explanation is that he projected what Cobb County sales tax receipts would have been during 2017-19 based on the trend in growth rates and compared that to the actual level. I performed the latter exercise using both the annual sales tax growth rate from 2012 through 2016 (1.4%) and the rate for 2013-16 (2.5%). Using these growth rates, the average increases in county sales tax receipts (above the trend) during 2017-19 were \$8.5 million and \$5.2 million, respectively; still well above Bradbury's assertion of \$3 million. These numbers, of course, also significantly exceed the \$4.6 million sales tax revenue that Bradbury maintains was generated by activity in The Battery.⁶ This result is more consistent with a finding of crowding in, i.e., a multiplier effect, rather than crowding out. That is, the added economic activity from The Battery and stadium raised employment and incomes such that the added sales were greater than the lost sales from substitution spending (i.e., spending in The Battery replacing entertainment spending elsewhere in Cobb County.)

⁵ Note that sales tax collections may or may not include liquor, occupation tax and room tax, and, thus, may differ from one source to another. However, these three taxes are diminutive relative to the retail sales tax and would not account for such a large differential.

⁶ As we shall see when I present my own estimate for the fiscal outcome below and in the data appendix, the actual number for the average sales tax revenue that The Battery and Truist Park provided to the county during 2017-19 was approximately \$1 million above Bradbury's estimate.

Table Two

Estimating the Gross Crowding Out Effect

Year	Sales Tax Collections ⁷	Counterfactual Sales Taxes at Prevailing Growth Rate (1.4%)	Deviation from Trend Growth	Counterfactual Sales Taxes at Prevailing Growth Rate (2.5%)	Deviation from Trend Growth
2012	\$131,646,667				
2013	\$129,058,838				
2014	\$134,240,404				
2015	\$137,739,847				
2016	\$139,182,502				
2017	\$144,725,619	\$141,132,922	\$3,592,697	\$142,730,549	\$1,995,070
2018	\$151,698,059	\$143,110,674	\$8,587,385	\$146,369,043	\$5,329,015
2019	\$158,465,019	\$145,116,140	\$13,348,878	\$150,100,290	\$8,364,729
2020	\$160,970,474				
2021	\$187,496,574				
		2017-19 Average	\$8,509,653		\$5,229,605

Further, Bradbury maintains that the increase in property values in The Battery would follow the pattern of sales tax receipts, because the value of a business is linked to its sales. While it is true that the value of a retail business will be related to the level of its sales, the correlation is far from perfect because there are many other factors that will determine its value, such as projections for future sales, its costs, interest rates, scarcity of real estate in the vicinity, *inter alia*. But, more importantly, the largest tenants at The Battery are not retail establishments; rather, they are corporate headquarters whose value is largely independent of the level of sales in the smaller retail establishments in The Battery.

Bradbury states that the Braves' investment in The Battery (outside the stadium) was \$400m, but this figure is from a 2013 newspaper article. The real figure now surpasses \$1 billion.

⁷ These sales tax collections represent only the 1 percent sales tax that goes to the county. The Board of Education also receives a 1 percent levy on sales and, thus, receives exactly the same amount as the county. The total collection, therefore, is double the amount shown in Table Two and the deviation from the trend would also be double, throwing the Bradbury numbers even further off from the actual numbers.

According to the Braves' accounting, the amount invested in The Battery as of May 1, 2022 was \$1.055 billion. This sum does not include additional investment by the tenants, which would add close to \$100 million to the total. It also excludes major investments planned or underway for the next five years, including \$200 million on the Truist office building, \$400 million on Goldenrod multi-family dwellings (connected by bridge to Battery), a hotel and condos, and \$100 million on Fournoy apartments (adjacent to Battery). Thus, Bradbury's assertions to the effect that The Battery is a relatively small economic entity and, hence, it could not provide an economic or fiscal lift to the local economy appear to be misplaced.

