

Product, process and customer preference alignment in prefabricated house building

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Abstract

Much of the extant literature exploits the customer order decoupling point (CODP) from an aggregate product level. We develop a systematic approach to determine the alignment of CODP configurations at product, category and component levels, with customer preferences in terms of their customisation requirements. We adopt a participatory research method incorporating focus groups and interviews with personnel from a German case study company that builds prefabricated houses. From this we determine the product architecture. We also undertake a customer preference survey utilising a questionnaire that is based on a paired comparison technique. The survey informs customer preferences for choice for various elements of the architecture. We find that while at the product level the company produces a house that as a whole offers a high degree of customisation, at a category or components levels there are various offerings from pure standardisation to pure customisation. Furthermore, there is not always alignment between what customers want and what is actually being offered by the customer. So the company has options in terms of reconfiguring its operations, design new products/categories/components and/or seeking new marketplace opportunities. While the research has developed a technique that determines the extent to which the CODP positioning for a product architecture is aligned against customer preferences, there is a need for further research to test our findings beyond a single case study and into other industry sector contexts.

Key words

House building, participatory research, customer survey, product architectures, decoupling points.

1. Introduction

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