

Culture moderation of the innovation input-output relationship: A panel data two-stage model fsQCA analysis

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Introdução

Well-developed national systems of innovation (NSI) are considered a cornerstone in countries competitiveness and economic development. The main tenet of the NSI is that innovation outputs (e.g., patents, high-tech exports, scientific publication) are the outcomes of a complex pattern of interactions between actors within national boundaries. Despite the potentiality of innovation outputs to increase countries competitiveness, the nature of the interactions among actors within a country NSI are shaped, among other factors, by societal values and beliefs, that is, by a country's culture.

Problema de Pesquisa e Objetivo

This study takes on a configurational perspective on the role of national culture as a boundary condition of NSI. More precisely, we analyse the moderating role of cultural dimensions on the relationship between investments in innovation (or inputs) and national innovation outputs. Drawing from the literature on NSI, which states that institutional settings, infrastructures and support activities play a key role in promoting innovation activities, we argue that culture should be considered a boundary condition affecting the way investments in innovation produce innovation outputs.

Fundamentação Teórica

National culture has deserved substantial attention in the field of innovation studies, with the rationale that countries with certain cultural characteristics (e.g., low power distance and high individualism) would be more innovative. Nevertheless, contradictory findings have been observed in the literature. According to NSI literature, innovation outputs are determined by factors, such as education levels, investments in R&D, patent applications, financial markets development or institutional quality. Thus, the role played by national culture is likely to be that of a boundary condition.

Metodologia

We assess the moderation effect through a systematic two-stage approach using fuzzy-set Qualitative Comparative Analysis (fsQCA), which permits analysing changes induced by the moderator variables and alleviates the selection bias introduced by database-splitting approaches. Furthermore, we analyse a diverse sample of 61 countries with panel data from 2011 to 2022.

Análise dos Resultados

Results reveal that investments in innovation, but not individual cultural dimensions, is a necessary condition for high innovation outputs. Furthermore, our results identified several configurations of national cultural dimensions that moderate the relationship between investments in innovation and innovation outputs.

Conclusão

This study highlights the necessity of investments in innovation to achieve high innovation outputs and the moderation role of certain configurations of national cultural dimensions.

Referências Bibliográficas

Bennett, D. L., & Nikolaev, B. (2021). Individualism, pro-market institutions, and national innovation.

Small Business Economics, 57(4), 2085-2106. Fan, D., Li, Y., & Chen, L. (2017). Configuring innovative societies: The crossvergent role of cultural and institutional varieties. *Technovation*, 66-67, 43-56. Ma, T., Cheng, Y., Guan, Z., Li, B., Hou, F., & Lim, E. T. K. (2023). Theorising moderation in the configurational approach: A guide for identifying and interpreting moderating influences in QCA. *Information Systems Journal*, 1-26.