Bradbury also argues that property values in Cobb County did not benefit from the ballpark and surrounding mixed use development. While Bradbury's statistical work is of interest, it is also problematic on several counts. First, property values are a function of both supply and demand. After a decade of little change in the inventory of multifamily units between 2000 and 2010, the multifamily market grew by an average of 358 units annually between 2010 and 2020. In 2021 alone, 1,059 multifamily units were delivered.⁸ As the supply of these housing units expands, it applies a downward price pressure on rents, which, in turn, will deter the growth of property values. A similar phenomenon occurred with office space: the supply of office space stagnated between 2004 and 2016 at just under 17 million square feet, but then began to rise, surpassing 18 million square feet in 2021.⁹

Second, because of the methodology applied by the Cobb County Board of Assessors, the increase in property values will take a while to register. Properties are newly appraised once every three years, with routine adjustments in other years.¹⁰ Further, when apartments are built, they are not included in the CID for taxation purposes. So, the real estate on which the apartments are built transfers from counting for the CID, to not counting; that is, apartment construction lowers the total property value in the CID. With robust multifamily construction in recent years, the CCID aggregate property values take a hit.¹¹ The delay in registering fair

⁸ Unless otherwise indicated the data in this section comes from KB Advisory Group's report of May 2022, "Economic Analysis of the Cumberland CID."

⁹ Relatedly, the positive spinoff from a new development can manifest itself in higher property values per acre, but it can also manifest itself in bringing new acreage into development. That is, the positive effect can be both intensive and extensive.

¹⁰ Also note that assessments for each year occur in January of that year.

¹¹ In 2022, there were 62 parcels with multifamily apartments inside the boundaries of the CCID (but not on the taxable property ledger) with a total fair market value of \$3.1 billion.

market value for CCID property is aggravated by the practice of freezing property values for two years if the landlord appeals the assessor's decision. It is common practice for commercial property owners to appeal their assessment. Since Bradbury's 2022 report uses property values only from 2017-2019, he likely misses much of the impact of the opening of the ballpark and The Battery.

Third, Bradbury focuses his data analysis on all of Cobb County, but the Cumberland CID is a small part of the county: As of 2020, there were 29,900 residents in the Cumberland CID and 768,828 residents in the county; thus, the CCID accounted for only 3.9 percent of the population of Cobb County. The ballpark and Battery, in turn, are a small part of the CCID. Thus, not only does Bradbury's year selection make it difficult to identify an impact on property values, but his use of the entire Cobb County further attenuates the potential impact.

Fourth, when more recent data is used, the impact of the ballpark and The Battery begins to appear. For instance, the grand total real estate tax digest value for the CCID was \$3.195 billion in 2010 and \$3.203 billion in 2016; that is, over the six-year span 2010-16, this value grew by only one-quarter of one percent. However, grand total digest value increased to \$4.837 billion in 2021, or by 51 percent over the five-year span 2016-21. Paralleling the growth in property values, employment growth in the CCID increased by 1.7 percent per year during 2004-16 and then by 4.1 percent per year during 2016-2022. The accelerated growth in the CCID appears poised to continue: within the next five years, 15 buildings, totaling 4.44 million square feet, are currently planned or under construction in Cumberland.

Fifth, the positive effects of the ballpark/Battery development are also revealed in the accelerated growth of delivered investment in commercial property in Cumberland. Measured in new square footage of commercial property added annually in the CCID, the average yearly amount was 235,336 sq. ft. during 2010-13, 471,706 sq. ft. during 2014-16 (the three years after the ballpark/Battery project was announced), 1,303,989 sq. ft. during 2017-2020 (the first four years of project's existence, despite disruption by the pandemic) and a planned or under construction of 1,752,007 sq. ft. during 2021-23.¹²

¹² Data in this paragraph is from KB Advisory Group based on data from CoStar Inc, Cumberland CID, March 2022.

