Purchasing and Digitalization in an era of Turbulence

Understanding the role of digitalization tools within the scope of Purchasing, in a global environment where supply chains are increasingly interconnected and dependent on each other.

Our master's thesis studied how the digitalization tools used in the purchasing processes of Duni Group contribute to the performance results of specific parameters. Our research was divided into four parts, the practical operational process of purchasing, the role of digitalization tools in it, the occurrence of turbulence that disrupts the purchasing process. Lastly, as an addition to digitalization tools, the perspective of Artificial Intelligence implementation was lightly studied.

The methodological approach in this research paper was of a multiple-case study, specifically four cases were included. Two suppliers, and two purchasers. All the information from the cases was collected from interviews.

From the perspective of what the operational purchasing process consisted of, Duni mainly utilizes single order contracting, meaning that Duni's contract length with suppliers was of a short nature, with the contract being that of one specific order with one corresponding delivery date.

From the perspective of the digitalization tools used in the Duni supply chain, similar software solutions were used throughout the cases. These software's were JAGGAER, SAP, APO, and the specific case of a customized software solution called Farben. With Farben being an interesting outlier, it indicated to be able to produce exceptional results. The main differences in the other usage of software's were the specific functions used within the software solutions. From the perspective of AI and automation, it was shown that the functions within the software's can automate processes to varying degrees, with the specific automation degree depending partly on the leadership of the case study.

Regarding turbulence, the findings show that there is no one specific problem that has an exceptional impact on the supply chain. Furthermore, turbulence originating from outside the supply chain is less frequent but more impactful, compared to turbulence within the supply chain.

Lastly, the two main measured parameters for performance (KPI) were shown to be the ability of a supplier to deliver for a specific date, with a specific order quantity. The supplier delivery performance evaluations were independently evaluated between cases through informal discussion with some quantitative measuring using the mentioned KPI.

The recommendation of this thesis is to establish a general methodology of evaluating suppliers' delivery performance with the help of the two currently measured KPI's and thereafter look for possibilities of automation and centralizing the storage of information to increase data-driven decision making.

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