

## Documents

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**Customer Allocation in Maximum Capture Problems**

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**Abstract**

The maximum capture (MAXCAP) model and its variants have been widely used to find the maximum capture that a firm can get as it enters a spatial market where there are already existing (competitor's) facilities. While the model obtains the optimal demand capture, it however allows the customers to be assigned to the non-closest facility which may incur additional operating costs. A two stage method can be used that overcomes the drawback of the original model while requiring a negligible extra computational effort. To make the original model mathematically self contained and more concise two revised formulations of the problem RMAXCAP-1 and RMAXCAP-2 are proposed which assure that the customers patronize only their closest entering facilities. These models are tested on different sizes of datasets and their performances are compared. © 2012 Springer Science+Business Media B.V.

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