The most consequential and serious problem with Bradbury’s approach, however, is that he focuses on the short-term (2017-19) effect. This leads him to conclude that the county investment in support of The Battery and the ballpark was harmful fiscally and that it costs the county some \$15 million net annually. As Bradbury writes on p. 68 of his report: “Contrary to the assertion of stadium boosters, Cobb County’s funding of Truist Park has generated a negative return on investment.”¹³ It is important to underscore that investments to economists are long-term commitments of resources in search of a long-term return. When investments are made in structures, the usual time horizon is in decades, not in three years. Bradbury’s time horizon is 2017-19. If Amazon, Meta or other social media companies worked with an expectation of turning a profit in three years, these companies never would have existed.¹⁴

V. Discussion of My Model and Alternative Assessment

While my model incorporates the basic theoretical insights of the scholarly economics literature regarding the use of net new spending and receipts, and accepts many elements of Bradbury’s methodology, it is based on a longer term assessment of the revenues and expenses generated by the project.

¹³ Bradbury continues to propound his stridently negative views in social media postings. From his June 1 twitter account: “If you’re going to cite The Battery Atlanta as the inspiration for Virginia’s “mini-city” stadium development, can you at least acknowledge that it didn’t work?”

¹⁴ Note also that Bradbury suggests that the Braves’ contribution to the county may diminish, rather than grow, over time because of the so-called “honeymoon effect.” The claim here, other things being equal, is that attendance at the ballpark will be higher in initial years due to the novelty effect and will decrease thereafter. While such an effect has been observed for other sports facilities, there is no evidence of this through year six at Truist Park. Other things have not been equal. Braves’ ticket sales have grown from 2,020,914 in 2016, to 2,505,252 in 2017, to 2,654,920 in 2019, to a pace of 3,014,658 in 2022. (There was no live attendance in 2020 due to Covid and 2021 attendance was still impacted by the ongoing pandemic.) The augmented team ticket sales led to increased team revenue that, in turn, enabled the Braves’ (LRD) payroll to increase from \$108,815,848 in 2016, to \$133,796,889 in 2018, to \$148,672,447 in 2021, and to \$184,474,475 in 2022 (alternatively, the Braves’ payroll ranking in MLB improved steadily from #19 in 2016, to #14 in 2019, to #9 in 2022) promoting team performance and bringing a World Championship to the team in 2021. That is, rather than a novelty effect wearing off, the new stadium has engendered a virtuous cycle of more revenue, higher payroll, stronger teams and still more revenue. Of course, there is never a guarantee that this will continue, but to assert the opposite is misleading, at least in the case of Truist Park and the Braves.

On the revenue side, most items will grow significantly over time, following both the higher rates of inflation the US and world economies have begun to experience, as well as the patterns of secular economic growth. Further, the tax abatements that the County offered to TK Elevator and Papa John's phase out over ten years which will lead to further fillips to property tax revenues. Moreover, new investments will continue to be made that are directly or indirectly connected to The Battery and Truist Park. As noted above, the dimensions of the investments and economic activity have already grown significantly since Bradbury's estimate of \$400 million. As I write in early June 2022, my understanding is that the total private investment in The Battery stands at \$1.055 billion, or more than two-and-a-half times what Bradbury represents. These investments are already planned to grow by over \$700 million by 2025.

In contrast, on the expenses side, the debt service on the initial 30-year stadium bond stays the same year after year and constitutes roughly 90 percent of total costs in 2022. This percentage scarcely changes for the life of the bond. Two other expenditures that remain basically flat over the thirty years are the capital maintenance fund and the amortization of the Circle 75/Windy Ridge bridge. When these two expenditures are added to debt service, together the three items constitute 96 percent of total county expenditures in 2022. Again, this percentage scarcely changes over the life of the project.

I assess the fiscal impact based upon the net, new changes in revenues and expenditures that result from the project and not upon the buckets of revenues that the county chose to divert to cover expenditures. The latter, while perhaps useful for the county's accounting purposes, is rather arbitrary and improper to assess the fiscal impact of the project. The items I included are presented in detail in the data appendix. Note that they include both taxes paid directly to the county and taxes paid to the Board of Education. The latter payments reduce the funding obligations of the county taxpayers to the school system and benefit the local economy. Bradbury's report appears to concur that these payments are fungible and should be included as a fiscal contribution to the county by the ballpark and The Battery.¹⁵

