

Perceptions of empowerment and management productivity in construction – a case study at a joint venture on a nuclear power plant



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Construction productivity is in decline, with research in the US identifying that the decrease in management productivity is five times greater than that of on-site productivity. Given on-site output heavily depends on the effectiveness of management, this trend is concerning. The decline in productivity is an issue for the industry's long-term pipeline of work, because of the UK's significant investment into its green energy provision, projected to reach up to £375bn by 2035. The problem statement is, there is a lack of insight regarding the role that managers can play to influence and enable improvements in construction productivity.

Enhancing productivity in the construction sector will contribute significantly to ensure any such investments are delivered efficiently, sustainably, and on time. Therefore, to support, this research explores manager perception of productivity, unearthing insights of the enablers

and constraints, through the theme of empowerment. The setting of this study is at Hinkley Point C (HPC), the only live nuclear construction project in the UK. At HPC, like other major-projects, regulation and large project teams are commonplace and procedures are complex and resource-intensive, making this a valuable case study for broader industry application and learning.

To address the problem statement, a mixed-methods research methodology was used. Results from 267 management participants working on HPC were obtained in the survey. The survey provided insights that conflicted against the outcomes of literature review, including the positive impact of regulation, with results also indicating their working environment to impact their ability to work productively. In addition to the survey, 17 semi-structured interviews were conducted across the project team. The interviewees were asked open ended questions, allowing the respondents to provide qualitative insights based on their real-world experiences. The interviews provided a line of inquiry into the examples underpinning some of the constraints and enablers to management empowerment and productivity at HPC with results including the use of authority matrices, mentoring systems and the impact of working in a Joint Venture (JV).

The research found there was evidence of shortcomings through the volume and use of meetings, emails and communication options, all of which were seen to be a constraint to manager productivity. The interviews identified that the HPC project and subsequent regulatory frameworks encourage empowerment, with the importance of the work environment and knowledge sharing identified as the enablers in support of both empowerment and productivity. The study recommends further research into the organisational and regulatory environments, both of which were found to contribute to the perceived positive aspects of unlocking manager productivity, including the appropriate use of authority matrixes and communication procedures in the major project sector.