

# BYUNGYEON KIM

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## Curriculum Vitae

July, 2021

### EDUCATION

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<b>Ph.D. in Business Administration (Marketing)</b>	Expected 2022
Harvard Business School, Boston, MA Committee: Doug J. Chung (Chair), Elie Ofek, and Sunil Gupta	
<b>M.S. in Marketing</b>	2016
Korea University, Seoul, Korea	
<b>Bachelor in Business Administration</b>	2009
Korea University, Seoul, Korea	

### RESEARCH INTERESTS

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Sales Management, Personal Selling, Business-to-Business Marketing, New Product Development, Empirical Industrial Organization, Dynamic Structural Modeling, Dynamic Panel Data, Analytical Modeling, Field Experiments

### PUBLICATIONS

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Doug J. Chung, Byungyeon Kim, and Byoung G. Park (2021). “The Comprehensive Effects of Sales Force Management: A Dynamic Structural Analysis of Selection, Compensation, and Training.” *Management Science* (forthcoming).

Doug J. Chung, Byungyeon Kim, and Niladri B. Syam (2020). “A Practical Approach to Sales Compensation: What Do We Know Now? What Should We Know in the Future?” *Foundations and Trends in Marketing*, 14(1): 1-52.

Doug J. Chung, Byungyeon Kim, and Byoung G. Park (2019). “How Do Sales Efforts Pay Off? Dynamic Panel Data Analysis in the Nerlove-Arrow Framework.” *Management Science*, 65(11): 5197-5218.

Byungyeon Kim, Takuya Satomura, and Jaehwan Kim (2017). “A Direct Utility Model with Dynamic Constraint.” *Asia Marketing Journal*, 18(4):125-138.

### PAPERS UNDER REVIEW

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Byungyeon Kim, Oded Koenigsberg, and Elie Ofek (2021). “I Dont “Recall”: The Decision to Delay New Product Launch to Avoid Costly Product Failure.” Minor revision at *Management Science*.

Doug J. Chung, Byungyeon Kim, and Byoung G. Park (2021). “Time Dependence and Preference: Implications for Compensation Structure and Shift Scheduling.” Reject and resubmit at *Marketing Science*.

## RESEARCH IN PROGRESS

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Byungyeon Kim and Doug J. Chung. "Managing Relational Sales: The Role of Behavior-Based and Outcome-Based Controls." **Job Market Paper**

Byungyeon Kim and Doug J. Chung. "A Structural Model of Multi-Component Incentive Design: Utilizing Compensation as a Lever to Influence Sales Force Behavior."

## HONORS AND AWARDS

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AMA-Sheth Foundation Doctoral Consortium Fellow	2020
Marketing Science Doctoral Consortium Fellow	2019
Graduate Fellowship, Harvard University	2016-2022
Best Master's Thesis Proposal Award, Korea University	2015
Graduate Fellowship, Korea University	2014-2016
Scholarship for Academic Excellence, Korea University	2007

## TEACHING INTERESTS

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Sales Management, Business-to-Business Marketing, Marketing Analytics

## TEACHING EXPERIENCE

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Personal Selling and Sales Force Management, Teaching Fellow MBA Elective Course, Harvard Business School	2018
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## EMPLOYMENT EXPERIENCE

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<b>POSCO</b> Associate, Marketing Strategy Department	2010-2013
<b>Accenture</b> Intern, Project Financing and Subcontractor Management	2008
<b>Republic of Korea Army</b> Sergeant, Operations, 3 <sup>rd</sup> Division Headquarters	2004-2006

## REFERENCES

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<b>Doug J. Chung</b> MBA Class of 1962 Associate Professor of Business Administration Harvard Business School, Boston, MA	dchung@hbs.edu
<b>Elie Ofek</b> Malcolm P. McNair Professor of Marketing Harvard Business School, Boston, MA	eofek@hbs.edu

**Sunil Gupta**

Edward W. Carter Professor of Business Administration  
Harvard Business School, Boston, MA

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**Oded Koenigsberg**

Professor of Marketing; Deputy Dean (Degree Education)  
London Business School, London, UK

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## APPENDIX: SELECTED ABSTRACTS

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**Title:** “Managing Relational Sales: The Role of Behavior-Based and Outcome-Based Controls.” (Job Market Paper)

**Abstract:** This study provides a dynamic structural analysis of an agents behavior in response to behavior-based and outcome-based sales force control measures. The model accommodates both observable, quantifiable sales effort (e.g., number of sales calls) and unobservable, qualitative sales effort (e.g., attitude), as well as the dynamics in demand channeled by customer goodwill. By understanding how multiple sales management instruments—including incentives, route call planning and price promotions—jointly influence behavior, the study offers insights on optimal sales management policies. The results show existence of different types of salespeople that possess heterogeneous preferences and productivity. A series of counterfactual experiments demonstrate a trade-off between increasing the number of sales calls (behavior-based control) versus offering additional incentives (outcome-based control); heterogeneous responses to reducing the level of price promotions in which some salespeople exert extra effort to mitigate the disadvantage; and how a firm can minimize the negative impact of reducing price promotions by utilizing different sales force control measures.

**Title:** “The Comprehensive Effects of Sales Force Management: A Dynamic Structural Analysis of Selection, Compensation, and Training.”

