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A Study on Planning and Personality in Operations Management

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Planning in operations management (OM) is balancing supply and demand under uncertainty. Its failure results in inventory costs or lost sales. Manager's behaviour contributes to the challenge due to over-reactions, mistrust, second-guessing and unnecessary interventions. In practice, this translates into overstocking, change of plans and dismissing statistical forecasting. Such behaviour can be partly attributed to myopic loss aversion (MLA) and individual personality traits.

We propose to test the hypothesis that behavioural biases and personality traits affect planning decision-making by conducting laboratory and field experiments. Three treatments are tested and results analysed using econometric methodology. The experiment is based on a planning task (modified newsvendor problem) followed by questionnaires with personality inventories and psychometric scales. Both OM students and OM professionals are targeted.

From the treatment on the commitment period, supporting the MLA hypothesis, follows that less frequent interventions lead to better planning performance. Considering personality inventories, less extroversion and greater agreeableness both correlate to better planning. Considering Barratt's Impulsiveness Scale, subjects with higher Motor Impulsiveness Perseverance perform better as expected. Similarly, better performance is also observed for lower focus on negative outcomes based on Elaboration of Potential Outcomes scale. Finally, measures for Global Decision Making Style shows better planning performance for subjects exhibiting lower rationality, greater intuition and less dependence; results supported by previous studies. Considering the expected utility theory, results once more suggests that

decision-makers fail to maximise their expected utility, exhibiting demand chasing and anchoring effects.

The main limitation of this study is the sample size for both students and even more for professionals. Further research should increase the sample size and add priming on planning policy.

The findings provide grounds for discussion in practice about planning policies and evidence to suggest that less frequent interventions can lead to better planning performance. The major social implication is that people might not be naturally suited for task relying heavily on mental accounting under conditions of uncertainty and high volumes of data.

Exploring planning in the context of OM alongside personality inventories and constructs together with scales for decision approach and style is novel. This is also one of the first efforts to relate a common OM planning issue with MLA.