¹⁵ For instance, on p. 67 of his report, Bradbury writes: "Though sales tax revenue cannot be used to fund the stadium directly, I count this revenue as a benefit to County taxpayers, because it represents a funding stream than [sic] may offset expenditures on other government projects or used to lower the overall tax burden on residents." And, on p. 20, he writes: "It is important to note that though stadium

Because costs are basically stagnant through 2046 and revenues grow at a healthy clip, the initial fiscal deficits become fiscal surpluses. My model uses the actual data through 2021. The growth in revenues after 2021 depends on the assumed rate of inflation as well as the real growth in economic activity. Given that sales taxes from The Battery grew at an annual rate of 29.1 percent during 2017-21 or at 13.3 percent during 2018-21, when inflation was relatively quiescent, it would be reasonable to assume that, in the current macroeconomic environment with inflation around 8 percent, the rate of growth in Battery retail sales would be above 8 percent in the coming years. Instead, I make the conservative assumption that sales will grow at half the rate of growth of the last three years; to wit, I assume an annual growth rate of 6.65 percent through 2028. After 2028, I assume an annual growth rate of 4 percent which is also conservative. Even if the Federal Reserve Board is able to return the economy to its target 2 percent inflation rate, the 4 percent rate assumes a real growth rate of only 2 percent.

Another crucial assumption for the projections in my model is the extent to which spending in The Battery and Truist Park substitute for (or crowd out) spending elsewhere in Cobb County. I discussed above the reasons why I think the methodology employed by Bradbury is completely unreliable for this purpose. Instead, the Braves utilize geolocation data from apps provided by Placer.ai (<https://www.placer.ai>) and zip code data from credit cards along with fan identification data which can be used to estimate the share of foot traffic in The Battery (including the ballpark) and share of spending at the ballpark that comes from residents of Cobb County.

Considering the average share of ticket spending by Cobb residents during 2017-2021 (excluding 2020 as anomalous due to Covid), we can arrive at an estimate of the gross crowding out effect. Table Three below presents this data for the last three years at Turner Field and the first four full years at Truist Park. During 2017-21, Cobb residents accounted for an average of 21.51 percent of the total spending on ticket purchases. It is reasonable to assume that the Cobb share of food, beverage and merchandise spending was similar.¹⁶ This 21.51 percent might crowd out spending at entertainment venues elsewhere in the county. I call this the “gross crowding out” effect.

funding comes from different revenue buckets, government funds are fungible and drawn from a common well of county taxpayers, which limits the availability of funds for other purposes.”

¹⁶ Though the share on parking expenditures by Cobb residents was likely a bit lower.

However, it is also true that Cobb residents used to attend Braves games when the team played in Fulton County. Table Three depicts that during 2014-16, Cobb residents accounted for an average of 12.4 percent of the spend on ticket purchases at Turner Field. Now, with the Braves playing in Cobb County, Braves’ fans from Cobb no longer have to spend money on tickets and other items in Fulton County, and music lovers can attend concerts at The Roxy, instead of going downtown. This phenomenon is often referred to as import substitution; it diminishes the impact of gross crowding out. If we adjust for the presence of import substitution, the “net crowding effect” is approximately 9.11 percent. Even this share might overestimate the extent of crowding out because it assumes that Cobb residents did not increase their total consumption spending in order to attend Braves’ games.¹⁷ It also does not account for the likelihood that Cobb residents spent money at other entertainment venues in Fulton County (e.g., for concerts and meals) and are now able to attend non-baseball events and enjoy meals in The Battery.