**Abstract:** This study provides a comprehensive model of an agents behavior in response to multiple sales management instruments, including compensation, recruiting/ termination, and training. The model takes into account many of the key elements that constitute a realistic sales force setting: allocation of effort, forward-looking behavior, present bias, training effectiveness, and employee selection and attrition. By understanding how these elements jointly affect agents behavior, the study provides guidance on the optimal design of sales management policies. A field validation, by comparing counterfactual and actual outcomes under a new policy, attests to the accuracy of the model. The results demonstrate a tradeoff between adjusting fixed and variable pay; how sales training serves as an alternative to compensation; a potential drawback of hiring high-performing, experienced salespeople; and how utilizing a leave package leads to sales force restructuring. In addition, the study offers a key methodological contribution by providing formal identification conditions for hyperbolic time preference. The key to identification is that under a multiperiod nonlinear incentive system, an agents proximity to a goal affects only future payoffs in nonpecuniary benefit periods, providing exclusion restrictions on the current payoff.

**Title:** “How Do Sales Efforts Pay Off? Dynamic Panel Data Analysis in the NerloveArrow Framework.”

**Abstract:** This paper evaluates the short- and long-term value of sales representatives detailing visits to different types of physicians. By understanding the dynamic effect of sales calls across heterogeneous physicians, we provide guidance on the design of optimal call patterns for route sales. The findings reveal that the long-term persistence effect of detailing is more pronounced for specialist physicians, whereas the contemporaneous marginal effect is higher for generalists. The paper also provides a key methodological insight to the marketing and economics literature. In the NerloveArrow framework, moment conditions that are typically used in conventional dynamic panel data methods become vulnerable to serial correlation in the error structure. We discuss the associated biases and present a robust set of moment conditions for both lagged dependent and predetermined explanatory variables. Furthermore, we show that conventional tests to detect serial correlation have weak power, resulting in the misuse of moment conditions that leads to incorrect inference. Theoretical illustrations and Monte Carlo simulations are provided for validation.

**Title:** “I Don’t “Recall”: The Decision to Delay Innovation Launch to Avoid Costly Product Failure.”

**Abstract:** Innovations embody novel features or cutting-edge components aimed at delivering desired customer benefits. Oftentimes, however, we observe the need to recall new products shortly after their introduction. Indeed, a firm may rush an innovation to market in an attempt to pre-empt rivals and capture early demand, yet in so doing

forgo rigorous testing; thus subjecting itself to the risk of a product recall. To shed light on this phenomenon, we construct a dynamic game-theoretic model in which firms plan to launch their innovations. Each firm must decide whether to conduct time-consuming quality assurance testing, which ensures no defects or safety problems but delays the launch. If the innovation is released without such testing and a recall occurs, the firm incurs pecuniary costs and faces future reputation damage. We investigate the strategic forces behind firms' testing and launch-timing decisions in this context. The analysis uncovers a novel mechanism governing firm behavior, causing the firms to more likely rush to market and take on the risk of product failure as the negative consequences of a recall increase. The results further demonstrate how competing firms' desire to forgo testing exhibits an inverse-U pattern as consumers become more heterogeneous; and how competition may induce both firms to forgo testing and launch their innovations immediately, even though the resulting profits are lower than had they both committed to conduct testing. The framework is extended to examine how product recall considerations affect firms' research and development (R&D) investments. Although, in general, post-innovation product failure discourages R&D effort, we identify conditions under which an increase in the product failure probability stimulates firms to innovate. Several model extensions are presented and managerial implications are discussed.

**Title:** "Time Dependence and Preference: Implications for Compensation Structure and Shift Scheduling."

**Abstract:** This study jointly examines agents time dependence—period effects within instantaneous utility—and time preference—behavior on discounting future utility. The study considers the start- and end-of-period effects for time dependence and exponential and hyperbolic discounting for time preference. It provides identification arguments and sufficient conditions for both time constructs. The data include agents work-shift schedules and daily observations in response to a firms non-linear compensation structure, in which the final payment depends on the history of performance. By illustrating how various time constructs jointly affect behavior, the study provides implications for designing compensation structure and employee-shift scheduling. Specifically, it disentangles the effects of time constructs to examine the effectiveness of long versus short quota-evaluation cycles, quota-bonus versus commission incentive schemes, and employee-shift scheduling. In addition, the study provides a field validation that compares post-analysis actual and counterfactual outcomes to validate the prediction accuracy of the model.

## APPENDIX: SELECTED GRADUATE COURSEWORK

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### Economics

Microeconomic Theory I	Maciej H. Kotowski
Microeconomic Theory II	Christopher Avery, Elon Kohlberg
Econometrics I	Maximilian Kasy
Introduction to Applied Econometrics (Econometrics II)	Gary Chamberlain
Econometric Methods (Econometrics III)	Mikkel Plagborg-Moller
Industrial Organization I	Robin Lee, Ariel Pakes
Industrial Organization II	Myrto Kalouptsi
Contract Theory	Oliver Hart, Richard Holden
Game Theory	Drew Fudenberg, Muhamet Yildiz
Experimental Economics	Benjamin Enke

### Marketing & Management

Marketing Models	Doug J. Chung
Doctoral Seminar on Consumer Behavior	Anat Keinan
The Foundations of Strategy	Hong Luo