65 Revenue sharing

Stefan Szymanski

Revenue sharing between teams in a league is a common phenomenon. Perhaps the best-known scheme is that operated by the National Football League (NFL), where 40 per cent of designated stadium income is paid to the visiting team. At various times different leagues have operated schemes of this kind, albeit based on smaller percentages. For example, at its foundation in 1876 the National League (baseball) shared the gate revenues equally, but over time this percentage fell, until by the mid-1990s the visitors were paid only 5 per cent. Since that time Major League Baseball has operated a scheme which has revenue sharing effects, namely a luxury tax. All teams contribute 34 per cent of net local income (after paying local expenses) to a sharing pool, part of which is then redistributed to teams in the bottom half of the income distribution.

Revenue sharing schemes are frequently part of a package of measures. Notably, collective selling of broadcast rights (which might reasonably be viewed as a restriction of competition aimed at extracting higher payments from broadcasters) is commonly defended by leagues on the grounds that it redistributes income (relative to a regime of individual selling), because of an egalitarian sharing rule. This is true not only in North America, where each team receives an equal share of the total, but in leagues such as the English FA Premier League, where only 50 per cent is shared equally, 25 per cent is shared on the basis of league performance and 25 per cent on the frequency of TV exposure.

Economists have studied revenue sharing mechanisms since the pioneering work of El-Hodiri and Quirk (1971). The focus of these studies has been to discover the impact of these schemes on (a) the distribution of talent in the league (the competitive balance issue and (b) the profitability of the league. These questions are no different from the ones that are studied in relation to restrictions in the labour market such as the reserve clause or a salary cap. There is a fairly broad consensus in the economic literature that all restrictions will tend to raise profits (see Szymanski, 2003). There is less agreement concerning the effect on competitive balance. This is because the impact of a revenue sharing scheme depends on not only the amount of money redistributed, but also the effect on the incentives to invest in the team.

The easiest way to make this point is to start from a model where all income is invested in the team. Such behaviour is not necessarily consistent with profit maximisation, but is consistent with the objective of win maximisation, which is widely held to be the objective of clubs in professional European soccer leagues (see Késenne, 1996). In such a world, any redistribution scheme which takes from the rich and gives to the poor is expected to improve competitive balance, since the weaker teams will have more to invest and the stronger teams less.[1]

Now consider a model where the teams are profit maximisers. In this case, the decision of each club is to invest only to the point where marginal revenue equals marginal cost. The type of redistribution scheme now needs to be precisely defined, in order to establish the impact on incentives at the margin. Consider, for example, a lump-sum tax on each

club (for example, suppose each must contribute $10 million for redistribution) which is then awarded as a prize to the team that wins the championship. Such a scheme will improve competitive balance, since marginal returns to success for each team will be more closely aligned. In the limit, if all club income were confiscated and then awarded as a prize to the team coming first in a league, then all teams would have exactly identical incentives to invest and the league would be perfectly balanced (in such a world, teams would lose money in every season in which they did not win the championship and an equilibrium might not exist).

Note here that identifying the incentive effects requires that both the revenue-raising and the revenue sharing rules must be identified in order to establish the incentive effects. The most widely studied incentive scheme is gate-revenue sharing, where the visiting team is paid a fixed percentage of the gate, as in the NFL. Note that such a scheme is not quite the same as sharing all income equally (because the income from each match is only shared between two teams) unless there is a two-team league. However, the literature has focused almost exclusively on the two-team case because of its tractability, and this is the case considered here.

First consider the case where 50 per cent of the gate goes to the visitors and there is no other source of income. In such a case the teams act as joint profit maximisers, since they each receive 50 per cent of the income generated by the league. Clearly the teams will seek out a distribution of talent which maximises joint profits. Now consider the distribution of talent when there is no gate sharing at all. In this case each team cares only about its own income and does not take account of the effect of its investment choices on the income of its rival. If the two teams have equal revenue-generating capacity then these externalities are of exactly equal and opposite size, and hence the distribution of talent will be identical to the case where 50 per cent of the revenue is shared. In such a case, revenue sharing has no effect on competitive balance, since the teams are perfectly balanced to begin with.

However, consider the case where one team can generate a higher income from any given level of success (for example, win percentage). In this case, the externalities produced by each team are of different size. Suppose that the share of wins that maximise profits for the league is 60 per cent for the strong teams and 40 per cent for the weak ones. With 50 per cent gate-revenue sharing, each team will hire enough talent to achieve this outcome. Now if there is no sharing, each team will expect a larger marginal revenue of winning starting from the 60:40 distribution (because they are not sharing), and each team will ignore the externality that its choice imposes on the income of its rival. The externality created by the large team will be small, since the small team's revenue-generating capacity will be small, while the externality imposed by the small team will be large, since the large team's revenue-generating capacity is large. Hence, the small team creates the larger externality, implying that it will take a larger share of wins than when there is 50 per cent gate sharing. As a result, the equilibrium when there is no gate sharing is more balanced than the equilibrium when there is equal gate-revenue sharing! Moreover, it is relatively easy to show that any increase in gate-revenue sharing will reduce competitive balance (see Szymanski and Késenne, 2004).

This surprising result illustrates how carefully revenue sharing schemes need to be considered, and that it should never be presumed that such schemes will automatically improve competitive balance. Some authors have argued that revenue sharing will have no

impact on competitive balance, basing their argument on a version of the Coase theorem. This argument assumes that whenever the marginal revenue of a unit of talent is higher for one team than for another, then talent will be traded to the high marginal revenue team. The reason why this is not the case when teams independently choose investment levels is that while marginal revenues of hiring a unit of talent are equalised, the marginal revenues of a win are not. The marginal revenue of hiring a unit of talent equals the marginal revenue of a win multiplied by the marginal effect of a unit of talent on win percentage. Under normal assumptions this latter effect decreases as teams become more successful, and hence when teams choose independently it can be the case that marginal revenues of a unit of talent are equal, while the fact that the marginal revenue of a win for the stronger team is larger is exactly balanced by the fact that the marginal effect of a unit of talent on win percentage of the stronger team is smaller. More generally, the proper application of the Coase theorem would require either equal revenue sharing or the large team to take over the operation of the smaller team in order to impose an efficient distribution of wins.

The economic analysis of revenue sharing schemes is still in its infancy and much work remains to be done to examine the incentive effects of the various forms of redistribution that are applied in practice.

Note

1. Surprisingly, one of the most neglected issues in the economics of sport is the sensitivity of success to the investment of financial resources. Some sensitivity is a precondition for any redistribution scheme to have an impact.

References

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