Towards understanding integration of heavyweight-product managers and collaboration software in collaborative product development: An empirical study in Taiwan

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ABSTRACT
With rapid proliferation of new product offerings, fast changing environments and shortened product life cycles, firms are being compelled to adopt a collaborative product development (CPD) approach to integrate key functions and stages of new product development in intrafirm and interfirm. An efficient CPD must rely on collaborative information systems (IS) to facilitate and support collaboration processes. Successful implementation of IS to fit the task must be recognized. Heavyweight-product managers (HPMs) who have sufficient authority to make significant decisions affecting the operation of the collaborative IS features and has gained significant importance. Based on the task–technology fit model and by using CPD data collected from a survey of 205 companies, hypotheses regarding the role of HPMs and collaborative IS in enhancing collaborative product development were empirically tested. The results indicate that HPMs have a significant impact on the fitness of IS-to-task and computer utilization, and ultimately significant positive effect on product quality, as well as a reduction in design changes, cycle time and cost. The HPM seems to be an important exogenous construct affecting the relationships among the fitness of IS-to-task, computer utilization and product development performance. Firms implementing CPD operating in a changing and competitive environment appear to adopt HPMs to integrate collaborative product development task and system features for encouraging IS practices and improving CPD performance.

Keywords: Heavyweight-product managers (HPM), Collaborative product design, Computer utilization, Task–...