

Monday-Morning Quarterbacking And Antitrust Damages

Law360, New York (January 10, 2014, 12:56 PM ET) -- On Nov. 30, Auburn University beat the University of Alabama in a college football game. The game had no effect on the U.S. Department of Justice's merger guidelines, changed nothing about class certification standards post-Dukes v. WalMart, and taught us nothing (alas) about the proper standard for evaluating reverse payment settlements. It did, however, propel Auburn into Monday's national championship game. More importantly for our purposes, the post-game chatter provides a fascinating window into the challenges facing economists and lawyers trying to determine the effects of allegedly anti-competitive behavior. Because, whether evaluating Nick Saban's^[1] coaching decisions or the effects of a cartel, the question is the same: What would have happened if different decisions were made by competitors?

The decision that Saban made did not immediately seem like a momentous one. The game was tied, and there was only a second remaining. With about 40 yards to go, Alabama had several options: The quarterback could kneel down and Alabama could let the game go to overtime and hope to win the game in the extra period; it could try a long field goal kick, or it could throw the ball toward the end zone in hopes of an unlikely touchdown. The first option would guarantee a tie and overtime. The second two options meant a chance at victory before the buzzer sounded — but not much of a chance. The most likely outcome, no matter Saban's decision, was that the game would go to overtime.

Saban chose option two, sending out a backup kicker to try a very long 57-yard field goal (even a good collegiate kicker will struggle with kicks over 45 yards or so). Alabama missed the kick. That would not have been a disaster, standing alone. But the kick was short of the goalpost, and an Auburn player caught the ball. The Auburn player then ran 109 yards, through and around 11 befuddled Alabama defenders and to the end zone for a touchdown. And all of a sudden Alabama's final-second roll of the dice had given the win to its in-state rival, Auburn.

The game ended, and real sport began: days of spirited national discussion and, one imagines, decades of debate in Tuscaloosa. This is what the second-guessers said: Saban should have gone to overtime. Or Saban should have thrown a "Hail Mary" pass to the end zone.^[2] If he had just done one or the other, things would have been different. And in one sense, they would be different; but in football, the question that matters is whether the outcome would be different — would Alabama have won?

It is here that commentators faced the problem so familiar to antitrust economics: How, exactly, does one figure out what would have happened if someone had made a different decision? Ideally, we let Saban redo his decision 10,000 times while meticulously coding the results and preserving for all time what was the best decision in that moment. So too when trying to judge the effects of a cartel: To see how much the cartel raised prices, it would be great if we could do everything over again, but this time, hold the price-fixing.

The antitrust community has developed a host of solutions of varying complexity and coherence to the problem of imagining the “but-for” world. The sports world, in recent years more than a little numbers-obsessed, has started to do the same. But the sports questions are more discrete, and the attempted solutions (usually) involve fewer regressions. They make, then, a comprehensible case study for the challenges we face in evaluating these but-for worlds.

Here is how Bill Barnwell, a writer for ESPN, analyzed Saban’s decision.[3]

1. If Alabama makes the kick, they win the game without going to overtime.
2. Barnwell observes that since 1999, NFL (i.e., professional) kickers have made about 36-38 percent of field goals from the relevant range.
3. He acknowledges that NFL kickers are likely better than college kickers, though he makes a halfhearted argument that this kicker may be more likely to succeed than other collegiate kickers. As a “wild guess” he assigns Alabama an 18 percent chance of making the kick.
4. Then he estimates the chances of Auburn even having a chance to return the kick. He lists a bunch of reasons he thinks makes it unlikely they would have such a chance. Together, he says, this makes for odds less than the 18 percent chance Alabama had of making the field goal.
5. Even if Auburn received the field goal, it had to return it. Barnwell states that there have been four field goals returned for a touchdown since 1999 on field goals longer than 52 yards — out of 389 field goals missed from that distance. In other words, about a one percent chance.
6. Barnwell acknowledges there are other eventualities he does not consider: the kick could have been blocked, for example.

The first thing that should jump out about this analysis is that it is not at all clear what the correct “but-for world” is. For example, do we evaluate Saban’s decision to try an improbable field goal against the equally improbable Hail Mary pass? Or, as Barnwell does, do we compare against the “certainty” of overtime (which really only offers the certainty of another chance for both teams)? Or, is the but-for world one in which Saban chooses to kick the field goal, but sends out faster, more able tacklers and specifically instructs them to identify Auburn’s returner? Barnwell’s analysis tells us how Saban might have been thinking about the choice he did make — but in antitrust, as in football, we must also think about the decisions that didn’t get made, or the world that didn’t happen.

Economists face a much more complicated world than football coaches. And the U.S. Supreme Court’s Comcast decision imposes a considerable burden on economists to isolate particular economic practices for purposes of analysis. The more possibilities we recognize, the harder it is to say anything definitive about one in particular.

