The Optimal Length of the Working Day: Evidence from Hawthorne Experiments

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What is the optimal length of the working day? We estimate the causal impact of daily hours worked on marginal productivity using data from the famous Hawthorne experiment in industrial organization which exogenously varies the length of the working day and tracks workers productivity. Building on a theoretical model we show that the productivity-working hours' relationship is linear below a specific hour's threshold as productivity increases proportionally with working hours; above the threshold, it is quadratic as productivity increases at a decreasing rate with working hours. We find that productivity is maximized at between 8 and 8.6 daily working hours depending on the production process. In addition, we demonstrate that the optimal working hours might vary within the same job from one individual to another.