AI-Related Skills and Individual Innovativeness as Links Between AI Mindset and Competitive Productivity Orientation in Indonesia

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Abstract

This study examines how an AI growth mindset relates to employees' self-reported competitive productivity (CP) orientation through AI-related skills and individual innovativeness. Cross-sectional survey data from 2,103 Indonesian workers, recruited mainly through an online research panel and screened for digital and AI exposure, were analysed with PLS-SEM and bootstrapped indirect effects.

AI mindset was positively associated with AI-related skills, which in turn were associated with both individual innovativeness and CP orientation; innovativeness was also associated with CP orientation. Innovativeness partially mediated the skills–CP association (VAF = 37.1%), and AI mindset was indirectly associated with CP orientation both through skills alone and through the skills–innovativeness sequence. The model explained 48.7% of the variance in CP orientation.

The study tests, at the individual level, a belief–capability–behaviour–outcome sequence in a large emerging-economy sample.

Keywords: AI mindset; AI-related skills; individual innovativeness; competitive productivity; PLS-SEM; Indonesia.

Introduction

Artificial intelligence (AI) is becoming a general work tool, yet field experiments show that the same AI tool yields different gains across workers and tasks. When access is comparable but outcomes differ, part of the explanation is likely to lie with the worker: what they believe AI does to their competence, what they can do with it and whether they use it to change how work is done.

Indonesia illustrates this gap. In 2024, 92% of Indonesian knowledge workers reported using generative AI at work (75% globally), yet GDP per hour worked in 2023 (≈ $14 PPP) was less than a fifth of Singapore's. A projected shortfall of about nine million digital workers and a fall from 27th to 48th in the IMD World Competitiveness Ranking (2024–2026) suggest that access to AI is not the binding constraint; workers' beliefs and skills are.

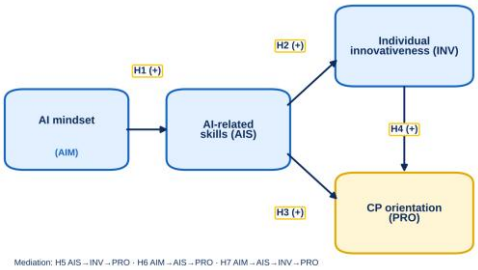
Existing research treats AI attitudes, AI literacy, innovative work behaviour and CP separately. Drawing on Social Cognitive Theory and Human Capital Theory, this study integrates them into one belief–capability–behaviour–outcome sequence.

RQ1: How are AI mindset, AI-related skills and individual innovativeness associated with one another and with CP orientation?
RQ2: Through which routes is AI mindset indirectly associated with CP orientation, and what share of the skills–CP association is carried by innovativeness?

Research Method

An explanatory, cross-sectional survey of Indonesian workers who use digital technology at work was conducted between May and August 2026. Of 2,123 raw responses, 2,103 complete cases remained after screening.

Four reflective constructs were measured with 25 items on 5-point Likert scales: AI mindset (4 items), AI-related skills (11), individual innovativeness (5) and CP orientation (5). Seven hypotheses were tested (Picture 1).

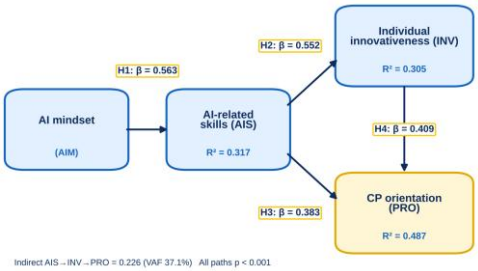


Picture 1. Research model (H1–H7)

Analysis. PLS-SEM in SmartPLS 4 with 5,000 bootstrap subsamples and 95% percentile confidence intervals. Mediation was classified following Zhao et al. (2010); a comparison model added direct paths from AI mindset, and PLSpredict assessed predictive power.

Measurement model. All loadings ≥ 0.708; Cronbach's α 0.857–0.924; composite reliability (ρC) 0.897–0.936; AVE 0.570–0.761; all HTMT < 0.85. Full-collinearity VIFs (1.489–2.059) were below 3.3, so no common method bias was detected by this test.

Model fit. SRMR = 0.066 (< 0.08) and Q²predict > 0 for all endogenous constructs. Predictive power relative to the linear-model benchmark was low, so the model is interpreted as explanatory.



Picture 2. Structural model estimates (n = 2,103)

Discussion & Result

All seven hypotheses were supported (p < 0.001).
H1 AIM → AIS: β = 0.563 (f² = 0.463), the strongest link.
H2 AIS → INV: β = 0.552 (f² = 0.439).
H3 AIS → PRO: β = 0.383 (f² = 0.199).
H4 INV → PRO: β = 0.409 (f² = 0.226); together, skills and innovativeness explain 48.7% of CP orientation.
H5 INV partially mediates AIS → PRO (indirect = 0.226; VAF = 37.1%).
H6 AIM → AIS → PRO: indirect = 0.216.
H7 AIM → AIS → INV → PRO: indirect = 0.127.

The results point to a capability-centred sequence. A growth belief about AI matters mainly because it goes with AI-related skills, which relate to CP orientation both directly (doing existing work better) and through innovation (changing how work is done). The comparison model showed only small direct paths from AI mindset (f² < 0.02), so skills carry most, but not all, of its association. Innovativeness was the lowest-scoring construct (M = 3.81), possibly reflecting limited room to innovate among early-career workers.

Conclusion

An AI growth mindset was associated with CP orientation mainly indirectly: through AI-related skills alone (the larger route) and through skills followed by individual innovativeness. Innovativeness carried a meaningful but minority share (37.1%) of the skills–CP association.

Practical implications. Campaigns promoting a positive view of AI are unlikely to be sufficient on their own; they may be most useful when combined with structured skill development and with room for employees to propose and trial work improvements.

Limitations. Cross-sectional, single-source self-reports from a non-probability online sample preclude causal inference and generalisation. Future research should use longitudinal, multi-source designs with direct performance measures and test managerial support, autonomy and innovation climate as moderators.

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