

# Propositions

attached to the thesis

## Marketing Analytics for High-Dimensional Assortments

by

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- I The scalability of a prediction method that is suited for high-dimensional assortments is just as important as its predictive accuracy. (*Chapter 2*)
- II When analyzing a large assortment, focusing on a set of latent factors that explain purchase behavior leads to more insight than focusing on individual products. (*Chapters 2 and 4*)
- III Obtaining an approximate result in a reasonable amount of time should, at the very least in practice, be preferred to obtaining an exact result in an unreasonable amount of time. (*Chapter 3*)
- IV Scalable model-based methods are preferred over heuristics. (*Chapters 2 and 4*)
- V In case one is interested in analyzing a large assortment, a subset of a large assortment is typically not a good substitute for the full assortment. To cite statistician John Tukey: “*An approximate answer to the right question is worth a great deal more than a precise answer to the wrong question.*” (*This thesis*)
- VI Simulation is a powerful tool in an econometrician’s toolbox. However, when applied to hierarchical models with multiple layers of random variables, simulation noise becomes more than a nuisance.
- VII Data has been called *the new oil*. This is a fitting metaphor and data, just as natural resources, should not be wasted. But fear not, the environmental impact of data waste will typically be less severe.
- VIII A large challenge facing business schools in the next decade is to design a curriculum that combines managerial content with a solid understanding of advanced business analytics.
- IX Academia must take a leading role in the push for open-source software, as one of the cornerstones of open-source software is public accessibility.
- X An unexpected challenge when publishing research that involves a large product assortment, is the implementation of not so scalable benchmark methods.
- XI “*Without deviation from the norm, progress is not possible.*” – Frank Zappa