




# Designing a Smart Manufacturing Model in Iran's Automotive Industry Using the Internet of Things and Artificial Intelligence: A Grounded Theory Approach

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E d i t o r	R e v i e w e r s
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## 1. Round 1

### 1.1 Reviewer 1

Reviewer:

The sentence “Industry 4.0 represents the convergence of cyber-physical systems, cloud computing, big data analytics, machine learning, digital twins, and intelligent automation...” introduces numerous technological concepts without establishing their analytical relevance to the grounded theory process. The manuscript would benefit from a conceptual delimitation clarifying whether the study investigates smart manufacturing broadly or specifically the AI-IoT integration dimension. At present, the scope appears overly expansive relative to the qualitative sample size.

The paragraph discussing Artificial Intelligence applications in automotive manufacturing contains strong claims such as “AI applications in the automotive industry include predictive maintenance, intelligent quality control, autonomous robotics...” but does not critically explain how these domains informed the interview protocol or coding schema. The authors should provide evidence that these technological dimensions emerged inductively from participant data rather than being pre-imposed deductive categories derived from the literature.

The methodological statement “The interviews lasted between 60 and 90 minutes and were transcribed within a maximum of 24 hours...” appears operationally descriptive but analytically insufficient. The authors should instead explain the nature of the interview guide, provide sample interview questions, and clarify how probing strategies facilitated theoretical category emergence.

The manuscript states that “Data analysis was conducted using MAXQDA 2020 software in three stages: open coding, axial coding, and selective coding.” However, there is no explanation of the transition logic between coding stages. The authors should provide a detailed example illustrating how raw interview excerpts evolved into open codes, then concepts, then categories, and finally into the paradigm model dimensions.

Author revised the manuscript and uploaded the updated document.

## 1.2 Reviewer 2

Reviewer:

The discussion of the Industrial Internet of Things states that “IoT-enabled smart factories can monitor production lines continuously...” yet the manuscript does not clarify whether any participating organizations had actually implemented such systems. This creates a methodological ambiguity between studying real organizational experiences and eliciting expert perceptions or aspirations. The authors should explicitly distinguish empirical implementation evidence from speculative or anticipatory opinions expressed by participants.

The paragraph beginning “The Iranian automotive industry represents one of the most important industrial sectors...” contains several macroeconomic and industrial claims regarding sanctions, competitiveness, and technological limitations. However, these assertions are insufficiently contextualized with empirical national data, policy documents, or industry reports. Including industry-level evidence regarding digitalization maturity, AI adoption rates, or IoT readiness in Iranian automotive firms would substantially strengthen the contextual credibility of the study.

The research gap paragraph states that “there remains a significant research gap regarding the development of an integrated and context-specific model...” but the manuscript does not systematically demonstrate how previous studies failed to provide such integration. A comparative analytical table summarizing prior Iranian and international studies, their dimensions, methodologies, and limitations would make the claimed novelty more convincing.

In the Methods section, the sentence “Sampling was carried out using purposive and theoretical methods with a snowball strategy until theoretical saturation was achieved...” requires far greater methodological detail. The authors should explain how theoretical sampling evolved during data collection, which categories guided subsequent participant selection, and at what analytical stage saturation was determined. At present, “theoretical saturation” is asserted but not demonstrated.

The sample composition described as “12 in-depth semi-structured interviews” involving “production managers, information technology specialists, senior engineers, and university faculty members” lacks sufficient demographic and organizational detail. The manuscript should include a participant profile table reporting organizational affiliation type, years of experience, specialization area, managerial level, and involvement in digital transformation projects. Without such contextual information, the transferability of findings remains difficult to evaluate.

Author revised the manuscript and uploaded the updated document.

## 2. Revised

Editor’s decision after revisions: Accepted.

Editor in Chief's decision: Accepted.