LEARNING ABOUT THE ECONOMIC IMPACT OF A SPORTS ARENA

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Abstract

This paper presents a method of teaching about the economic impact of building a professional sports arena in a metropolitan area. Designed for an upper-division, undergraduate course in Sports Economics, this teaching method is an application of the context-rich teaching strategy. It also uses a jigsaw cooperative learning technique in preparation for an individual assignment actually performing a simple economic analysis in a plausible situation. The students must decide what is and what is not important to consider, what relevant information is missing, and then use that information to advise an elected official on a proposal to use tax money to help build the sports arena.

Key Words: context-rich, cooperative learning, economic impact, sports economics, jigsaw

JEL Classifications: A22, Z23, R53

Introduction

There have long been calls for teachers of economics to move from the traditional chalk-and-talk method in the classroom to more interactive strategies. There is growing evidence that active strategies are effective at teaching economics (Freeman et al., 2014; Allgood, Walstad, and Siegfried, 2015), though these findings are not universal (Zanca, 2017). McConnell and Lamphear (1969) argue that active learning over passive learning might still be better in the long run in promoting life-long learning. The increase in interactive and cooperative learning methods has been slow (Watts and Becker, 2008; Asarta, Chambers, and Harter, 2020), however. While instructors often resist interactive strategies due to various costs (Goffe and Kauper, 2014), a mixture of teaching strategies that include active learning might be best (Salemi, 2002).

To help reduce those costs, this paper offers a flexible application of the context-rich teaching strategy. This application is an examination of the economic impact of a professional sports arena to a metropolitan area. It also uses a jigsaw cooperative learning technique in preparation for an individual assignment actually performing a simple economic analysis in a plausible situation.

In my undergraduate, upper-division Sports Economics course, a portion of the course is devoted to learning about the public subsidies given to professional sports teams. One of the

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common rationales behind these subsidies is the economic impact expected to arise from them. However, there are many thorny issues involved in measuring the economic impact, such as the opportunity cost of spending on sports, whether to count the spending of local residents as a benefit arising from the team, and how big the multiplier might be. This teaching strategy is a way of addressing those issues in a way that seems to be more effective for the students than the traditional chalk-and-talk method.

Procedure and Justification

About two-thirds of the way through the semester, we begin discussing public policy towards sports franchises. In particular, we look at the claims by teams of their economic impact and discuss whether metropolitan areas should subsidize the teams. The students generally find this very interesting because they've long heard the teams' side of the story about the huge economic impact of sports but not the various reasons why that impact is probably much smaller. This exercise introduces the section on public policy, though the writing assignment is not due until after this section of the course.

The premise of the exercise is that a state politician is trying to decide if it is useful to spend public money on building a large arena in one of the state's metropolitan areas, and she asks the student for advice. To begin, each student is given a fact sheet (Handout 1, Appendices) containing information of some expected outcomes of building the arena such as the estimated number of tickets sold, the Fan Cost Index, the location of the arena, and so on. The fact sheet is specifically written to bring up several of the usual flaws and complications in economic impact studies. For example, one of the facts concerns spending from visitors who would already be in the area for work-related visits. However, in-class discussions highlight that only new spending should be counted. Local spending and spending from visitors who are in the area anyway would mostly substitute for spending elsewhere in the city and not be new. Similarly, expenditures by visitors for lodging, gas, and so on are mentioned, but any leakages are not. These leakages might include payments made outside of the area from, say, a hotel to the franchising corporation.

Other information is intentionally omitted. There is no discussion at all of any multiplier effect. Part of the benefits of the context-rich learning strategy is that it forces students to consider information that is not right in front of them. It is more realistic to have a problem with some information but not all of it. A key feature of context-rich problems is the need to consider what is and is not included (Maier and Simpkins, 2008). This forces students to utilize a process more in line with how an expert in the field would attack the problem (Bangs, 2012) and is an important part of the critical-thinking push at many colleges and universities.

The students are placed in groups of two to three. Groups have been shown to be more effective than individual efforts to solve context-rich problems (Heller, Keith, and Anderson, 1992). I let them choose the groups for themselves, though the groups could be assigned. Each student is then randomly assigned one of three individual tasks: 1) decide which of the items on the fact sheet are relevant and important for determining the economic impact of the sports arena, 2) decide which of the items on the fact sheet are irrelevant, and 3) decide what other relevant bits of information the student would like to know. While the first two tasks serve the same function, framing them as opposed to each other increases the engagement when the groups

come together and may give the students more ownership of their respective tasks. I usually give them 10-15 minutes to look over the sheet, but it might be useful to assign this part as homework for the next class period.

