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A cost-based methodology for evaluating product platform commonality sourcing decisions with two examples

T. J. Marion, H. J. Thevenot & T. W. Simpson 

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Abstract

As more US companies source tooling development and manufacturing overseas in countries like China and Taiwan, are the need and primary drivers for product platforms diminishing? As tooling cost is reduced to a very small percentage of the total project cost, combined with availability of inexpensive purchased components and low labour rates, the need to develop product platforms can decrease substantially. Low cost outsourcing has given firms the ability to develop and manufacture products cheaply without having to spend the additional time and effort to develop product platforms and families. In this paper, two examples involving two consumer product companies and their product lines are presented. Product family components and estimated tooling costs are analyzed, as well as development timing and profit margins to demonstrate why companies are moving away from product platforms in certain types of consumer

products. A novel methodology using component commonality decisions relating to major cost drivers is introduced and applied to both examples. Based on the evidence from the examples presented in this paper, there appears to be little financial or functional benefit to develop product platforms that share common components or subsystems when these products are being manufactured offshore; however, even when considering outsourcing, platform-based product development principles can still yield tangible improvements in production costs over the life of the product.

Keywords:

Product platform

Product family

Commonality

Outsourcing

Production costs

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