

Benchmarking the performance of school swimming pools in Taiwan

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Aim of paper

This paper describes the assessment of the cost-benefit breakdown of swimming pools operated in schools in Taiwan. The findings of this study are expected to improve swimming pool operations efficiency, to set guidelines of management, and provide insights into subsidy principles for building new school swimming pools.

Organisational/managerial context

Swimming pool play an important role in promoting and facilitating physical education at school and university levels. As part of a research plan which aims to enhance students' swimming competency, the Department of Physical Education at the Ministry of Education commissioned the Taiwan Society for Sport Management (TASSM) to devise a benchmarking system to evaluate the operational performance of school swimming pools in Taiwan. This study is the first research in Taiwan to evaluate the operational performance of school swimming pools at the national level. More than half of school swimming pool managers joined this project and provided valuable performance data to facilitate the establishment of national benchmarks.

Organisational/managerial practice/issues

Stemming from the concept of Sport England's National Benchmarking Service, the benchmarking system employed in this paper embraces the following six performance indicators:

1. Weekly hours of swimming class;
2. Visits per square meter;
3. Visits per opening hours;
4. Costs per square meter;
5. Revenue for operations cost;
6. Subsidy per visit.

To calculate the six performance indicators, this study collected data regarding six input and output variables. They are annual income, operations costs, visits and opening hours as well as data regarding the facility area. The data were collected from 198 out of the total 381 school swimming pools in Taiwan during September and December, 2006. Five variables are assumed to affect school swimming pools' cost-benefits performance. They are school type (elementary, high school or college), pool size (50 meters or 25 meters length of lane), pool type (indoor or outdoor), if the pool was heated or not and charges to visitors. The findings are as following. First, there are significant differences of weekly hours of swimming class among different school types. Second, pool size makes a difference in operation costs and subsidy per cost. Third, significant differences could be found across five indicators due to pool type and whether

the pool water is heated or not. In our research, pools can be classified into three types- outdoor, indoor and mix, where indoor pools normally have hot water provision and opened all the year. Fourth, indoor pools with heated water generally have higher annual visits but also have higher operating costs. Finally, revenue for operations cost and subsidy per visit are influenced by the policy of charge.

Implications for sport and sport management

Findings of this study are useful for further managerial planning or improvement actions. Such findings are as following. The best cost-benefit ratio was found to apply to the pool type that is outdoor, 25-meter lane length, without heated water, operated in college and where there is a charge for using the pool. The next type is an indoor pool, 25-meter, with heated water, operated in college with a charge for use. The worst pool type regarding its economic efficiency is an indoor pool, 50-meter lane length, and with heated water. The key factor influencing the cost-benefits performance is the number of visitors. That is, when the number of visitors increases to or above a certain level of capacity, the order of pool type efficiency performance changes. The number of users of school swimming pools is largely influenced by the location, promotion efforts, and incentives for high revenue performance. That is an important reason why school swimming pools operated in colleges performed better than in elementary or high schools. However, a number of missing values and imprecise data were provided, especially those related to financial performance and utilization leading to the conclusion that in Taiwan, not all school swimming pool managers keep operations records systematically.

References

- LIRC (2002). *Sport England Benchmarking Service for Sports Halls and Swimming Pools: National Benchmarks 2001*. Sheffield: University of Sheffield.
- Liu, Y.D., Taylor, P., & Shibli, S. (2007). The operational efficiency of English public sport facilities. *Managing Leisure*, 12(4), 251-272.