

Optimisation of B2C Supply Chain Resource Allocation

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Abstract : The allocation of resources is an issue that is needed on the tactical and operational strategic plan. This work considers the allocation of resources in the case of pure players, manufacturers and Click & Mortars that have launched online sales. The aim is to improve the level of customer satisfaction and maintaining the benefits of e-retailer and of its cooperators and reducing costs and risks. Our contribution is a decision support system and tool for improving the allocation of resources in logistics chains e-commerce B2C context. We first modeled the B2C chain with all operations that integrates and possible scenarios since online retailers offer a wide selection of personalized service. The personalized services that online shopping companies offer to the clients can be embodied in many aspects, such as the customizations of payment, the distribution methods, and after-sales service choices. In addition, every aspect of customized service has several modes. At that time, we analyzed the optimization problems of supply chain resource allocation in customized online shopping service mode, which is different from the supply chain resource allocation under traditional manufacturing or service circumstances. Then we realized an optimization model and algorithm for the development based on the analysis of the allocation of the B2C supply chain resources. It is a multi-objective optimization that considers the collaboration of resources in operations, time and costs but also the risks and the quality of services as well as dynamic and uncertain characters related to the request.

Keywords : e-commerce, supply chain, B2C, optimisation, resource allocation

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