

عنوان مقاله:

Supply Chain Optimization by Dynamic Mathematical Modeling in the Production and Distribution of Organic Products
(in the Food Industry)(Case Study of a Wick Food Company)

محل انتشار:

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خلاصه مقاله:

Today, given the different attitudes of the field of performance assessment, this process can be used in the supply chain. Proper supply chain performance plays a key role in the success of an organization and the sustainable achievement of its goals, and in particular its profitability. In this research, in order to achieve the main objective of the research, namely the evaluation of the supply chain of food industry one and one, to simulate and model this chain. For this purpose, a hybrid method of dynamic simulation simulation and mathematical modeling of dynamic systems has been used in this research. The research is also limited to studies conducted in the food industry, one and one, and a comprehensive evaluation has been carried out using four indicators of financial, time, capacity and quality. In this research, in the first stage, simulation of the system evaluation indicators was simulated using the system s dynamics. Then, using the simulation results, the design of the chain system model and its identification using the concept of system modeling The dynamic ones are dealt with. The final result of the research shows that the study of production behavior shows that in the first period, although the production rate is associated with ups and downs, there is a near constant trend that increases stock in the central warehouse. With the continuation and dropping of output, the downward trend in stock in the central warehouse will begin in the middle of the second period. Although the supply is reduced at this time, however, due to the zero production of the product, the gradual reduction of the inventory of the central warehouse and reaching it to zero. With the beginning of production in the middle of the third period, after nearly 3 months of suspension, which appears to be the main and indirect cause of a drop in sales in the third period, inventory of the central warehouse will begin and subsequently sends its incremental trend. Although it produces a decline and periodic increases until the end, the continued production will prevent a sharp drop in the stock of the central warehouse. In the meantime, comparing the behavior of production and the confidence of the stocks shows that except for the last months, based on the algorithm, there is a clear relationship between ordering from sale to production and the amount of production on the other, in the previous months the influence of other .factors on Production is more pronounced and more colorful than the order received from sales

کلمات کلیدی:

.Supply Chain; Supply Chain Performance Evaluation; System Dynamics; Simulation; System Stability

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