



**UNIVERSITY OF
CAMBRIDGE**

Department of Engineering

CONSTRUCTION ENGINEERING MASTERS DISSERTATION ABSTRACT

The Effect of Increasing Autonomy on Wellbeing in a Highly Constrained Construction Environment

The purpose of this research was to measure how increased autonomy affected wellbeing, productivity and working hours of eleven salaried engineering and project delivery personnel working in a highly constrained construction project delivery environment. Construction professionals are said to “struggle to achieve a balance between their work and personal lives” (Lingard and Francis, 2005) creating conflict, which leads to an increased likelihood that an employee will leave an organisation and/or suffer burnout (Lingard and Francis, 2006). It is evident in industry publications that the UK construction industry is struggling to attract and retain talent as a consequence of its reputation for inflexibility and long working hours resulting in a “lack of career attraction” (Cable, 2013). Therefore, for the long term viability of the industry and its ongoing success, a solution is required that can offset the effects of long working hours and inflexibility in order to minimise conflict for individuals, improve wellbeing and retain and attract talent.

The Case Study research methodology used parallel convergent mixed methods with quasi-experimental design principles to measure how increased autonomy affected the wellbeing, productivity and hours worked of the Sample Group over a 12-week experimental phase. The results of the Sample Group were compared against a Control Group to improve the interval validity of the results.

The findings suggest that giving individuals increased autonomy does, in the case of this Sample Group, improve their wellbeing without negatively affecting project productivity or the overall hours worked. The improvements in wellbeing are shown to have a medium to large effect size, when using the Cohen’s-d calculation to compare independent means, which is significant for this type of research.

The main limitation of the research was the sample size and non-probability sampling method meaning the findings of this research cannot necessarily be generalised to a wider population, and the aggregation of the results should be treated with caution. However, these findings have positive implications for the future of the UK construction industry as they have demonstrated, with supporting evidence, that engineering and project delivery personnel can have a higher level of autonomy that improves their wellbeing whilst achieving project requirements. There is a need for further research that uses this quasi-experimental methodology to build upon this research and the wider body of knowledge in order to develop improved workplace designs for the UK construction industry.

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