Bohong Ma (马搏宏)

University of Glasgow / Nanjing University
Email: mabohonggz@gmail.com
Chinese (Native); **English** IELTS: Overall 7.5 (Each over 7.0)

Education

PhD in Management — **University of Glasgow**
Adam Smith Business School — *Sep 2024 –*

Research Master of Management — **Nanjing University**
School of Information Management — *Sep 2021 – Jul 2024*

- **GPA**: 84.1/100
- **Supervisor**: ***Lele Kang*** Homepage: **https://im.nju.edu.cn/kll1_en/list.htm**
- **Awards and Honours**: First Class Academic Award | 2021
  First Class Academic Award | 2022
  Outstanding Graduate Student (Top 1.26%) | 2022
  Merit Scholarship (Ranking 3/132) | 2022

Bachelor of Management — **Nanjing University**
School of Information Management — *Sep 2017 – Jul 2021*

- **GPA**: 81.8/100
- **Major:** Information Management and Systems
- **Minor:** Computer Science and Technology
- **Awards and Honours**: People's Scholarship | 2018
  People's Scholarship | 2020
  Excellent graduation thesis of Nanjing University | 2021
  Recommended Postgraduate Admission without Examination | 2021

Knowledge and Skills

Research Skills & Tools:

- Statistics & Empirical Analysis: systematic knowledge, extensive practical experience
- Programming Language: **R & Python** (both 6+ years experience), C++
- Other Research Tools: **SQL, Stata**, Big Data Processing, Network Analysis, ML & DL

Other Skills:

- **Database Administrator:** Responsible for **building and maintaining** multiple databases in DIII Lab, Nanjing University, including 2 database clusters, TB level data, and 50+ users.
- **Server Administrator:** Manages two server clusters within our institute. Over 60 servers are configured to meet the research needs of a team of approximately 200 people.

Research & Paper

Project 1 (2021-2022): Technology convergence in the global innovation process

- **[Published]** Wenjing Zhu, **Bohong Ma** & Lele Kang. (2022). Technology Convergence among Various Technical Fields: Improvement of Entropy Estimation in Patent Analysis. [J]. ***Scientometrics***.
  [URL] https://link.springer.com/article/10.1007/s11192-022-04557-6
- **[Published]** Wenjing Zhu, **Bohong Ma** & Lele Kang. (2021). The Trend of Technological Convergence Based on Patent Analysis. [C]. ***The 18th International Conference on Scientometrics & Informetrics (ISSI 2021)***.
  [URL] https://www.webofscience.com/wos/alldb/full-record/WOS:000709638700152

Project 2 (2022-2023): How to innovate more efficiently? Labor input and innovation communities.

- **[R & R round 2nd] *Journal of the Knowledge Economy***. (*JCR Q1*)
  Bohong Ma, Erqi Liu & Lele Kang. Transnational innovation and innovation efficiency from the perspective of labor input.
  [Brief Introduction] In the usual discussion of innovation efficiency, researchers usually abstracted innovation as a "money in, innovations out" process, focusing on evaluating the balance between capital input and innovation output. After referring to the Cobb-Douglas Production Function, this paper points out the importance of labor input, and delves into the comparison between domestic innovation and transnational innovation. Based on the analysis of global patent data for several decades, we verify the general efficiency decline of transnational innovation compared with domestic innovation from the perspective of labor input. We also investigate the organizational antecedents of this inefficiency.
- **[R & R round 1st] *Journal of Information Science.*** (*ABS 2*)
  Bohong Ma & Lele Kang. Knowledge Structure and Innovation Performance in Innovation Communities.
  [**Brief Introduction**] This study thus applies a community detection algorithm to identify more than 9 million Innovation communities (ICs) from the global network of tens of millions of innovators. Compared with traditional analysis units (e.g., company), ICs provide a more reliable basis for innovation units, thus eliminating conflicts and inconsistencies in the existing literature regarding the influence of knowledge base structure on innovation performance.