After this, each group gets together to compare their answers. This is a version of the jigsaw learning method since each group member is required to bring their answers to one of the three tasks and work together with the rest of the group to complete the picture of what is relevant and desirable to know. I give each group as much time as they need, which is usually about 15-20 minutes. Each group writes their answers (Handout 2, Appendices) to all three questions, and I collect them. The main purpose of collecting the handout is to allow me to copy the answers so that each group member has it in front of them in the follow-up assignment. However, this also gives me the opportunity to guide them if I see fit. One of the dangers of setting up the assignment this way is that errors at this stage can become calcified. If the whole group feels it is important to include local spending, for example, then the students are less likely to question that when doing the individual assignment later.

Following this, the students are given an individual writing assignment (Handout 3, Appendices) to advise the state senator on whether she should vote for providing state funding for the arena project. They are to write a one- to two-page memo with their advice, attaching their justifications. The student is informed that their economic expertise is the reason for being selected to advise the legislator, so the memo must address the economic impact. The student is free to add additional concerns, however.

This method of examining the issue of government subsidies of sports teams forces the students to grapple with the material in a way that is more realistic than the traditional method of studying the issue. Students are forced to consider for themselves how to address the issue, and they must decide what is important to consider. Additionally, the information is incomplete – they must recognize that they can make rough estimates of team revenue from some of the data, but they must also quantify what isn't there. The students should recognize that a multiplier would be necessary, but also what magnitude of multiplier would be appropriate. This allows the students to develop the ability to transfer their learning to new situations (Bangs, 2007) and also helps them become more discriminating consumers of these types of economic impact studies.

Discussion and Conclusions

I have used this strategy a total of five times. There have been minor tweaks during the years. For example, the fact sheet originally posited an arena in Louisville, but the location was changed to Northern Kentucky (south of Cincinnati) when the city of Louisville actually built a basketball arena. The essential elements of the method remained the same, however. While I have used this activity and assignment in my course on the economics of sports, it is also applicable to a course in urban economics or public economics.

This activity is particularly flexible in the assessment portion. The graded part of the assignment is the memo with an accompanying appendix containing the justifications. For my class, the appendix is the meat of the assessment. I look for a solid economic impact argument using the topics discussed in class. In particular, after the cooperative learning (jigsaw) portion of the exercise, the class critiques other economic impact studies, and I look for the students to take into account the substitution effects of entertainment spending, leakages as team revenues leave

the local area, and the lower multiplier due to revenues accruing to persons with relatively high wealth and, thus, low marginal propensities to consume. I expect a simple calculation of the economic impact that reflects other class homework, but other classes would have different expectations. Though my classes do not emphasize the issue, a more complete response would look at the expected lifespan of an arena and the present discounted value of the benefits. Also, there is less discussion of the payment mechanism than I would use in a public economics course.

For my students, the numbers provided usually produce an economic impact that is smaller than the requested government spending, but different assumptions about the arena lifespan and bond payments could yield a positive net economic benefit. In addition, the student's actual recommendation does not have to be based solely on the economic impact numbers. The student's justification could bring in discussions of how these government expenditures tend to benefit higher-income residents, how certain political philosophies think this type of expenditure is inappropriate for the role of governments, or how the location of the benefits within the state compares to the location of the tax burden.

Before, during, or after the assignment, class discussions can highlight any particular aspect of economic impact studies. Coates and Humphreys (2008) and Wassmer, Omg, and Propheter (2016) give an overview of the various important features. For specific aspects, Siegfried and Zimbalist (2002), Matheson (2009), and Crompton (1995) point out that the multiplier is lower for sports than for many other industries, and Agha and Taks (2018) discuss whether spending on professional sports essentially substitutes for other local spending and is, therefore, not new. Debriefing this activity at a more-basic level, the opportunity cost for the public and for the government would be relevant, as well as demonstrating to students the messiness of information in real-life decisions. Alternatively, discussions could focus on normative issues, such as the distributional effects of this type of government expenditures (Swindell and Rosentraub, 1998).

Since Cincinnati has the closest major professional sports teams to our university, I have the students read a story about when the Cincinnati Reds and Bengals were trying to get new stadiums (Blair and Swindell, 1997). This article contains a critique of an economic impact study done during that process which points to some of the common issues such as the relevant geographic area to be studied, how the use of public money to build a stadium might crowd out other uses of public funds, or the temporary nature of construction jobs and demand increases.

