

Connection of work engagement to individual temperament and socio-economic characteristics among entrepreneurs and employees – generalised additive models (GAM)-based analysis of the Northern Finland Birth cohort data

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Abstract

This study examines associations between work engagement and temperament traits and socio-economic variables among entrepreneurs and employees. Particularly entrepreneurs have received very limited attention in prior research, even though they account for a substantial share of employment. We analysed data from the Northern Finland Birth Cohort 1966 (NFBC 1966), which covered a 46-year follow-up sample of 5,384 individuals originally comprising 12,058 people. In the study, associations between work engagement and selected continuous predictors were analysed using generalized additive models (GAMs), which enable flexible, data-driven modelling of non-linear relationships through smooth functions based on cubic splines.

The preliminary results indicate that entrepreneurship has a modest but observable positive association with work engagement. Among temperament traits, reward dependence was related to higher work engagement and novelty seeking showed a mild positive relationship. As a contrast, harm avoidance demonstrated association with lower work engagement. Household income exhibited a positive association at higher income

levels, with a linear increase beginning at approximately 60,000–70,000 €, although uncertainty increased in the highest income categories. Interestingly, very low household income was also associated with work engagement, albeit with substantial variability. Furthermore, job strain showed a non-linear relationship, with the highest work engagement observed at moderate stress levels, while both very low and high stress levels were linked to lower engagement and effort–reward imbalance was associated with higher work engagement. With these findings, the study provides new insights into the role of individual temperament and socio-economic factors in promoting work engagement including also entrepreneurs.

Keywords: entrepreneurs, employees, work engagement, temperament, socio-economic status, generalized additive models