Revenue Sharing with Heterogeneous Investments in Sports Leagues

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Abstract 2012-041  11:40 AM  20-minute oral presentation (including questions) (West)

It is well known in the sports economics literature that revenue sharing decreases the incentive to invest in the talent level of the team, thereby decreasing player salaries. In North American sports leagues, where the supply of talent is assumed to be fixed, a decrease in player salaries does not decrease the overall talent level of the league. Therefore, revenue sharing is a way of controlling costs without significantly affecting revenues that are derived from the absolute talent level of the league. However, other factors besides player quality drive revenues. For example, new stadiums and facilities typically increase demand and revenues, so leagues do not want to mitigate the incentives of building new stadiums and facilities. This study analyzes the effects of differentiated revenue sharing and ways in which leagues maintain incentives for the construction of new stadiums. Specifically we develop a theoretical model that illustrates the incentives from revenue sharing and then give examples where sports leagues have revenue sharing policies, but try to curb the disincentive to invest in facilities.

The standard theoretical economic model of a sports league assumes that a team’s revenues are a function of winning, which is a function of the team’s investment in player talent (El Hodiri and Quirk (1971), Fort and Quirk (1995), Szymanski and Kesenne (2004)). Player talent investment is rather unique in that it is often a zero-sum game. In other words, if a team increases their talent level it is at the expense of another team. Therefore, barring any effects from rearranging player talent, revenue sharing increases profits by decreasing costs and leaving revenues essentially unchanged. While our model is not in disagreement with previous models, we add other types of investments to the model. Our model contains investments, such as stadium investments, that are not zero-sum throughout the league. One result of this model is that if revenues are not differentiated, then the optimal level of revenue sharing is less than that of the previous models. Furthermore, overall profit of the league will increase if the league differentiates revenue sources as shares different revenues at different rates. Finally, it is most efficient for the league if they can subsidize non-player investments.

The first example that illustrates these incentives is the National Football League (NFL) and stadium construction. Teams in the NFL do not share revenue received from the sale of personal seat licenses (PSLs), provided a waiver is obtained, which the league only allows in connection with a newly constructed or renovated stadium. The primary and obvious incentive is to encourage the construction and renovation of stadiums and obtain the resulting benefits (additional revenue opportunities and generation, improved fan experience and customer service, significant public relations and branding opportunities, etc.), by increasing the revenue received and retained by the team/stadium and therefore the likely return on the stadium investment. In this regard, it is a substantially better return for the team/stadium owner than simply increasing ticket prices, which would naturally become part of shared revenue.

Furthermore, teams in the NFL receive a receive credit for actual stadium investment up to 1.5 percent of revenue each year, providing a direct incentive for team/stadium owners to invest in new stadiums and obtain the resulting benefits. To further provide the necessary incentives, those credits are higher in California than for stadiums in other states, given the unique costs of building in California and the relatively greater difficulty and the experience of getting support other than from the private sector. This enhanced credit not only stimulates the construction of a new stadium, but necessarily recognizes the importance of the Los Angeles market and provides enhanced incentives to have a team/stadium there.

A second example deals with the National Basketball Association (NBA) and marketing incentives. In connection with certain revenue sharing components, NBA teams were required to maintain certain ticket and/or attendance minimums. To ensure that teams marketed themselves appropriately and aggressively, for teams to receive a certain type of revenue sharing (thereby providing significant additional financial incentives), NBA teams had to have a minimum number of tickets sold or attendance. While the NBA included some flexibility in these requirements (e.g,
requiring the minimums be met once every two years or enabling a two-year average to be used), the minimum requirement was something teams were aware of and focused on to ensure that the team was not penalized (and avoided the general league embarrassment of failing to reach the minimums).

This work shows the importance for sports leagues to distinguish between various types of revenues and investments. Future work may include an analysis of the social welfare implications of various revenue sharing policies. Also, an empirical analysis that estimates the magnitude of the changes in investments under various policies would add to the literature.