Understanding the impact of non-standard customisations in an engineer-to-order context - DTU Orbit (14/05/2019)

Understanding the impact of non-standard customisations in an engineer-to-order context: A case study
Companies operating with an engineer-to-order (ETO) manufacturing strategy produce customised solutions for their customers. While they may be able to build on a base of existing sub-solutions, e.g. standard product structures, modules or parts when engineering a customer-specific solution, they often have to create something completely new to satisfy customers’ requirements. However, it is not always clear to ETO companies what the costs associated with making customer specific solutions are, or which product or project characteristics drive costs and in what business processes. Therefore, it is not clear to companies if it is actually profitable for them to fulfil all of their customers’ requirements. Hence, making it relevant to understand how creating non-standard customisations impact project profitability. This paper presents a framework for how ETO companies can quantify the impact of the complexity associated with non-standard customisations when cost data is only available at the project level. The framework is theoretically founded; it is based on statistical regression and a definition of a complexity index for non-standard customisations. The framework is validated in the context of an ETO case company and empirical data is presented.

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