

Artificial Intelligence Readiness, Digital Transformation Capability, Organizational Agility, Innovation Ambidexterity, and Sustainable Competitive Advantage: A Structural Equation Modeling Approach

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1. Round 1

1.1. Reviewer 1

Reviewer:

The research gap presented in the final paragraph of the Introduction argues that “relatively few studies have developed and empirically tested comprehensive models.” While this statement is plausible, the manuscript does not provide a systematic synthesis of prior integrated models. A comparative table summarizing previous studies, variables examined, methodological approaches, and unresolved gaps would significantly strengthen the justification for the current investigation and demonstrate the novelty of the proposed framework.

In the Methods section, the authors indicate that the study focused on “medium-sized and large organizations operating in knowledge-intensive industries.” However, no operational definition is provided for medium-sized or large organizations. The

manuscript should specify the employee-count thresholds, annual revenue criteria, or industry classification standards used to categorize organizations, thereby enhancing methodological transparency and replicability.

In the data analysis section, the authors state that “Missing values, outliers, and assumptions of normality were assessed prior to conducting the main analyses,” yet no results are reported. The manuscript should provide skewness and kurtosis statistics, outlier diagnostics, treatment procedures for missing data, and justification for the use of maximum likelihood estimation.

Table 1 reports construct-level reliability and validity statistics; however, no item-level CFA results are provided. The manuscript should include a detailed factor loading matrix, standardized loadings, cross-loadings if applicable, item deletion decisions, and significance values for all indicators to allow readers to evaluate the measurement model rigorously.

In Table 2, the authors conclude that discriminant validity is established because “the diagonal values represent the square roots of AVE.” While the Fornell-Larcker criterion is reported, recent SEM literature recommends complementing it with the Heterotrait-Monotrait Ratio (HTMT). Reporting HTMT values would provide a more robust assessment of discriminant validity.

The measurement model fit reported in Table 3 demonstrates excellent indices; however, the manuscript does not provide the chi-square statistic itself or the degrees of freedom. Reporting these values is necessary for complete transparency and would allow readers to independently evaluate model adequacy.

Authors revised the manuscript and uploaded the new document.

1.2. Reviewer 2

Reviewer:

The paragraph describing the sampling strategy states that “a stratified random sampling approach was adopted to ensure representation across different industries and organizational sizes.” However, the manuscript does not explain how the strata were constructed, how many organizations were sampled from each stratum, or whether proportional allocation was employed. Detailed information regarding the sampling frame and selection procedures should be provided to evaluate the representativeness of the sample.

The authors report that “650 questionnaires were distributed electronically through professional networks, industry associations, and organizational contacts.” This recruitment strategy raises concerns regarding true randomization because professional networks and organizational contacts may introduce convenience sampling elements. The manuscript should clarify how random selection was maintained and discuss potential sampling biases arising from these recruitment channels.

In the description of the Artificial Intelligence Readiness Scale, the manuscript notes that an “adapted version” of the instrument developed by Aydiner et al. (2019) was utilized. However, no information is provided regarding the specific adaptations made. The authors should explicitly identify modified items, explain the rationale for adaptation, and report whether additional validation procedures were conducted following these modifications.

The measurement section states that Digital Transformation Capability was assessed using the Warner and Wäger (2019) scale. Given the rapid evolution of digital transformation research, the authors should justify the continued suitability of this instrument and explain whether any contemporary dimensions such as platform integration, AI-enabled processes, or data-driven governance were considered during instrument selection.

The manuscript indicates that Organizational Agility was measured using the Sharifi and Zhang (1999) scale. Considering that this instrument was originally developed over two decades ago, the authors should discuss its contemporary relevance and provide evidence that the scale adequately captures agility within AI-enabled and digitally transformed organizational environments.

The paragraph beginning “To establish content validity, the complete questionnaire was reviewed by a panel of academic experts” lacks sufficient methodological detail. The authors should report the number of experts involved, their disciplinary

backgrounds, years of expertise, evaluation criteria, and any quantitative content validity indices (e.g., CVR, CVI) that were calculated.

The study relies entirely on self-reported questionnaire data collected from single respondents. Given the complexity of constructs such as sustainable competitive advantage and innovation ambidexterity, the manuscript should explicitly address the risk of common method variance (CMV). Statistical tests such as Harman's single-factor test, common latent factor analysis, or marker-variable approaches should be reported.

Authors revised the manuscript and uploaded the new document.

2. Revised

Editor's decision after revisions: Accepted.

Editor in Chief's decision: Accepted.