Shifting from material price to total cost of ownership in purchasing of a global company

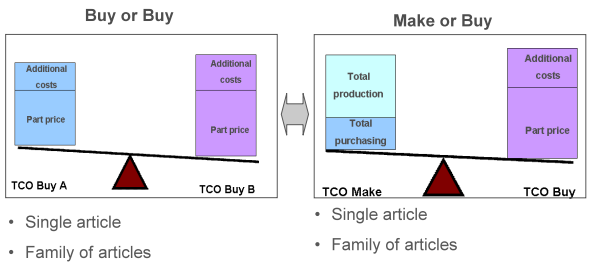
Sascha Spiegl, Section Microtechnique

Responsible BOBST: Sorrentino Claudia

Professor: Glardon Rémy

Sourcing decisions in globally active companies require a precise knowledge of the total costs of ownership (TCO) along the end-to-end supply chain. In the present thesis, cost models allowing the determination of the TCO have been elaborated for BOBST.
Both a "Buy or Buy" model, targeting the comparison between different external sourcing scenarios, and a "Make or Buy" model for comparing internal production with external sourcing have been implemented. Specific case studies finally allowed the successful validation of the models.

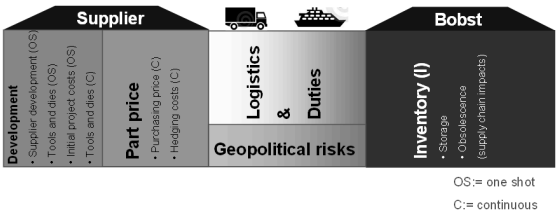
For being cost competitive in today's markets, BOBST requires tools that allow a quick and accurate estimation of the total costs for different sourcing scenarios. Main challenges therefore include both the identification of all cost drivers and the creation of a tool that allows an almost automatic cost calculation for different items. Both the analysis of a single article and of entire article families is therefore crucial.



Different TCO models to be elaborated

In a first step, all cost drivers for BOBST Buy or Buy TCO calculations have been identified, represented on the figure below.

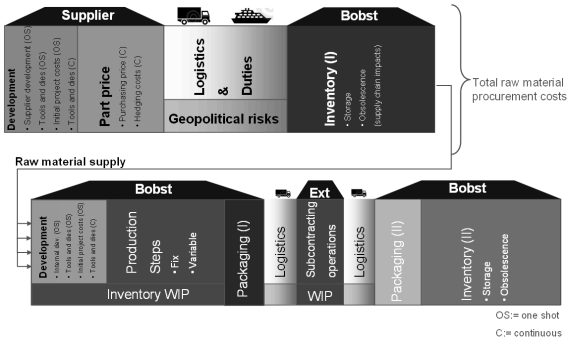
Based on a detailed analysis of the different cost criteria, a tool allowing the cost estimation has then been created.



Identified cost drivers Buy or Buy model

A case study about sourcing of cast iron parts from a European country in comparison with sourcing outside Europe allowed validating the obtained model.

In a second step, the Make or Buy model has been addressed. In a similar manner, first all cost drivers, represented in the figure below, have been identified and then estimated.



Identified cost drivers Make or Buy model

The elaborated tool has then been tested based on a study on a family of mechanical parts. The obtained results show that the criteria are significant. However, due to the relative complexity, the tool does not allow a completely automatic estimation. Building accurate Make or Buy analyses is a long-term process, which has to be continued by BOBST.