

The Macroeconomic effects of generative AI

R. Katz; J.F. Jung Lusiardo

Abstract-

Our purpose is to estimate the macroeconomic impact of generative Artificial Intelligence (gen-AI). A theoretical model, based on a two-level CES production function, is developed to consider different elasticities of substitution between capital and labor, but differentiating between worker groups. Gen-AI is modeled as a potential enhancer of productivity for the different labor groups. We estimate the model for 67 countries over period 2022–2025. Results suggest that gen-AI contributed to increasing the productivity of most workers, regardless of their education, contract type, full or partial work time, and vulnerability level. This can be explained as, contrary to prior advances in this technology, gen-AI presents a wider range of uses, being easily accessible for most individuals. On the other hand, we were not able to find evidence of significant changes in the substitution dynamics across different groups of workers, while the overall macroeconomic impact has been modest so far.

Index Terms- Artificial intelligence; Generative AI; Productivity; Technology adoption; Labor impact

Due to copyright restriction we cannot distribute this content on the web. However, clicking on the next link, authors will be able to distribute to you the full version of the paper:

[Request full paper to the authors](#)

If you institution has a electronic subscription to Structural Change and Economic Dynamics, you can download the paper from the journal website:

[Access to the Journal website](#)

Citation:

Katz, R.; Jung, J. "The Macroeconomic effects of generative AI", Structural Change and Economic Dynamics, vol.79, pp.400-411, August, 2026.