Optimizing Inventory Positions with Auto-Replenishment

A thesis submitted for the degree of Master of Science

Business Analytics
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The information in the thesis is confidential , so is not included in this public version. For more information, please contact Michael Pieffers.

Preface

This master thesis is submitted for the purpose of achieving the degree of Master of Science in the field of Business Analytics. The program ends with an internship at a company with a problem in the context of Business Analytics, in my case an internship at de Bijenkorf in the Netherlands. The purpose of this internship was to become practically experienced with the three facets of the program Business Analytics: Business, Mathematics, and Informatics. All three facets play an important role in the thesis.

My choice for de Bijenkorf comes from my will to improve. In retail organizations in general in the Netherlands not all things are working in an optimal way. Especially de Bijenkorf, which is a retailer with many luxury goods in different categories, has different kinds of opportunities to optimize their business. For me this was a good opportunity to learn about the main problem faced in retail: the inventory replenishment problem.

I want to thank de Bijenkorf, and especially Michael Pieffers and Rudi Meijer, for giving me this opportunity to study in the field of retail. I also want to thank them for the help and advice during my research. I would like to thank the people of the Supply Chain Analysis and Information department for the great time I had at de Bijenkorf.

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