

**Do it or not? Explaining the complexity of decision-making processes for
Industry 4.0 adoption in international SMEs**

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Abstract

The adoption of Industry 4.0 (I4.0) in small and medium-sized enterprises (SMEs) often rests on its positive evaluation from managers, decision-makers, and entrepreneurs. Because of the mixed outcomes attainable through the SMEs' openness to disruptive changes, managers must weigh the beneficial aspects of I4.0 against the complexities, challenges, and drawbacks coming from its implementation. Drawing upon the tenets of the dual-process theory (DPT), this study highlights the cognitive configurations leading to managerial willingness (or reluctance) to adopt I4.0. This is done by investigating perceptions about the international markets in terms of risk and uncertainty, and by assessing organizational stimuli to openness, such as the explorative and exploitative orientations (i.e., ambidexterity), in combination with decision-makers' cognitive systems. To shed further light on observed heterogenous outcomes, this study explores the managerial willingness (or reluctance) towards I4.0 adoption among 157 managers working in international SMEs. The results of combined Partial Least Squares Structural Equation Modeling (PLS-SEM) and fuzzy-set Qualitative Comparative Analysis (fsQCA) outline different decisional paths associated with willingness and reluctance to adopt I4.0 for internationalization. This empirical evidence, therefore, contributes to the "human side of I4.0" by providing fruitful implications about cognitive configurations of decision-makers in international SMEs concerning I4.0 practices.

Keywords: Industry 4.0; decision-making; managerial cognition; human side; international SMEs.

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