Table Three

Percentage of ticket spend (Regular Season) by account origin 2014-2021							
	2014	2015	2016	2017	2018	2019	2021
Georgia residents (inclusive)	74.90%	74.47%	72.74%	78.92%	75.88%	73.25%	73.96%
Cobb residents	9.58%	10.20%	17.41%	25.36%	23.25%	18.61%	18.82%
Fulton residents	32.09%	31.94%	25.47%	25.87%	24.35%	24.47%	23.21%
Non-Georgia residents	25.10%	25.53%	27.26%	21.08%	24.12%	26.75%	26.04%

It remains also to consider spending in The Battery. According to estimates from geolocation data, Cobb residents accounted for 10.46 percent of the foot traffic at The Battery (including the stadium) on average between 2017 and 2021 (excluding 2020). Although many additional considerations apply to deciphering the share of out-of-county spending at The Battery, it appears that the final pattern is similar. While non-Cobb residents are likely to attend the nearly one hundred events at The Roxy, the share of non-Cobb residents at The Battery’s restaurants and

¹⁷ That is, Braves’ fans could reduce spending on travel, lower their saving or increase borrowing in order to attend games at The Battery.

other retail outlets is likely to drop during non-game days. In contrast, The Battery's businesses bring 5,564 employees to work every day in Cobb County and they are likely to frequent The Battery's restaurants and retail shops.¹⁸ The foot traffic data suggests that these factors largely balance out to produce similar patterns.

Acknowledging some imprecision, then, in my fiscal impact model, I will consider two crowding out effects: the gross effect of 21.51 percent and the net effect of 9.11 percent. Note also that, to be conservative, I assume that the same crowding out effects applies fully to property tax revenues, even though there is no direct connection between the county origin of consumers at retail outlets and the value of the adjacent office real estate. The model's details are presented in the data appendix. Here I summarize its results.

With a net crowding out rate of 9.11 percent, the county's net fiscal results from the project turn positive in 2024 at \$629,329. Thereafter, the net fiscal outcome increases rapidly, reaching, for instance, \$6,188,651 in 2028. With a net crowding out rate of 21.51 percent, the net fiscal outcome becomes positive two years later at \$184,601 in 2026, rising to \$2,736,513 in 2028. The positive returns grow significantly over the remaining years of the Truist Park thirty-year lease. Considering the entire period between 2016 and 2046, the net present value of the county's investment is between \$19.6 million and \$125.6 million, depending on the discount rate and the net crowding out rate employed.

In the data appendix, I show the net present value results, using the 9.11 percent and the 21.51 percent crowding out rates with three different discount rates of 3 percent, 4 percent and 5 percent. Sensitivity analysis with these rates seems appropriate given the county's rate of borrowing on its 2015 stadium revenue bonds varied between 1.00 percent and 4.50 percent depending on their maturity.¹⁹ In all cases, the net present value is positive for the county.

¹⁸ Well over a thousand more employees will be added as the underway and planned investments are realized over the next three years. Currently, there are also 1213 residents living in The Battery's multi-family units.

¹⁹ The blended rate is approximately 4 percent.

I view these numbers as conservative because (a) they exclude any possible multiplier or halo effects,²⁰ (b) they do not include property taxes paid by the Braves and The Battery to the Cumberland CID which amount to over \$1 million annually,²¹ (c) they are based on very cautious estimates for revenue growth, (d) they do not include the sales taxes paid to the county or to the Board of Education based on the internet sale of Braves' merchandise, (e) they do not include the almost doubling of sales taxes paid to the state from Truist Park relative to the previous level at Turner Field,²² (f) they treat crowding out equally on property values as on retail sales, and (g) they do not count any possible gains from the likely persistence of the stadium and The Battery after the first thirty years.

VI. Conclusion

Bradbury appears to relish criticizing Mr. Lee and Mr. Plant for calling the Truist Park and Battery project a home run. He cites Mr. Lee and Mr. Plant ironically invoking the home run metaphor on more than one occasion in his March 2022 report. Instead, Mr. Bradbury

²⁰ Although Meek/CEDR overestimated these effects in my view, I also believe that there are discernible spread effects in and around The Battery that are not included in my model. For instance, the data on the swift growth in new commercial property in the CCID cited above is strongly suggestive of a significant multiplier effect. A recent example of a likely halo effect is provided in the following: <https://www.businesswire.com/news/home/20220601005310/en/Affiliates-of-Paceline-Equity-Partners-Acquire-Full-Service-Sheraton-Suites-Hotel-in-Atlanta>. Also see the example provided in footnote 3 above.

