

عنوان مقاله:

Image of the performance boundary for inefficient units in data envelopment analysis with integer values

محل انتشار:

اولین کنفرانس ملی بهینه سازی و روش های نوین حل مسئله (سال: 1400)

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خلاصه مقاله:

The aim of this study is investigation effect of integer data in data envelopment analysis (DEA). The inputs and outputs in different types of DEA are considered to be continuous. In most application oriented problems, some or all of them are integers; and subsequently, the continuous condition of the values is omitted. For example, situations in which the inputs/outputs are representatives of the number of cars, people, etc. In fact, the benchmark unit is artificial and does not contain integer inputs/outputs after projection on the efficiency frontier. By rounding off the projection point includes integer values which mostly is not in the feasible region or gives another inefficient DMU. In such cases, it is required to provide a benchmark unit such that the considered unit reaches the efficiency. In the present short communication, by proposing a novel algorithm, the projecting of an inefficient DMU is carried out in such a way that produced benchmarking takes values with fully integer inputs/outputs.

کلمات کلیدی:

data Envelopment Analysis (DEA); inefficient units; benchmarking

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