Applied Economics ›
Volume 36, 2004 - Issue 13

Original Articles

Multi-product costs and standby capacity derived from queuing theory: the case of Belgian hospitals

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Pages 1475-1487 | Published online: 02 Feb 2007

Cite this article https://doi.org/10.1080/0003684042000201811

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reserve margin. The often used occupancy rate has an important shortcoming: the

same occupancy rate can hide different turnaway probabilities and waiting times, obscuring the true degree of reservation quality. Since turnaway probabilities and waiting times are typical queuing theory indicators, an indicator for average waiting time (derived from queuing theory) is incorporated into a proper multi-product cost function to capture the degree of standby capacity into a proper multi-product cost function. The study uses 1997 data on Belgian general care hospitals to estimate a multi-product cost function and calculate cost elasticities, marginal costs and the degree of economies of scale. The results further show that providing standby capacity has a significant impact on total costs.

Acknowledgements

The author wishes to thank the Belgian Federal Ministry of Social Affairs, Public Health and the Environment for providing the data for this study. However, the author is the sole responsible for the empirical analysis and conclusions presented here.

Notes

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Because of the long history of involvement of the Catholic Church in the provision of health care, the majority of hospital care is provided by state-subsidized, not-for-profit (catholic) private initiative, i.e. most private hospitals are owned by religious charitable orders. The public and the private (not-for-profit) sectors operate in the same market and receive more or less comparable levels of resources.

National Institute for Sickness and Invalidity Insurance.

Although the limited input price variation already suggests it would not promise well, we did estimate a model using cost share equations. However, as it was only to be expected, this generated poor results.