²¹ These taxes not only promote economic activity in the Cumberland district, they also potentially reduce the demand for funding from the county. The amount of these taxes rose from \$29,979 in 2015, to \$116,327 in 2016, to \$376,406 in 2017, to \$1,112,176 in 2018, to \$1,104,573 in 2019, to \$1,166,014 in 2020, and to \$1,252,689 in 2021.

²² Bradbury maintains that sales taxes to the state should not be included in the economic impact discussion because the taxes paid from Truist and The Battery simply replace those paid from Turner Field. This is incorrect. The sales levels at Truist and The Battery are much higher than they were at Turner Field. While it is true that much of the additional spending substitutes for other retail spending within the state, it is also true that there are out of state visitors and some in-state visitors augment overall spending rather than substituting one location for another. (The Braves' television territory as defined by MLB includes all or parts of six states: Georgia, S. Carolina, N. Carolina, Alabama, Mississippi, and Tennessee – one of the largest territories in baseball. According to Braves' data based on zip codes, between 2017 and 2021, excluding the pandemic distorted year of 2020, an average of 24.5 percent of ticket purchases came from outside Georgia. Using geolocation technology from apps, the Braves estimates that 38.4 percent of foot traffic in select locations in The Battery come from out of state.) The growth of state revenues supports economic activity (and, hence, tax revenue) within Cobb County. The average level of sales taxes to the state from Turner Field during 2012-2016 was \$3.656 million, while the average level from Truist Park during 2017-2021 was \$6.653 million. If the Covid down year of 2020 is excluded, the average level from Truist Park rises to \$8.25 million. These numbers exclude retail sales tax contributions from The Battery. In 2021, total revenue from retail sales in The Battery were \$94.0 million, up from \$68.5 million in 2019 and from \$21.3 million in 2017.

appears content, if not triumphant, in stating that the more apt metaphor is a pop fly. Based on my review of the available information from the Braves and County, I conclude that if the project is indeed a pop fly, then it is a pop fly that fell in for a double. Or, perhaps, if Ronald Acuña Jr. is running it out, a triple!

I have confined my discussion to the fiscal policy effect of the ballpark and The Battery on Cobb County. I have not attempted to analyze the overall economic impact. My analysis clearly indicates that in present value terms (i.e., discounting future streams of costs and benefits) the Braves' combined project will be a significant fiscal plus with an estimated range of between \$19.6 million and \$125.6 million. It is always possible to posit a counterfactual and to claim that the hypothetical alternative may have had yet a more salutary fiscal outcome. Dealing in hypotheticals is far from the rigorous analysis on which policymakers should make decisions, especially when the hypotheticals are both unlikely and poorly defined.

I conclude that the outcome of a project that is more than self-financing and that brings a product of major cultural significance (the Braves) as well as other entertainment venues is an attractive investment for Cobb County.

