Unveiling hidden innovation in emerging economies

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The research proposal
This project will develop novel data extraction and analysis methods to examine firm-level innovation capabilities in emerging economies. Firm-level innovation capabilities are typically examined with the use of survey methods or patent indicators. Both methods have important limitations. It is well known that patenting activities are low in most parts of the Global South as compared to OECD countries, and hence they are of limited value in innovation studies concerned with the global south. Furthermore, patents work as indicators of science and technology innovation (STI) but do not capture dynamics in sectors where doing, using and interacting (DUI) is the dominant mode of learning and innovation (Jensen et al., 2007). Innovation surveys can be devised for data collection, but they are highly costly.

Studies have identified effective Indicators on firm level innovation activities from web scraped data in the European Union (Ashouri et al., 2022). This study will develop web-scraping methods to analyse firm-level innovation capabilities in Emerging Economies such as China, India, Brazil, Indonesia, Malaysia, Turkey and South Africa (upper middle-income countries). The development of this method is highly challenging, for instance due to language issues and the absence of registry data.

Institutional collaboration
The PhD candidate will be placed UNU-MERITs newly established Computational Innovation Lab and will benefit from interaction with other data-science experts.[1] At the same time, the student will be steered by a supervisor team in both Netherland and China and will receive a double degree from Maastricht University and Tsinghua University, provided that an institutional agreement can be reached.

Requirement:
- Highly motivated student with good English communication skills.
- Background (at the level of M.SC) in economics, management, or a relevant field.

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[1] See https://www.merit.unu.edu/the-computational-innovation-lab-on-crises-transformation-and-sustainable-development/

- Knowledge in environmental economics and sustainable development.
- Excellent skills in computational research methods

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Key references

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