Project 3 (2023-2024): How can **imitative innovation** help companies gain competitive advantage?

- **[In preparation]** Plan to submit to **Research Policy**
  How does imitative innovation help companies gain long-lasting competitive advantages? The niche impact of knowledge components in ecosystems.
  [Brief Introduction]
  This research examines how innovative companies achieve competitive advantage through imitative innovation. Prior studies reveal two key research gaps: (1) a lack of large-scale, credible evidence on imitative innovation, as most prior research has relied on qualitative analyses or case studies, and (2) an unclear understanding of the mechanisms by which innovative companies or other organizations gain a sustainable competitive advantage through imitative innovation.
  To address these gaps, this study uses Shadow Patents—patents that replicate existing technologies—as a reliable indicator of imitative innovation. We hypothesize that imitative innovation is particularly effective in helping companies gain competitive advantage when they have a broad, well-connected knowledge base and pursue narrow, specialized innovation paths for subsequent developments.
  For methodology, this research employs a mixed-methods approach, combining quantitative analysis of patent data with qualitative methods such as case studies and surveys. This approach ensures that the study is grounded in objective, large-scale data patterns, while also providing the depth and richness necessary to explore how and why companies successfully leverage imitative innovation.

Other Research Experience

Cancer Identification Based on Radiomics and Deep Learning

University-Industry *Collaboration Data Analysis Project (Long-term Project by my supervisor)*

- **[My work]** Conducting empirical analysis and scientific visualization using physiological and medical data provided by our industry partner.
- **[Research Tools]** Python (Data acquisition, preprocessing), R (data analysis)
- **[Research Methods]** Lasso Model (omics feature selection), Survival analysis, Nomogram, Calibration Curve, etc.
- **[Deep Learning]** Multimodal model (clinical data, PI-RADS scores, radiomics images), Dynamic Weight Model

Teaching Assistant Experience

- **Introduction to data science and data analysis**

  Tutorial TA *(2020):* *Homework correction, question answering*

  Lecturing TA *(2021):* *Homework correction, question answering, programming course teaching*

  - **[Target Audience]** Undergraduates at NJU. IM., **highest credit**, **lowest pass rate**
  - **[Course Content]** Its contents include data thinking, common statistics & machine learning algorithms, and the introduction & application of Python & R.

  When I took this course during my undergraduate years (Fall 2018), I got 96/100 (the highest score among all my peers).
- **The foundation of big data analysis and application**

  Tutorial TA *(2020):* *Homework correction, question answering*

  Lecturing TA *(2021, 2022):* ***New online judge (OJ) system design****, programming course teaching*

  - **[Target Audience]** Undergraduates at NJU. IM. School.
  - **[Course Content]** Advanced R language applications, big data and distributed computing (Python & R), and R Markdown

  When I took this course during my undergraduate years (Spring 2019), I got 94/100.

Entrepreneurial Experience

- **[Business Model and Product]** In 2019 fall, my partner and I created the ***VSR Data Analysis*** project, providing programming and data analysis services for students and researchers. We utilized ***Taobao.com*** as our C2C delivery platform, enabling customers to seek advice, make payments, and receive services online.
- **[My Role]** My role primarily involved serving as the **trainer** of analysts and the **technical consultant** of analysis, evaluating customer requirements, and assigning them to the appropriate analysts. Sometimes I take on analytical tasks myself.

- **[Financial Success]** Our 3-year turnover exceeded **500,000 RMB**, of which the total amount of projects I was fully responsible for exceeded **100,000 RMB**.
- **[Team Growth]** At its peak, we have a team of more than **200 analysts** (80% are master's or doctoral students), including **30 long-term collaborators**.
- **[Analyst Development]** I have directly **trained** 50+ analysts and designed a **proven program for producing good analysts**, including training in professional skills and comprehensive competencies.

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