

STEPHEN T. DOWNING

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📖 Research: <https://sdownin.github.io>

Research Focus

- Competitive dynamics, especially competitor identification and the implications of market entry and acquisitions
- Interorganizational networks, exploring cross-industry encounters, multimarket interdependence, human capital flows structure, and the embeddedness of language in competition

Education

Ph.D., National Chiao Tung University—ranked top 2 in Taiwan **2019***

- Concentration: Strategic Management (Decision Sciences core 3.94 / 4.00 GPA)
- Dissertation: “Red in Tooth and Claw: Exploiting Competitive Embeddedness for Identification of Threats and Opportunities”
- Adviser: Assoc. Prof. Jin-Su Kang

MBA, National Chiao Tung University—ranked top 2 in Taiwan **2012**

- Concentration: International Business Management

BA, Tulane University (New Orleans, LA, USA) **2008**

- Majors: International Relations, Philosophy; *magna cum laude*, departmental honors

Research

Published & Forthcoming

- Kang, J.-S., & Downing, S. (2015). “Keystone effect on entry into two-sided markets: An analysis of the market entry of WiMAX.” *Technological Forecasting & Social Change*, 94, 170–186.
- Kang, J. S., Kholod, T., & Downing, S. (2015). “Analysis of Russia’s biofuel knowledge base: A comparison with Germany and China.” *Energy Policy*, 85, 182–193.
- Kang, J. S., Chiang, C. F., Huangthanapan, K., & Downing, S. (2015). “Corporate social responsibility and sustainability balanced scorecard: The case study of family-owned hotels.” *International Journal of Hospitality Management*, 48, 124–134.

Under Review

- Downing, S., Kang, J.-S., & Markman, G. “What you don’t see can hurt you: Awareness cues to identify tomorrow’s rivals.” (Under 2nd round review at *Academy of Management Journal*)

- Downing, S., Kang, J.-S., & Markman, G. “Opening The Black Box Between Corporate Social Responsibility (CSR) and Corporate Financial Performance (CFP) in Platform Competition.” (Under review)

Conference Papers

- Downing, S., Kang, J.-S., & Markman, G. (2017) “Emergent Awareness: Competitive dynamics beyond rivalry.” 37th Annual Strategic Management Society Conference, Houston.
- Downing, S., Kang, J.-S., & Markman, G. (2017) “Competitive Dynamics: Of whom should you be aware?” 77th Annual Meeting of the Academy of Management, Atlanta.
- Downing, S., Kang, J.-S., & Hsu, C.L. (2016) “Network Risk: Assessing the threat of envelopment”. 36th Annual Strategic Management Society Conference, Berlin.
- Downing, S. & Kang, J.-S. (2015) “Characteristics demand and platform competition: A game-theoretic argument for strategic CSR”. 35th Annual Strategic Management Society Conference, Denver.
 - ❖ SMS best student paper award nominee

Teaching Cases

- Kang, J.-S., and Downing, S. (2015). “Cconma.com in South Korea: An innovative e-commerce platform”. Ivey ID: 9B15M020. Ivey Publishing.

Working Papers & Ongoing Research

- Downing, S., Kang, J.-S., & Lee, H. “Ripe Targets: Multimarket Contact, Networks and Acquisitions.” (A longitudinal study of the effect of network-level MMC configurations upon firms’ acquisition motivations and target selection. Hypotheses are tested using U.S. tech firm acquisitions and competitive relations data.)
- Downing, S. & Kang, J.-S. “In One Door and Out The Other: Unpacking Cyclic Dependence in Human Capital Flows.” (A network-level analysis of the embeddedness and structural patterning drivers of interorganizational human capital flows. Hypotheses are tested using employee co-location and firm competitor relation data.)
- Kang, J.-S., & Downing, S. “When Connectivity Doesn’t Lead To Value: Evidence From An E-Commerce Platform’s Social Network Quasi-Experiment” (A Bayesian structural time series analysis of the impact of an exogenous change in platform member transactional interconnectivity upon the total value created for different groups of platform members and the platform operator. Hypotheses are tested using a novel data set of customer attributes, purchasing behavior, and mobile social network connections from a Korean e-commerce platform.)
- Downing, S. & Kang, J.-S. “Parsing Value From Unobserved Networks: Relational Inference From Non-Relational Data”. (A study of the effect of unobserved social embeddedness upon observable consumer behavioral similarities, offering marketers an opportunity to leverage their underutilized data for improved demand modeling. Hypotheses are tested using recent purchase and demographic data from a Korean retail e-commerce platform.)
- Kang, J.-S., Kwok, J., & Downing, S. “Coopetition and Knowledge Seeking Behavior.” (A study exploring the impact of technological alliance membership, relative private/public benefit, and relative technological scope on firms’ ultimate handling of the exploration-exploitation tradeoff in R&D. Empirical analysis utilizes EPO patent citations data.)

