

AI-DRIVEN PRODUCTIVITY TRANSFORMATION FOR A COMPETITIVE UNITED KINGDOM ECONOMY

Dr Victor Joes Obasse*

*Researcher,
Lakeshore Management College,
Lakeshore Management College, UK

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ABSTRACT

The United Kingdom faces a persistent productivity puzzle that has seen output per hour stagnate since the 2008 financial crisis. This paper investigates the role of Artificial Intelligence (AI) as a general-purpose technology capable of breaking this cycle. By analysing the diffusion of AI across the UK service and manufacturing sectors, the research explores how these technologies transition from mere automation tools to drivers of cognitive augmentation. Let me explain: the core argument posits that the UK's competitive advantage lies not in the raw adoption of AI, but in the institutional and cultural readiness to reorganise business models around these capabilities. Through a critical review of existing economic frameworks and recent UK-specific data, this study demonstrates that effective business decision-making now requires a synthesis of human intuition and algorithmic precision. Here is what matters: without a fundamental shift in management practices and a focused investment in human capital, the productivity gains of the AI era will remain elusive.

KEYWORDS: *Artificial Intelligence, Productivity Puzzle, Cognitive Augmentation, General Purpose Technology, Resource Based View, United Kingdom Economy.*

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