

Curriculum Vitae

Dawoon Jeong

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Professional Appointment

Northwestern University , Evanston IL, USA Postdoctoral Fellow, Management & Organizations, Kellogg School of Management (Affiliated with the Northwestern Institute on Complex Systems) Advisor: Hyejin Youn	Sep 2024 – Present
Ulsan National Institute of Science and Technology (UNIST) , Ulsan, Republic of Korea Lecturer, Graduate School of Interdisciplinary Management	Feb 2024 – Feb 2025
Seoul National University , Seoul, Republic of Korea Postdoctoral Fellow, Engineering Research Institute Advisor: Jeong-Dong Lee	Mar 2024 – Aug 2024

EDUCATION

Seoul National University , Seoul, Republic of Korea Ph.D. in Engineering <i>Dissertation title:</i> “A Study on Generalized Evolutionary Patterns of Product: Learning on Mobile Product Phylogenetic Network” <i>Committee:</i> Jeong-Dong Lee, Jongsu Lee, Donghyun Oh, Junghye Lee, Yoonmo Koo	Mar 2020 – Feb 2024
Seoul National University , Seoul, Republic of Korea M.S. in Engineering	Mar 2018 – Feb 2020
Korea Advanced Institute of Science and Technology (KAIST) , Daejeon, Republic of Korea B.S. in Physics	Feb 2009 – Aug 2016

RESEARCH INTERESTS

Computational social science
Product innovation
Science of science
Network science
Economic complexity

RESEARCH METHODS

Network analysis
Machine learning
Natural language processing
Econometric

TEACHING EXPERIENCE

TEACHING

Advanced Data Mining with Artificial Intelligence (BAT51201), UNIST	Fall 2024
Text Mining (BAT54201), UNIST	Spring 2024
Analytics Programming with Application (BAT563001), UNIST	Spring 2024

PUBLICATIONS (*Corresponding Author, †Equally contributed)

Publications in Peer-Reviewed Journals

Jeong-Dong Lee, Keun Lee, Jongsu Lee, Yongdai Kim, **Dawoon Jeong*** (2025). Multidimensional Development Pathways to Economic Complexity: Comparative Analysis of South Korea and Vietnam in Product-Technology Space. *Innovation Studies*, 20(1).

Dawoon Jeong*, Jeong-Dong Lee (2024). Where and How Does a Product Evolve? Product Innovation Pattern in Product Lineage, *Technovation*, 131, 102958.

Jeong-Dong Lee, **Dawoon Jeong***, Euy-Young Jung, Yunyoung Kim, Jiyong Kim, Youwei He, Sungjun Choi (2024). Mapping the Evolutionary Pattern of Mobile Products: A Phylogenetic Approach. *IEEE Transactions on Engineering Management*. 71, pp. 4776-4790

Hayoung Park, **Dawoon Jeong***, Jeong-Dong Lee (2024). Evolutionary mechanism for diversity dynamics in technology using a phylogenetic tree approach: directional suggestions for photovoltaic technology. *Industrial and Corporate Change*. dtae020.

Kiyoong Shin, **Dawoon Jeong***, Yoonhwan Oh. (2024). An Analysis of Global Research Space for Smart Manufacturing Based on Academic Literature. *Journal of Industrial Convergence*, 22(11), 1-11.

Dawoon Jeong, Chanlim Park*, Taewon Kang, Kiyoong Shin, Sungjun Choi, Junseok Hwang (2023). Measuring ethics level of technological topics using phylogenetic tree. *Technology Analysis & Strategic Management*. 1-14.

Hoyoon Lee, **Dawoon Jeong***, Jeong-Dong Lee (2023). Drivers of institutional evolution: phylogenetic inertia and ecological pressure. *Journal of Evolutionary Economics*, 33(2).

Yeongjun Yeo, **Dawoon Jeong***, Kiyoong Shin, Jaewon Choi, You-bean Kim (2022). Analysis of evolution patterns and path dependences of the mid- to long-term strategies in the S&T field with qualitative and quantitative findings. *Journal of Korea Technology Innovation Society*, 24(5).

Reports

Anwar Aridi, Jeong-Dong Lee, Kibum Kim, Kyeyoung Shin, **Dawoon Jeong**, Wonsub Eum, Taewon Kang (2024). *Diversification through the Application of the Co-evolutionary Framework: Korea and Viet Nam*. © Washington, DC: World Bank.

