Should We All Work in Sprints? How Agile Project Management Improves Performance

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Abstract. *Problem definition*: This article explores how agile project management impacts project performance and execution. We compare the effects of agile sprints—short-term project phases characterized by time-boxed progression from one sprint to the next and self-imposed, phase-specific output goals—with those of traditional project management. *Academic/practical relevance*: Agile project management, in particular Scrum, is finding increasing use in practice, despite scant scientific validation. *Methodology*: We decompose the two sprint elements of time-boxed progression and self-imposed, phase-specific output goals as factors in a 2×2 experimental design. We then conceptualize project execution as a simple real-effort task and conduct a controlled laboratory study. *Results*: We show that for a given duration, participants perform better with time-boxed progression, as without it, i.e. with flexible progression, they spend too much time on early project phases at the expense of later ones. We refer to this effect as "Progression Fallacy" and show how it differs from other well-known behavioral effects that cause project delays. Introducing self-imposed, phase-specific output goals in combination with time-boxed progression, as proposed by Scrum, does not significantly improve performance compared to time-boxed progression alone. However, the combination of self-imposed, phase-specific output goals and flexible progression, as is common in traditional project management, amplifies the Progression Fallacy, with the result that goal-setting has a negative performance effect. *Managerial implications*: This study contributes strong scientific evidence of higher project performance when working in agile sprints, which mitigate behavioral flaws present in traditional project management. Not only do these behavioral insights apply to project management, but they are also relevant in the broader context of task completion.

Key words: agile project management; Scrum; sprints; goal-setting; behavioral operations