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Financial aid management: an optimisation approach. (English) Zbl 1100.90021

Summary: Higher education administrators regularly make decisions regarding the allocation of multi-
million institutional dollars in attracting superior students, while trying to maximise certain factors such
as net revenue, quality and enrolment. Often these decisions are made based on experience or some
times in an ad hoc manner. The resulting enrolment management strategies can be far from optimal.
We model this decision-making problem via a linear programming problem that can be easily solved to
optimality while taking multiple factors into account. Through very representative data, our analysis
shows how the optimal allocation of financial aid awarded to the entering class can significantly improve
enrolment management. It also shows how an administrator can dynamically assess the various strategies
as more information becomes available during the enrolment process. Such a strategy has been successfully
implemented with major improvements at the University of Miami.

MSC:
90B50 Management decision making, including multiple objectives
91B06 Decision theory

Keywords:
enrolment management; financial aid; optimisation; higher education; university administration; decision
making; linear programming; operational research; student enrolment; net revenue; quality

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