IN REVIEW PROCESS (*Corresponding Author, †Equally contributed)

Dawoon Jeong, Saangkeuk Lee, Wonsub Eum*. Learning from Rivals: Diversification Paths from Countries with Similar Export Structures. *Structural Change and Economic Dynamics*. (Revise & Resubmit)

Dawoon Jeong*, Jeong-Dong Lee. Mapping Product Development Trajectories: Product Citation Network. *Scientometrics*. (Under Review)

Junghun Chae†, WooJoong Kim†, Woochul Jung†, **Dawoon Jeong**†, Roktaek Lim†, Manoj Chamlagain, Giju Jung, Juneil Jang, Jae Won Lee, Nam Kyu Kang, Kwangryul Baek, Jonghyeok Shin, Ye-Gi Lee, Hyun Gi Koh, Chanwoo Kim, Sangdo Yook, Allen Ka Loon Cheung, Yong-Su Jin, Hyejin Youn*, Pan-Jun Kim* and Cheol-Min Ghim*. Long-term innovative potential of genetic research and its suppression. *PNAS Nexus*. (Under Review)

Hayoung Park, **Dawoon Jeong***, Jeong-Dong Lee. Revisiting the Routine of a Multidimensional Approach to Heterogeneous Firms: Quantification and Classification of Innovation Routines. *Journal of Evolutionary Economics*. (Revise & Resubmit)

Soohyoung Lee, **Dawoon Jeong***, Jeong-Dong Lee. Automation Will Set Occupational Mobility Free: Structural Changes in the Occupation Network, *Human and Social Sciences Communications*. (Submitted)

WORKING PAPERS (*Corresponding Author, †Equally contributed)

Dawoon Jeong†, James Holehouse†*, Chris Kempes, Geoffrey B. West, Hyejin Youn*. A Century of Growth and Evolution in the U.S. Code.

Dawoon Jeong, Seolmin Yang, Sungwoo Jang, Seungryul Shin*. Transitioning from science to technology on the shoulders of scientific giants: an analysis of patent-paper pair.

Dawoon Jeong, Moh Hosseinioun, Hyejin Youn*. Manager Scaling Residual

Seolmin Yang, **Dawoon Jeong**, Hyejin Youn*. Technology landscape from micro to macro structure community detection

Dawoon Jeong, Seolmin Yang, James Evans, Hyejin Youn*. Disruption Needs Consolidating.

Soohyoung Lee, **Dawoon Jeong***, Jeong-Dong Lee. Unraveling Human Capital Complexity: Economic Complexity Analysis of Occupations and Skills.

Yeokyung Hwang, **Dawoon Jeong***. The evolution of scientific knowledge and social discourse: A multi-layer network analysis of AI technologies

CONFERENCES

Dawoon Jeong, Jeong-Dong Lee, Jiyong Kim, Youwei He, Sungjun Choi, Joomin Lee. Evolutionary Pattern for Product Innovation: Learning on Product Phylogenetic Network
2nd International Conference on Science of Science and Innovation, Evanston, USA, Jun 26-28 (Poster)

FELLOWSHIPS & AWARDS

National Research Foundation of Korea
2023 Ph.D. Fellowship (KRW 40,000,000) Sep 2023 – Feb 2024

Korea Institute of Science & Technology Evaluation and Planning (KISTEP)
2022 KISTEP Fellowship (KRW 3,000,000) Jun 2022 - Nov 2022

Korea Institute of Science and Technology (KIST)
2021 KIST Convergence Research Fellowship (KRW 3,000,000) Jun 2021 - Oct 2021

PROFESSIONAL SERVICE

Program Committee
Atlanta Conference on Science and Innovation Policy 2025 Nov 2024 – Present

Peer review for Journals
Research Policy
Science and Public Policy

ADVISING & CO-ADVISING

Soohyoung Lee, Ph.D. Candidates, Seoul National University Sep 2024 – Present
Yeokyung Hwang, Ph.D. Candidates, Seoul National University Sep 2024 – Present
Hayoung Park, Ph.D. Candidates, Seoul National University Sep 2022 – Present
Hoyoon Lee, Ph.D. Candidates, Seoul National University Feb 2021 – Feb 2022

WORK EXPERIENCE

World Bank
Consultant Nov 2022 - May 2023
Supported in research project “Patterns of Economic Diversification via Coevolution of Production and Technology”

Korea Broadcasting System
Consultant Feb 2023 - Mar 2023
Advised data analysis in production of documentary “30 살 수능 길을 잃다” 시사기획 창 411 회 (KBS 23.03.28)”

COMPUTATIONAL SKILLS

Computing Languages: Python, R
Machine Learning Libraries: Pytorch, Tensorflow
Network Visualization Software: Gephi

REFERENCES

Hyejin Youn, Ph.D.
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