Next, we should note that Barnwell’s analysis depends on its many inputs. This is true, only more so, in the economics sphere. Estimating a “but-for” price or quantity requires countless assumptions, some of which the economist will likely explain and some that will inevitably be left unarticulated. Economists are fond of the phrase “Garbage-in, Garbage-out,” which means what it says: use unreliable inputs and you will get unreliable outputs. So too here.

Things get interesting at point 2. Immediately, Barnwell confronts what is almost always the first question of econometric analysis: What data is available? And he immediately runs into what is very often the first challenge of econometric analysis: The data available is not very good. Barnwell without much apparent hesitation uses data from NFL professionals to make statements about college students. Why does he do this? Not because he is blind to the error this is introducing — he is quick to try adjustments to account for the professionals' superiority. But because this is the data that he has available.

This is a not-so-secret aspect of much economic analysis: The economists scramble for second-best data, and the selection of data can often drive the results. Nor is it something to be ashamed of — companies gather data for all kinds of reasons, but not usually to facilitate antitrust analysis. Nonetheless, we should question why data is being chosen. For example, the “yardstick” method of measuring overcharges uses data from a benchmark industry to compare to the allegedly cartelized industry. Inevitably, the choice of industry will be constrained by the available data. But we should be careful to ensure that data limitations are not forcing us to compare apples to oranges or professionals to amateurs.

The reliance on data from the NFL is an obvious flaw in Barnwell's analysis, but there is a more subtle problem with his data. The data shows that NFL kickers make field goals of this distance 37 percent of the time, conditional on deciding to kick the field goal. In other words, the data Barnwell cites do not show that even any NFL kicker makes 37 percent of the field goals from this distance. Rather, they show that when a kicker is summoned to try such a field goal, he makes it 37 percent of the time. Of course, a coach will ask a kicker with a stronger leg to try long field goals more often. Without analyzing the distribution of long field-goal attempts, we have no way of knowing whether the statistic is showing anything more than that a small minority of extremely powerful kickers can make long field goals 37% of the time.

We should be on the lookout for similar assumptions and “biases” implicit in economic work. For example, an economist arguing that overcharges are high might point to evidence that competitors were able to increase prices by significant amounts. But if this calculation is conditional on the time period examined, or the range of products selected for analysis, then the price increases observed may reflect normal competitive dynamics and they may not tell us anything interesting at all about an alleged cartel's operation.

Relying on data he recognizes is imperfect, Barnwell next moves to adjust the data. Few economists will be as frank as Barnwell is when describing such adjustments — he calls it a “wild guess.” But economists will often need to make similar adjustments. Sometimes these are relatively straightforward adjustments — applying exchange rates to ensure prices are expressed in a common currency, for example (although even here mischief may lurk). But some are much more complex and uncertain — what to do with discounts, for example, or negative prices and quantities? How do we align prices for sales in January with costs incurred earlier? But because they can be described in technocratic terms (LIFO vs. FIFO anyone?), and because these choices are often more art than science, these selections may only seem more rigorous than Barnwell's “wild guess.”

Central to any analysis is the identification of appropriate “control” variables that will inform a regression analysis. The controls an economist chooses are often critical to the outcome, because they make up, in some sense, the “but-for world”; they are all the factors that will be “held constant” and separated from the factor that will be varied in the analysis. In modeling the outcome of the Iron Bowl, you want to know the temperature and wind conditions and the injury status of key players, for

example, because all those things are still true if Saban tries something different.

Of course, Barnwell acknowledges that this is a simple model that does not account for every possibility. Even the most complicated model cannot do so, and making the model too complicated has other consequences. For example, antitrust economists may model a “but for” world in which there was not a cartel by using actual data from the period where there was (allegedly) a cartel. After applying various controls, they will say, this is what the price should have been. But if the price was lower in the but-for world, other things would also probably have been different: fewer plants (or more plants) might have been built, for example. The economist may nod at this possibility, and may try to account for it. But there are so many ripple effects that to account for all of them may be impossible.

Finally, see that despite the precision of some of the numbers, the conclusion is far from as airtight as the author seems to imagine it. Numbers and statistics are important, but they are not sufficient, and they can often mislead. Economists produce 100-page expert reports that estimate overcharges to the hundredth of percent. Lawyers naturally assume that having calculated these precise numbers, the economists must also believe them to be right. But they are “right” at most only in a statistical sense — the most likely estimate within a range of possibilities.

This uncertainty is not a failure of computing power; rather, it is incumbent in the modeling process. Antitrust economists and lawyers are forecasting (or more often, backcasting) what would take place in a world that doesn’t exist. We cannot compare our answer to a “true” answer (just as Saban won’t ever know what would have happened if he had tried the Hail Mary). We have to think carefully, analyze rigorously, and then — like Saban — expect a lot of second-guessing.

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[1] Saban is Alabama’s football coach, a maddeningly successful automaton who attracted a lifetime’s worth of schadenfreude after Alabama’s loss.

[2] The authors admit that this is not an exhaustive list of the things that were said about Saban.

[3] http://www.grantland.com/blog/the-triangle/post/_/id/84347/thank-you-for-not-coaching-week-13. Scroll down to the “College Night” section.