

Presenting a Model in the Analysis of Supply Chain Management Components by Using Statistical Distribution Functions

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Abstract : One of the most important topics of today's industrial organizations is the challenging issue of supply chain management. In this field, scientists and researchers have published numerous practical articles and models, especially in the last decade. In this research, to our best knowledge, the discussion of data modeling of supply chain management components using well-known statistical distribution functions has been considered. The world of science owns mathematics, and showing the behavior of supply chain data based on the characteristics of statistical distribution functions is innovative research that has not been published anywhere until the moment of doing this research. In an analytical process, describing different aspects of functions including probability density, cumulative distribution, reliability, and failure function can reach the suitable statistical distribution function for each of the components of the supply chain management. It can be applied to predict the behavior data of the relevant component in the future. Providing a model to adapt the best statistical distribution function in the supply chain management components will be a big revolution in the field of the behavior of the supply chain management elements in today's industrial organizations. Demonstrating the final results of the proposed model by introducing the process capability indices before and after implementing it alongside verifying the approach through the relevant assessment as an acceptable verification is a final step. The introduced approach can save the required time and cost to achieve the organizational goals. Moreover, it can increase added value in the organization.

Keywords : analyzing, process capability indices, statistical distribution functions, supply chain management components

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