APPENDIX

REVENUE	2016	2017	2018	2019	2020	2021
Sales Taxes to County (incl liquor, occup, hotel)		2,013,792	3,845,604	4,338,717	1,810,957	5,593,677
General Fund Property Taxes	196,825	508,902	1,882,802	1,868,937	1,972,895	2,119,549
Cumberland SSD2 (property)	57,000	184,439	544,966	541,241	571,347	613,817
Cumberland SSD1 (hotel)			136,764	208,548	121,833	205,977
Debt Service Fund	5,351	9,787	28,917	28,719	30,316	32,570
Fire Fund	68,865	222,833	636,165	631,816	666,960	716,538
Sales Taxes to School District		1,637,645	2,482,551	2,743,463	550,759	3,796,897
Property Taxes to School District	439,715	1,422,816	4,204,026	4,175,285	4,407,532	4,735,163
ANLBC rent		3,050,000	6,100,000	6,100,000	6,100,000	6,100,000
Total Revenue	767,756	9,050,214	19,861,795	20,636,726	16,232,599	23,914,188
Net Crowding out of 9.11 percent + rent	697,813	8,503,595	18,608,095	19,312,430	15,309,519	22,291,315
Net Crowding out of 21.51 percent +rent	602,612	7,759,568	17,509,876	17,509,876	14,053,077	20,082,356
EXPENDITURES						
Debt Service	12,250,446	18,793,290	22,484,130	22,485,536	22,484,078	22,484,158
Capital Maintenance		1,200,000	1,230,000	1,260,000	1,290,000	1,320,000
Property Insurance		74,376	55,857	71,361	71,361	71,361
Public Safety		841,398	899,097	890,428	4,785	817,867
Windy Ridge Bridge	169,656	169,656	169,656	169,656	169,656	169,656
Total Expenditures	12,420,102	21,078,720	24,838,740	24,876,981	24,019,879	24,863,041
Fiscal Balance I (net crowding out=9.11%)	-11,722,289	-12,575,125	-6,230,644	-5,564,551	-8,710,360	-2,571,725
Fiscal Balance II (net crowding out=21.51%)	-11,817,491	-13,319,152	-7,328,863	-7,367,105	-9,966,802	-4,780,684
Net Present Value I (.03;nco ²³ =9.11%)	\$125,569,470					
Net Present Value II (.03;nco=21.51%)	\$58,018,343					
Net Present Value III (.04;nco=9.11%)	\$93,072,219					
Net Present Value IV (.04;nco=21.51%)	\$36,264,140					
Net Present Value V (.05;nco=9.11%)	\$67,745,296					
Net Present Value VI (.05=21.51%)	\$19,597,799					

²³ nco = net crowding out.

2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
5,965,657	6,362,373	6,785,470	7,236,704	7,717,945	8,231,188	8,778,562	9,129,705	9,494,893	9,874,689	10,269,676
2,260,499	2,410,822	2,571,142	2,742,123	2,924,474	3,118,951	3,326,362	3,459,416	3,597,793	3,741,705	3,891,373
654,636	698,169	744,597	794,113	846,922	903,242	963,307	1,001,840	1,041,913	1,083,590	1,126,933
205,977	205,977	205,977	205,977	205,977	205,977	205,977	205,977	205,977	205,977	205,977
34,736	37,046	39,509	42,137	44,939	47,927	51,114	53,159	55,285	57,497	59,797
764,190	815,009	869,207	927,009	988,655	1,054,400	1,124,518	1,169,499	1,216,279	1,264,930	1,315,527
4,049,391	4,318,675	4,605,867	4,912,157	5,238,816	5,587,197	5,958,745	6,197,095	6,444,979	6,702,778	6,970,889
5,050,051	5,385,880	5,744,041	6,126,019	6,533,400	6,967,871	7,431,234	7,728,484	8,037,623	8,359,128	8,693,493
6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000
25,085,136	26,333,950	27,665,810	29,086,239	30,601,127	32,216,754	33,939,821	35,045,175	36,194,743	37,390,293	38,633,666
23,355,590	24,490,637	25,701,165	26,992,193	28,369,074	29,837,518	31,403,613	32,408,269	33,453,112	34,539,748	35,669,849
21,001,433	21,981,628	23,027,005	24,141,899	25,330,934	26,599,040	27,951,476	28,819,068	29,721,364	30,659,751	31,635,674
22,486,658	22,483,495	22,487,130	22,481,198	22,486,678	22,485,988	22,485,306	22,489,009	22,488,911	22,483,663	22,482,200
1,350,000	1,380,000	1,410,000	1,440,000	1,470,000	1,500,000	1,530,000	1,560,000	1,590,000	1,560,000	1,530,000
75,000	75,000	80,000	80,000	80,000	90,000	90,000	90,000	100,000	100,000	100,000
925,000	925,000	925,000	940,000	940,000	940,000	940,000	940,000	955,000	955,000	955,000
169,656	169,656	169,656	169,656	169,656	169,656	169,656	169,656	169,656	169,656	169,656
25,006,314	25,033,151	25,071,786	25,110,854	25,146,334	25,185,644	25,214,962	25,248,665	25,303,567	25,268,319	25,236,856
-1,650,723	-542,514	629,379	1,881,339	3,222,741	4,651,874	6,188,651	7,159,605	8,149,544	9,271,429	10,432,993
-4,004,880	-3,051,523	-2,044,781	-968,954	184,601	1,413,397	2,736,513	3,570,403	4,417,796	5,391,433	6,398,818