To assess the effectiveness of the method, I surveyed the students to see how relatively effective they felt the approach is. This unscientific poll of students indicated that 73% felt that this assignment was better (or much better) than a typical assignment for understanding economic impact studies, and 82% felt that it was better (or much better) for applying these topics to real life. This coincides with others who have documented an improvement in knowledge and skills (Heller and Hollabaugh, 1992) and that student interest and enjoyment increases with the use of context-rich problems (Jonsson, Gustafsson, and Enghag, 2007, and Albanese and Dast, 2014).

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Appendices

Handout 1

Learning about the Economic Impact of a Sports Arena
Class Group-Work Assignment

You are invited to an end-of-the-year banquet for outstanding students. You find your seat and realize that you are sitting next to your local state senator. When she hears that you are taking a course in sports economics, she is delighted. There is a bill working its way through the legislature that will pay $450 million for a new basketball arena in Northern Kentucky ("The Southern Side of Cincinnati"). The idea is to lure an NBA team. She has seen an economic impact study indicating that the team will create $900 million worth of economic activity for the area, but she isn't so sure. She asks for your advice on how to vote. She decides to hire you as a consultant.

She sends you a fact-sheet about the bill with the following information:

- There is an interested team that would likely move to Northern Kentucky if the arena is approved. (The team doesn't want its identity known, though, so you will have to take her word for it.)
- The team would expect to sell 800,000 tickets.
- The Fan Cost Index, which figures the average expenditure for a family of four to attend a single game, comes to $390.
- The average ticket price is $70.
- Ten percent of those fans are from out of town and would need hotels, gas, etc. The average expenditures per visitor per day are estimated to be $100.
- The team would get to keep all of the parking, concessions, etc. as part of the package to lure them from its current city.
- The arena would be located in Newport, near the Aquarium.
- The team could draw about 15,000 people per year who are in town for work-related visits. Schwan's food company, in particular, brings in a large number of people to its offices.
- There is, of course, a 6% sales tax. That number is already included in the dollar amounts above, but that part of it will end up in Frankfort.

Handout 2

Class Group-Work Worksheet

Group Members:_____

On Handout 1, you are given a set of facts. Decide which of the facts are important and which are not for determining the economic impact of the new basketball arena. (Why or why not?)

1. Important:

2. Not Important:

3. What other information would you want or need to know?

Handout 3

Learning about the Economic Impact of a Sports Arena
Context-Rich Paper Assignment

You are invited to an end-of-the-year banquet for outstanding students. You find your seat and realize that you are sitting next to your local state senator. When she hears that you are taking a course in sports economics, she is delighted. There is a bill working its way through the legislature that will pay $450 million for a new basketball arena in Northern Kentucky ("The Southern Side of Cincinnati"). The idea is to lure an NBA team. She has seen an economic impact study indicating that the team will create $900 million worth of economic activity for the area, but she isn't so sure. She asks for your advice on how to vote. She decides to hire you as a consultant. She sends you a fact-sheet about the bill with the following information:

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-

Write a memo to the state senator recommending how she should vote. Remember, a Yes vote is to agree to pay $450 million for a new basketball arena in Northern Kentucky.

Even though this is a vote in Frankfort, assume the relevant area for your analysis is comprised of Boone and Kenton Counties (or, at least, the Kentucky part of the metropolitan area).

In class, you and your group identified some items that you were not given, but that you thought were important. You will have to estimate these items.

The state senator is a busy woman, so do not take too much of her time. Write a two-page memo giving advice on how she should vote on the proposal. You do not have to base your advice *solely* on the expected economic impact of the arena, but you should include that in your argument. Be

persuasive – do not simply give your opinion, but argue it. The senator is intelligent but has only studied economics at a principles level.

Make sure the memo clearly states your recommendation and is professionally written. You should use proper grammar, and the memo should be typed. To the back of your memo, staple an appendix with your calculations of the economic impact of the arena. Make sure you refer to the calculations in your memo. If you used any other sources besides the professor or the course textbook, you need to cite them and add a list of references. This format (a memo with attached details) is a common way of bringing a busy decision-maker up to date on a topic.

This is an individual assignment, and not a group assignment.

Make sure you have your memo printed out and ready to turn in at the beginning of class on the due date.