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The modelling and design process of coordination mechanisms in the supply chain

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Abstract

The process description languages, which are used in business, may be useful in logistics processes. The planning, organization, direction and the control of the logistics processes might be more efficient if these formal languages are applied. During the logistics processes, many problems might arise, which should have already been addressed in the planning phase. In our days, the symptomatic treatment is a common practice, but it does not provide predictability. The obvious solution would be process control, in order to handle the main sources of faults and to give a correct list of what needs to be done during the logistics process. The process description languages may be useful not only in standardisation, but they may also help to avoid losses. Simulation experiments, on the basis of built model, also allow for the elimination of problems, standardisation and the limitation of losses. The aim of the article is a discussion of selected coordination mechanisms in the supply chain, its modelling in the form of a reference, as well as a discussion of the simulation experiment with the use of the FlexSim tool.

Keywords:

coordination, coordination mechanisms, supply chain, reference model, description languages, modelling

1. Introduction

Structures of a supply chain nature are "multi-actor" systems. They grapple with the lack of synchronised tasks, the lack of internal rational, and often

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