2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
10,680,463	11,107,682	11,551,989	12,014,069	12,494,632	12,994,417	13,514,194	14,054,761	14,616,952	15,201,630	15,809,695
4,047,028	4,208,909	4,377,265	4,552,356	4,734,450	4,923,828	5,120,781	5,325,612	5,538,637	5,760,182	5,990,590
1,172,011	1,218,891	1,267,647	1,318,353	1,371,087	1,425,930	1,482,968	1,542,286	1,603,978	1,668,137	1,734,862
205,977	205,977	205,977	205,977	205,977	205,977	205,977	205,977	205,977	205,977	205,977
62,189	64,676	67,263	69,954	72,752	75,662	78,688	81,836	85,109	88,514	92,054
1,368,148	1,422,874	1,479,789	1,538,981	1,600,540	1,664,562	1,731,144	1,800,390	1,872,405	1,947,302	2,025,194
7,249,725	7,539,714	7,841,303	8,154,955	8,481,153	8,820,399	9,173,215	9,540,143	9,921,749	10,318,619	10,731,364
9,041,233	9,402,882	9,778,997	10,170,157	10,576,963	11,000,042	11,440,044	11,897,645	12,373,551	12,868,493	13,383,233
6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000	6,100,000
39,926,774	41,271,605	42,670,231	44,124,801	45,637,554	47,210,817	48,847,010	50,548,652	52,318,359	54,158,854	56,072,969
36,845,154	38,067,472	39,338,683	40,660,741	42,035,682	43,465,621	44,952,758	46,499,379	48,107,866	49,780,692	51,520,431
32,650,635	33,706,193	34,803,974	35,945,666	37,133,026	38,367,880	39,652,128	40,987,747	42,376,790	43,821,394	45,323,783
22,483,238	22,485,538	22,483,088	22,484,875	22,484,663	22,481,213	22,483,400	22,484,650	22,488,500	22,483,600	22,483,600
1,500,000	1,470,000	1,440,000	1,410,000	1,380,000	1,180,000	1,000,000	800,000	600,000	500,000	300,000
110,000	110,000	110,000	120,000	120,000	120,000	130,000	130,000	130,000	140,000	140,000
955,000	955,000	970,000	970,000	970,000	970,000	970,000	985,000	985,000	985,000	985,000
169,656	169,656	169,656	169,656	169,656	169,656	169,656	169,656	169,656	169,656	169,656
25,217,894	25,190,194	25,172,744	25,154,531	25,124,319	24,920,869	24,753,056	24,569,306	24,373,156	24,278,256	24,078,256
11,627,261	12,877,279	14,165,939	15,506,210	16,911,364	18,544,753	20,199,702	21,930,073	23,734,710	25,502,436	27,442,175
7,432,741	8,516,000	9,631,230	10,791,135	12,008,707	13,447,011	14,899,072	16,418,441	18,003,634	19,543,138	21,245,527

2044	2045	2046	2047
16,442,083	17,099,766	17,783,757	
6,230,213	6,479,422	6,738,599	
1,804,257	1,876,427	1,951,484	
205,977	205,977	205,977	
95,736	99,566	103,549	
2,106,201	2,190,449	2,278,067	
11,160,619	11,607,043	12,071,325	
13,918,562	14,475,305	15,054,317	
6,100,000	6,100,000	6,100,000	
58,063,649	60,133,955	62,287,075	
53,329,760	55,211,462	57,168,432	
46,886,268	48,511,252	50,201,235	
22,486,700	22,486,100	22,485,338	11,242,388
300,000	250,000	250,000	
140,000	150,000	150,000	150,000
985,000	1,000,000	1,000,000	1,000,000
169,656	169,656	169,656	
24,081,356	24,055,756	24,054,994	12,392,388
			-
29,248,404	31,155,706	33,113,439	12,392,388
			-
22,804,912	24,455,496	26,146,241	12,392,388