Grants & Awards

Best Ph.D. Thesis Award	2018
<ul style="list-style-type: none"> • Top prize and monetary award, 11th annual Thesis Symposium, Taiwan 	
Ph.D. Dissertation Research Grant	2016 - 2017
<ul style="list-style-type: none"> • Taiwan Ministry of Science & Technology, 105-2420-H-009-012-DR 	
Management Research Grant	2015 - 2016
<ul style="list-style-type: none"> • Taiwan Ministry of Science & Technology, 104-2410-H-009-050, under Assoc. Prof. J.-S. Kang 	
Ph.D. Scholarship	2013 - 2016
<ul style="list-style-type: none"> • Taiwan Ministry of Education scholarship 	
Dimerco Corp. MBA Leader Award	2011
<ul style="list-style-type: none"> • A monetary award for ranking top 3 in MBA class 	
Tulane Distinguished Scholar Award	2004 - 2008
<ul style="list-style-type: none"> • Undergraduate academic half-scholarship 	

Quantitative Research Competencies

Experienced in data science and big data methods that advance management research by facilitating greater data granularity and scope, including the following software and technologies:

Methods

- Network analysis (ERGMs with extensions, REM, TNAM)
- Unsupervised learning and dimensionality reduction (topic models, tensor factorization)
- Agent-based modelling (discrete choice and game-theoretic simulations)
- Time series analysis (ARIMA, Markov switching models, Bayesian structural time series)
- Linear and generalized regression with extensions (OLS, GLM, HLM)

Software & Technologies

- Scientific / statistical computing (R, Python, SAS, Matlab, LaTeX, SGE HPC shell scripting)
- Relational and non-relational databases (MySQL; limited AWS DynamoDB, MongoDB, Neo4j)
- Object oriented programming (Python, PHP)
- Full-stack web development (HTML, CSS, JS/jQuery, LAMP stack, PHP Yii2 framework)
- Cloud architecture (Amazon Web Services EC2, S3, RDS, Route53, SES, Lambda, etc.)
- Version control (Git)

Professional & Entrepreneurial Experience

Co-Founder & Data Science Lead, Choco.ly (Taipei; startup CEM SaaS platform) **2015 - 2018**

- Iterated customer interviews, observations via lean startup for agile product development

- Designed and implemented analytics suite
 - Collaborated in systems design and full-stack web development
- Co-Founder & BDM, Choco Design** (Taipei; startup digital design agency) **2014 - 2015**
- Managed new business development, account prospecting, negotiations
- Sales Account Manager, ACTi Corporation** (Taipei; IP camera mfg.) **2012 - 2013**
- Managed Nordic territory distributor sales during key product lines overhaul
 - Transitioned channel partners onto new policy terms, nurtured key accounts to accelerate growth while minimizing cannibalization
- Marketing Intern, PPG Industries** (Shanghai & Taipei; fiberglass joint venture) **2011 - 2011**
- Completed analysis of Chinese fiberglass export data to inform APAC market development initiatives for the Pittsburgh Formosa Group joint venture
- Public Finance Consulting Intern, The PFM Group** (New Orleans; public finance) **2007 - 2007**
- Drafted budgeting for outcomes and best practices recommendations for City of New Orleans revenue structure and generation
 - FY2008 budget results: Cut expenditures by \$8.1 million and eliminated \$48 million in unnecessary funding requests

Teaching Experience

- Teaching Assistant, National Chiao Tung University** (Taipei, Taiwan) **2018**
- Strategic Management (graduate level) – evaluations: 4.81 / 5.00 (n = 22)
- Guest Lecturer, National Chiao Tung University** (Taipei, Taiwan) **2017**
- Introducing the R statistical computing language for network analysis (graduate level)
- Guest Lecturer, Shih Chien University** (Taipei, Taiwan) **2017**
- Digital Marketing (graduate level)
 - Research Methodology (undergrad level)
 - International Business Management (undergrad level)
- Teaching Assistant, National Chiao Tung University** (Hsinchu, Taiwan) **2011**
- Microeconomics for Business, NCTU Global MBA program (graduate level)

Presentations

- Downing, S., Kang, J-S. & Markman, G.D. 2017. Competitive dynamics: Of whom should you be aware? *Academy of Management Meeting*, Atlanta, GA.
- Downing, S., Kang, J-S. & Markman, G.D. 2017. Emergent awareness: Competitive dynamics beyond rivalry. *Strategic Management Society*, Houston, TX.
- Downing, S., Kang, J-S. & Hsu, C.L. 2016. Network Risk: Assessing the threat of envelopment. *Strategic Management Society*, Berlin.

- Downing, S., Kang, J-S. 2015. Characteristics demand and platform competition: A game-theoretic argument for strategic CSR. *Strategic Management Society*, Denver.

Affiliations

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| • Academy of Management | 2016 - Pres |
| • Strategic Management Society | 2016 - Pres |
| • Beta Gamma Sigma | 2012 - Pres |

Languages

- English: Native
- Chinese (Mandarin): Intermediate