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

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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.

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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.





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