

**Substitute Player? The Economic Contribution of Sport**

2018 Treasury Research Institute Essay Competition

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Sport is a visible part of Australian life. 27% of Australian adults participate in organised sport at least once a year, and households spend more than \$8 billion on sporting goods and services annually.<sup>1</sup> This visibility belies the relatively small economic contribution made by sport. Taking an opportunity cost perspective, only those effects which would not occur in the absence of sport, after all agents adjusted their behaviour, should be considered the economic contribution of sport. In this framework, professional sport has virtually no economic effect. Amateur sport has some positive effects, particularly in the long-run through its impact on health, but these are fairly small in magnitude.

### **Professional sport**

Empirical studies in the United States<sup>2,3</sup> and Europe<sup>4,5</sup> consistently show that professional sport teams, facilities and large sporting events have no effect on the short-run income or employment of the economies in which they are situated. This is because expenditure on sport often merely displaces other spending, due to substitution and crowding out.

The first source of this displaced spending is sport fans themselves. Consumers' budgets for leisure, in terms of time and money, are fairly fixed, so it is likely that other forms of entertainment would be substituted for sport in its absence. Empirical studies<sup>6,7</sup> indicate that cinema, music and cultural events, and audiovisual media are substitutes for match attendance and sport broadcast viewing. Similarly, other forms of marketing are likely to be close substitutes for sport sponsorship. Thus, to the extent that these substitutes are produced domestically, sport expenditure represents a rearrangement of, rather than new, spending.

Large international sporting events have a greater potential to generate genuinely new spending, from international tourists and sponsors. However, there is evidence of substitution even here: international tourists may simply change the timing of their trip to coincide with the event, or 'place switch', as in the 2000 Sydney Olympics, when hotel occupancy rates fell in Melbourne and Brisbane.<sup>8</sup> Similarly, the opportunity cost of government subsidisation of sport infrastructure construction and operation costs is spending on other, potentially productivity-enhancing, public projects, so there is no stimulatory effect.

Large events are particularly susceptible to the second source of displaced spending: crowding out. This occurs when local residents or non-sport tourists are discouraged from visiting an area for the length of an event, because of concerns about congestion or higher accommodation prices. For example, though the Honolulu Marathon is associated with an

increase in international tourists, more than half of this increase is offset by a decline in domestic tourism.<sup>9</sup>

A raft of empirical evidence indicates that the substitution and crowding out effects combined mean that sport teams and events have close to zero effect on local income, though they may rearrange it between sectors. During the Salt Lake City Olympics, sales in the hospitality and hotel sectors increased, but this was offset by a decrease in department store sales, and there was no change in total sales.<sup>10</sup> Similarly, Coates and Humphreys<sup>11</sup> found that the presence of professional football, baseball and basketball teams was associated with an increase in earnings in the recreation sector, but a reduction for the hospitality sector. Overall, the teams' presence was associated with lower employment in both the retail and services sectors.

Thus, professional sport teams and large sport events have no consistent short-run effect on economic activity. There is similarly scant evidence for longer-term effects. The international attention associated with major sport events can increase tourism beyond the duration of the event, but only if the host city is attractive to tourists but was not formerly well-known.<sup>3</sup> Sydney fails the latter condition, and subsequent analysis found that there was no sustained tourism effect following the 2000 Olympic Games.<sup>12</sup> Professional sport events also fail to attract new international business investment<sup>13</sup> or promote community sport participation.<sup>14</sup> The economic impact of professional sport is likely close to zero.

### **Amateur sport**

By contrast, amateur sport makes a positive economic contribution, largely through its effect on health. I limit the definition of amateur sport to activities which have some formal structure and organisation: netball is a sport, walking and gym workouts are not.

Amateur sport's potential short-run economic contribution has been less studied than that of professional sport. As with spectator sport, there is evidence of substitution between participation sport and other leisure activities,<sup>15</sup> suggesting that amateur sport may displace other leisure spending. However, regular amateur sport practices and events are much less likely than professional sport to crowd out other consumption. Thus, unlike professional sport, amateur sport may make a positive short-run economic contribution, but with substitution this is likely to be small.

Amateur sport may also have a positive long-run economic effect. The link between physical activity and physical and mental health is well-established. Higher physical activity levels are

associated with a lower incidence of chronic diseases, including depression, and a lower risk of premature death.<sup>16</sup> Thus, to the extent that amateur sport leads to higher population physical activity levels, it produces these health benefits. However, this connection is not inevitable. Organised sport comprises only 15% of all leisure time physical activity sessions for Australian adults.<sup>17</sup> Leisure time physical activity itself, which includes non-sport exercise, constitutes only 5% of total physical activity from all sources (occupational, active transport, etc.) for American adults.<sup>18</sup> Studies of children's sport indicate that more than half of the typical session is spent in sedentary or light-intensity activities.<sup>19</sup>

There is little evidence of substitution between different forms of physical activity,<sup>20</sup> so the absence of amateur sport organisations would likely reduce physical activity levels for some individuals. However, these studies suggest that population physical activity levels would not dramatically decline. Nonetheless, the change might have a disproportionate effect on health: there is some evidence that sport may be more beneficial than other forms of physical activity for physical<sup>21</sup> and mental<sup>22</sup> health, the latter possibly because of the social connections associated with membership of a team or club. On the other hand, the immediate and long-term health consequences of sport injuries can be substantial,<sup>23</sup> and participation is linked to higher alcohol consumption in adolescents,<sup>24</sup> so sport's effect on health is not unidirectional.

Overall, it is probable that amateur sport has a positive, but fairly modest, effect on population physical and mental health. This has little net impact on healthcare costs, which are effectively postponed.<sup>25</sup> However, improved population health can positively affect the long-run determinants of economic growth: population, participation, and productivity. Higher self-rated health is associated with a higher probability of labour force participation in Australian adults,<sup>26</sup> though the effect is especially strong for older adults, who are least likely to participate in sport.<sup>1</sup> In addition, various chronic conditions, including heart disease and depression, have been linked to higher rates of absenteeism and lower workplace productivity.<sup>27</sup> In fact, Lechner<sup>28</sup> found positive associations between physical activity and earnings after controlling for health, suggesting that other factors, such as non-cognitive skill development, may be responsible for part of the productivity effect. However, such skill development is not exclusive to sport, so the net contribution of sport would depend on the extent to which substitute leisure activities offered the same benefits. Nonetheless, there is evidence that amateur sport may have a small positive effect on long-run economic growth.

It is difficult to imagine modern Australia without sport. In this essay, however, I have made the attempt, to discern sport's true economic contribution. Professional sport has virtually no short- or long-run effect, due to substitution and crowding out. Amateur sport may positively impact long-run economic growth through its effect on health, but interrogation of its contribution to population physical activity levels suggests this is probably fairly small. For sport enthusiasts, though, these considerations are beside the point. Sport is far from an ordinary industry.

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