

## National Culture and AI Knowledge Flow: An Empirical Study

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**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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