

# STEPHEN T. DOWNING

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## EDUCATION

Ph.D.	National Chiao Tung University (AACSB; ranked top 2 in Taiwan) Mays Business School, Texas A&M University ♦ Visiting Research Scholar   Host: Albert Cannella Gatton College of Business & Economics, University of Kentucky ♦ Visiting Research Scholar   Host: Walter Ferrier  Dissertation: Relational Competitive Dynamics: Exploiting Competitive Embeddedness for Competitor Identification and Opportunity Recognition  The Awareness-Motivation-Capability (AMC) framework instructs firms to be aware of rivals, yet it offers limited guidance on how to profile those who are not rivals today but stand to become so tomorrow. Recognizing that rivals are embedded in dyads, triads, tetrads, etc. I take a multilevel view (i.e., firm, dyad, and network) to develop four awareness cues that address this oversight and make the awareness construct prescient. Studying thousands of competitive encounters over ten years, I show that at the firm and the dyad levels respectively, diversification and competitive asymmetry (the differential exposure to competitive pressure from other players) predict competitive encounters. Awareness cues at the network level also precede competitive encounters: convergence drives the formation of triadic encounters (when a focal firm encounters the rivals of its rivals), and the degree of separation between a focal firm and its indirect competitors predicts the formation of tetradic-level encounters (when a focal firm and the rivals of its rivals' rivals become rivals). Together, these awareness cues delineate a hostility profile—the conceptual bound within which awareness is applicable and beyond it is misplaced. That is, only direct rivals and 2nd- and 3rd-degree indirect competitors merit awareness; more remote players do not. This research challenges several views, including that competition is industry-specific; that we can understand competition from observations at one level of analysis; that we can only see rivals after they strike; and that indirect competitors are monolithic and non-segmentable.	(expected) 2020 Spring 2019 fall 2019
M.B.A.	National Chiao Tung University (AACSB; ranked top 2 in Taiwan) ♦ Concentration: International Business Management	2012
B.A.	Tulane University ♦ Majors: International Relations, Philosophy; <i>magna cum laude</i> , departmental honors ♦ Honors Thesis: An Impotent Hegemon: The post-9/11 decline of U.S. Influence	2008

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## RESEARCH INTERESTS

Competitive dynamics – especially competitor identification, market entry and acquisitions

Interorganizational networks – exploring cross-industry encounters and multimarket interdependence

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## MANUSCRIPTS UNDER REVIEW

Downing, S., Kang, J.-S., & Markman, G. “What you don’t see can hurt you: Awareness cues to identify tomorrow’s rivals.”

- ♦ 2<sup>nd</sup> R&R, preparing submission for 3<sup>rd</sup> review, *Academy of Management Journal*
- ♦ Award: An earlier version received the Best Thesis Award at the 11<sup>th</sup> annual Topco Scientific Co. Thesis Symposium, Taiwan (media summary: <http://www.tmi.org.tw/2018/08/2018.html>)

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## WORKING PAPERS

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- Downing, S., Kang, J.-S., & Lee, H. "Multimarket Contact and Acquisitions: A Power-Dependence Perspective on Multisided Competition." *Submission preparation stage*.
- Kang, J.-S., Downing, S., & Markman, G. "Strategic Nonresponse: The Mediating Role of Buyer Engagement." *Submission preparation stage*.
- Downing, S., Yu, T., Cannella, A.A., & Kang, J.-S. "The Coevolution of Multimarket Contact and Competition." *Data analysis stage*.
- Downing, S., Kang, J.-S., & Markman, G. "The Dual Embeddedness of Product and Factor Market Rivalry." *Data analysis stage*.
- Kang, J.-S., & Downing, S. "When Connectivity Doesn't Lead To Value: Evidence From An E-Commerce Platform's Social Network Quasi-Experiment." *Design stage*.
- Downing, S. & Kang, J.-S. "Parsing Value From Unobserved Networks: Relational Inference From Non-Relational Data". *Design stage*.

