Products' Supplier Selection for the Enterprise's Technical Re-Equipment

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In the article, we have presented a stochastic model of choosing a supplier of technologies and equipment for the technical re-equipment of the enterprise and have analyzed the main works in which various models of supplier selection are proposed. Advantages and disadvantages of these models are shown and the main directions of their improvement are identified. We have proposed an approach to the selection of a products' supplier based on the concept of stochastic dominance, in which the technical and economic characteristics of the supplier are considered as random variables. The most preferred supplier is the supplier for whom the probability that its technical and economic characteristics exceed the technical and economic characteristics of other suppliers is the maximum. The main relations defining the stochastic model of supplier selection for technical re-equipment are given in the one-dimensional case when the supplier selection is performed based on one technical and economic characteristic and for the multidimensional case when the supplier selection is performed because of several technical and economic characteristics.

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