

Rethinking Hofstede and Innovation: Evidence from Industry-level Data in Europe

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Abstract

Much of the existing research on Hofstede's cultural dimensions and innovation has relied on the Global Innovation Index, an annual ranking of countries by innovation capacity and outputs in technology, knowledge, and creativity. While useful at the macro level, this index does not capture the actual innovation activity of enterprises.

Using data from the 10th Community Innovation Survey with 1,340 data points across 66 industries in 31 European countries, this study takes a different perspective. Innovation is modeled at the intersection of national and industry dynamics and measured as the share of enterprises in each country-industry cell reporting innovation activity. The baseline regression model includes the industry-specific innovation system as a factor (proxied by two-digit NACE codes) and three covariates for country-level inputs (EU indicators for "finance and support," "human resources," and "research systems"). In the extended model, Hofstede's six cultural dimensions are added.

The baseline model explains 44% of the variance in innovation activity, the extended model 51%. Results show negative associations for power distance, positive for uncertainty avoidance and long-term orientation, and no statistically significant effect for indulgence. Notably, individualism is negatively and significantly associated with innovation, while masculinity is positive and significant. In other words, cultures with loosely knit social frameworks tend to exhibit lower innovation activity, whereas cultures emphasizing competition, achievement, and performance orientation tend to induce higher levels. These findings suggest that enterprise-level data can provide a more nuanced understanding of how culture contributes to shaping innovation activity alongside industry dynamics and structural conditions.

Keywords: Cultural Dimensions; Enterprise Innovation Activity; European Industries; Community Innovation Survey; Linear Regression.