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## REFEREED PUBLICATIONS

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- 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.

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## GRANTS & AWARDS

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Ph.D. Student Research Abroad Program Grant                                                                                                                                                                               | 2019        |
| ♦ One-year international research and travel stipend from National Chiao Tung University and Taiwan Ministry of Education                                                                                                 |             |
| Best Ph.D. Thesis Award                                                                                                                                                                                                   | 2018        |
| ♦ Top prize and monetary award, 11 <sup>th</sup> annual Topco Scientific Co. Thesis Symposium, Taiwan ( <a href="http://www.tmi.org.tw/2018/08/2018.html">http://www.tmi.org.tw/2018/08/2018.html</a> , story in Chinese) |             |
| Ph.D. Dissertation Research Grant                                                                                                                                                                                         | 2016 - 2017 |
| ♦ Taiwan Ministry of Science & Technology, 105-2420-H-009-012-DR                                                                                                                                                          |             |
| Management Research Grant                                                                                                                                                                                                 | 2015 - 2016 |
| ♦ Taiwan Ministry of Science & Technology, 104-2410-H-009-050, under J.-S. Kang                                                                                                                                           |             |
| Ph.D. Scholarship                                                                                                                                                                                                         | 2013 - 2016 |
| ♦ Taiwan Ministry of Education scholarship                                                                                                                                                                                |             |
| Dimerco Corp. M.B.A. Leader Award                                                                                                                                                                                         | 2011        |
| ♦ Monetary award for ranking top 3 in MBA class                                                                                                                                                                           |             |

Tulane Distinguished Scholar Award  
♦ Undergraduate academic half-scholarship

2004 - 2008

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## REFEREED CONFERENCE PROCEEDINGS

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

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## PUBLISHED TEACHING CASES

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

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## TEACHING EXPERIENCE

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National Chiao Tung University (Taiwan)			Section Evaluation
2018 Summer	<i>TA</i> (Masters)	Strategic Management 6157 (22 students)	4.81 / 5
2018 Spring	<i>Guest Lecturer</i> (Masters)	Network Strategies: Methods and Applications 6167 “Introducing the R statistical computing language for network analysis”	n/a
2017 Fall	<i>Guest Lecturer</i> (Masters)	Network Strategies: Methods and Applications 6167 “Introducing the R statistical computing language for network analysis”	n/a
2011 Spring	<i>TA</i> , (Masters)	Microeconomics for Business	n/a
Shih Chien University (Taiwan)			Section Evaluation
2017 Spring	<i>Guest Lecturer</i> (Masters)	Digital Marketing	n/a
2017 Spring	<i>Guest Lecturer</i> (Undergrad)	Research Methodology	n/a
2017 Spring	<i>Guest Lecturer</i> (Undergrad)	International Business Management	n/a

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## PROFESSIONAL & ENTREPRENEURIAL EXPERIENCE

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- Co-Founder & Data Science Lead, Choco.ly (Taipei; startup CEM SaaS platform) 2015 - 2018
- ♦ Designed and implemented analytics suite
  - ♦ Iterated customer interviews and user observations, testing hypotheses via lean startup
  - ♦ Collaborated in systems design and full-stack web development

- Co-Founder & B.D.M., 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
- ♦ Oversaw Nordic territory distributor sales during key product lines overhaul
  - ♦ Transitioned channel partners onto new policy terms, nurturing key accounts to accelerate growth while minimizing cannibalization
- Marketing Intern, PPG Industries (Shanghai & Taipei; fiberglass joint venture) 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
- ♦ 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

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## QUANTITATIVE ANALYSIS COMPETENCIES

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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 (ERGM, REM, SAOM)
- ♦ 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; 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)

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## PRESENTATIONS

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- 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.

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## MEMBERSHIPS

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Academy of Management	2016 – Pres.
Strategic Management Society	2016 – Pres.
Beta Gamma Sigma	2012 – Pres.

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## LANGUAGES

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English: Native  
Chinese (Mandarin): Intermediate