

National Culture and AI Knowledge Flow: An Empirical Study

Sofia Vidalis

*School of Science, Engineering, and Technology
Penn State University, Harrisburg*

Iordanis Petsas^{*} and Jinghan Cai

*Department of Economics, Finance, and International Business
University of Scranton*

Yunzhi Lu

*School of Economics and Management
South China Normal University*

Aram Balagyozyan

*Department of Economics, Finance, and International Business
University of Scranton*

Abstract: This paper investigates how national culture influences the international diffusion of artificial intelligence (AI) knowledge, using OECD AI Policy Observatory data from Stack Overflow as a proxy for flows and Hofstede's dimensions as cultural measures. We find that source-country traits dominate: higher individualism enhances outflows, while power distance, masculinity, uncertainty avoidance, long-term orientation, and indulgence act as barriers. Instrumental variables confirm causality for individualism, power distance, and long-term orientation. Twitter activeness strongly moderates these effects, whereas capital market openness does not. Our findings underscore cultural heterogeneity's role in global AI disparities and inform equitable innovation policies.

Keywords: AI Knowledge Flow, Hofstede Culture Dimensions, Individualism, Power Distance, Long-term Orientation

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^{*} Corresponding author. Email: iordanis.petsas@scranton.edu

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