

Taiwan's scientific collaboration under the New Southbound Policy: Trends, effects, mechanisms, and implications

Pei-Ying Chen^a

^aIndiana University Bloomington, Bloomington, IN, USA

peiychen@iu.edu

ABSTRACT

My dissertation explores the evolving trends and patterns in Taiwan's scientific collaboration under the New Southbound Policy (NSP), with a focus on research co-authorship with NSP target countries across Southeast and South Asia, as well as Australia and New Zealand. Launched in 2016, the NSP represents Taiwan's strategic effort to reintegrate into the Indo-Pacific region amidst shifting geopolitical realities. This study investigates the underexplored dynamics of scientific collaboration and the seldom-tested policy effects in a non-Western, non-colonial context, exemplifying science diplomacy in action. Specifically, this research addresses three key questions: (1) What are the long-term trends in research collaboration with NSP target countries from the mid-2000s to 2021? (2) How do co-authorship patterns and dynamics manifest in cross-specialization profiles and authorship orders among these countries? (3) What impact has the NSP had on the volume of co-authored research? Methodologically, this study combines bibliometric, network, and modeling approaches. It employs established bibliometric indicators for measuring attractiveness and preferences among partnered countries, multilayer network analysis, and piecewise models of change. The primary data sources are drawn from Clarivate's Web of Science, accessed in both aggregated forms via the *Observatoire des sciences et des technologies* and as raw JSON data retrieved through the Web of Science Expanded API. By analyzing the patterns, effects, and mechanisms of Taiwan's scientific collaboration with NSP target countries, this dissertation contributes to broadening theories and methodologies of international scientific collaboration. It also sheds light on South-South collaboration and offers policy implications for nations navigating similar geopolitical challenges.

ALISE RESEARCH TAXONOMY TOPICS

Bibliometrics; Data visualization; Informetrics.

AUTHOR KEYWORDS

international scientific collaboration; science diplomacy; New Southbound Policy (NSP); Taiwan; bibliometrics.

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