Modeling space elasticity of demand to support retail replenishment planning

Tommi Vainio

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Instructor: *Ville Sillanpää*

Supervisor: *Fabricio Oliveira*

Backround

- The demand of a product is affected by the amount of shelf space allocated for it

- In general, this is ackowledged by retailers, but the decisions of the shelf space allocation are usually based also on other factors

- Different models for estimating space elasticity of demand [Eisend, 2015] and for optimizing store operations have been developed [Hansen and Heinsbroek, 1979]

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Objectives

- Study the literature and find the attributes of a product that determine its space elasticity

- Figure out how to use the space elasticity information to support:
  - Replenishment
  - Planogramming
  - Promotion planning

- Build a simple model to demonstrate the benefits of the developed use case, if applicable

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Research questions

- Do we examine space elasticity only in relation to amount of facings, or do we take the position also into account? (Bottom shelf vs eye-level shelf)
- Brand or category level?

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Methods

- Literature review
- Mathemathical models depend on the findings

Sources

- Eisend, M.
  Shelf space elasticity: A meta-analysis
  Journal of Retailing, Elsevier, **2014***, 90*, 168-181

- Hansen, P. & Heinsbroek, H.
  Product selection and space allocation in supermarkets
  European journal of operational research, Elsevier, **1979***, 3*, 474-484

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Schedule

- Studying the price elasticity   2-3/2018
- Determining the practical applications 3-4/2018
- Analysing the developed use case   4/2018
- Presenting the results   4/2018
- Writing the report   2-5/2018

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