

# Zhe Han

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## Education

### Emory University

Goizueta Business School, Ph.D. Candidate in Marketing

*Expected 2019*

### Georgia Institute of Technology

M.S. in Statistics, M.S. in Economics

2012

### Beijing Language and Culture University

B.S. in Economics and Finance

2010

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## Research Interests

Gamification and Gaming

Dynamic Incentives

Customer Relationship Management

Bayesian Analysis

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## Working Papers

“The Influence of Consumer Investments on the Response to Dynamic Incentives: An Empirical Study of Video Game Player Behaviors” with Michael Lewis and Yi Zhao  
*Job Market Paper*

“Gamification: The Interplay between Dynamic Incentives and Outcome Uncertainty”  
with Michael Lewis and Michelle Andrews  
*Best Track Paper, Winter AMA 2018*

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## Conference Presentations

AMA Winter Academic Conference, New Orleans, LA

2018

Marketing Science, Los Angeles, CA

2017

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## Awards and Honors

Best Track Paper, Winter AMA, New Orleans, LA

2018

Sheth Fellowship, Emory University

2015

ISMS Doctoral Consortium Fellow, Johns Hopkins University

2015

ISMS Doctoral Consortium Fellow, Emory University

2014

National Scholarship, Beijing Language and Culture University

2008, 2009

Academic Scholarship (First Tier), Beijing Language and Culture University

2007

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## Teaching Experience

Seminar on Global Marketing (MBA)

2016

*TA for Professor Jagdish Sheth*

Predictive Sports Analytics (BBA, MBA, EMBA)

2014, 2015

Marketing Strategy and Customer Relationship Management (BBA, MBA)

2013

*TA for Professor Michael Lewis*

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## Teaching Interests

Gamification, Customer Relationship Management, Digital Marketing, Marketing Analytics

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## Programming Skills

MATLAB, R, Stata, SAS

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## Work in Progress

“Virtual Currency Pricing in Games: Implications on Player Motivation” with Michael Lewis  
“Dynamic Incentive Scheme Design in Video Games” with Michael Lewis and Yi Zhao  
“The Impact of Promotion and Relegation on Brand Equity and Payroll Investment of Soccer Clubs” with Michael Lewis

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## PhD Coursework

### Marketing

Marketing Strategy  
Consumer Behavior  
Empirical Models in Marketing  
Marketing Topics  
Survey of Business Research Methods  
Marketing and Bayesian Methods (GSU)

Sandy Jap  
Ryan Hamilton  
Douglas Bowman  
Michael Lewis, David Schweidel  
Michael Lewis  
Yi Zhao

### Economics

Microeconomic Theory  
Quantitative Methods  
Econometric Methods  
Game Theory  
Probability and Statistics for Economists

Samiran Banerjee  
Daniel Levy  
David Jacho-Chavez  
Hugo Mialon  
Esfandiar Maasoumi

### Statistics

Probability Theory  
Stochastic Processes  
Bayesian and Empirical Bayes Methods  
Latent Variable Modeling  
Hierarchical Linear Models  
Statistical Computing  
Stochastic Optimization

Andrew Hill  
Jian Kang  
Zhaohui Qin  
Yuk Cheong, Irwin Waldman  
Yuk Cheong  
George Cotsonis  
Anton Kleywegt

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## References

### Michael Lewis (Chair)

Professor of Marketing  
Goizueta Business School  
Emory University  
1300 Clifton Road, Atlanta, GA 30322  
(404) 727-9438

### Yi Zhao

Associate Professor of Marketing  
J. Mack Robinson College of Business  
Georgia State University  
35 Broad St NW, Atlanta, GA 30303  
(404) 413-7671

### Michelle Andrews

Assistant Professor of Marketing  
Goizueta Business School  
Emory University  
1300 Clifton Road, Atlanta, GA 30322  
(404) 727-4226

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## Dissertation Research Abstracts

### **The Influence of Consumer Investments on the Response to Dynamic Incentives: An Empirical Study of Video Game Player Behaviors**

with Michael Lewis and Yi Zhao

*Job Market Paper*

Consumer behavior concerning a product is influenced both by consumers' past experience and future possibilities. Hence factors such as past investment into the product and possible future rewards from dynamic incentive schemes often seen in loyalty programs are important for firms to influence customer motivation and behavior. In this study we focus on how the interplay between customer commitment and dynamic incentive schemes influence consumer choices in the video game industry. We find that effectiveness of dynamic incentive schemes in engaging players before and after player commitment depends on the nature of the rewards offered. Rewards that help players explore the games become ineffective after commitment while rewards that help players further progress are effective with or without player commitment. Also, player commitment decisions depend on the breadth of content offered by the game, which is influenced by rewards from dynamic incentives. Our findings shed some light on how firms, especially firms with digital products, can better design dynamic incentive schemes to help persuade consumers to invest and stay with the product.

### **Gamification: The Interplay between Dynamic Incentives and Outcome Uncertainty**

with Michael Lewis and Michelle Andrews

*Best Track Paper, Winter AMA 2018*

Mobile and online games often employ strategies such as badging and leveling-up to increase customer retention and create reasons for repeat play. While gamification includes aspects similar to the dynamic incentive and status structures used in loyalty programs, games and gamification are unique in their outcome uncertainty, rendering consumers less confident of whether they can achieve specified goals. Using data from a mobile app game, we investigate how gamification elements affect consumer behavior over the long term. We find that points pressure effects exist in gamification settings: as players approach the next prize level, their motivation to participate increases. We also find that multiple losses motivate continued play, suggesting players view gamification as probability-based, not skill-based. Moreover, we find status comparisons can motivate behavior to a point: positive status comparisons can fuel continued effort until players achieve the highest status, after which status decreases future effort. Our results have important implications for firms who apply game concepts to non-gaming applications.

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