

RENNA JIANG

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EDUCATION

Ph.D. in Marketing, University of Chicago, Graduate School of Business, 2009 (expected)

Support Area: Economics

Coordinated Sequence: Econometrics / Statistics

Coursework in Marketing Ph.D. program, Hong Kong University of Science and Technology, 2001-2003

Bachelor in Economics, Tsinghua University, China, 2001

HONORS, AWARDS AND SCHOLARSHIPS

Winner of ISBM (Institute for the Study of Business Markets) Business Marketing Doctoral Support Award Competition, 2007

Performance bonus for excellence in teaching assistance (Executive MBA – London / Singapore), Graduate School of Business, University of Chicago, 2006, 2007

Haring Symposium Fellow, 2007

INFORMS Society of Marketing Science Doctoral Consortium Fellow, 2005, 2006

Summer Research Grant, Graduate School of Business, University of Chicago, 2004

Doctoral Fellowship, Graduate School of Business, University of Chicago, 2003-2007

SUMMARY OF DISSERTATION RESEARCH

“Structural Estimation of A Moral Hazard Model: An Application to Industrial Selling” (Preliminary and incomplete, Jan 2008)

Since the pioneering work by Holmström (1979), the moral hazard literature has seen far more theoretical papers than empirical ones. In this study, I use a unique dataset to quantify firm’s loss due to non-optimal contracting behavior in the presence of moral hazard.

The optimal contracting issue is relevant for many economic situations where a “principal” hires an “agent” to take some action for him. Moral hazard issues often arise in these situations because the agent’s objective is not necessarily aligned with that of the principal, and the principal may not be able to observe how much effort his agent puts into the job. Anticipating such information asymmetry, the principal seeks to design a contract that better aligns the incentives.

In the data, manufacturers (“principal”) of industrial components resort to outside selling agencies (“agent”) to sell products for them. The customers buy the components and process them into final products. A selling firm usually represents several suppliers as their exclusive selling agent. The selling firms do not manufacture or inventory any products. They only receive commissions on realized sales. I abstract away from the relationship between the selling firm and its field salespeople due to limited information about their internal transfer.

The data is obtained from surveys and is cross sectional. It contains realized sales and commission rate at each customer, and multiple characteristics of each customer, of the salesperson that dealt with the customer, and of the selling firm that the salesperson belongs to. The unique feature of the data is that the agents also report their monetary costs to exert effort. The effort data allows me to use a structural model to back out a). the relationship between sales and effort, and more importantly, b). the relationship between commission rate and effort. The second relationship is important because the effort is not observable to the supplier, and therefore he must design the compensation scheme in a way that indirectly gives the selling firm the incentive to take the correct actions.

The model also allows the agent to have better information than the supplier about the opportunities in the field. Specifically, effort's effectiveness on sales is determined by two components: a). characteristics of the customer, of the field salesperson, and of the selling firm, and b). a random shock that is customer specific. The salesperson knows both components before making effort decision, while the researcher knows only the first component and the supplier knows neither.

After obtaining the structural parameters, I then proceed to a second stage to design a better contract that maximizes the manufacturer's value. The optimal contract may involve a different commission rate, fixed salary, or other forms of compensation scheme. I also compare outcomes under optimal contracts with those under first-best.

OTHER WORKING PAPERS

"Bayesian Analysis of Random Coefficient Logit Models Using Aggregate Data" (2007), with Puneet Manchanda and Peter E. Rossi (R&R for the *Journal of Econometrics*)

"Information, Learning and Drug Diffusion: the Case of Cox-2 Inhibitors", with Pradeep K. Chintagunta and Ginger Z. Jin (Oct 2007)

"Payment Formats, Currencies and Consumption" (2004), with Gillian Jay and Dilip Soman, forthcoming in *Progress in Psychological Research*, F. Columbus (ed.), Nova Publishers

PRESENTATIONS

"Estimating a Random Coefficient Logit Model Using Aggregate Data", *INFORMS Marketing Science Conference*, Katz Graduate School of Business, University of Pittsburgh, 2006

TEACHING EXPERIENCE

Teaching Assistant – Graduate School of Business, University of Chicago

Economics of Information, PhD, Professor Milt Harris, 2005, 2006

Pricing Strategies, MBA, Professor J.P. Dubé, 2005, 2006

Marketing Management, Executive MBA (London / Singapore)

Professor Günter Hitsch (Summer 2006)

Professor Pradeep Chintagunta (Summer 2007)

Advanced Marketing Strategy, MBA, Professor Puneet Manchanda, 2006, 2007

Marketing Strategy, MBA, Professor Robert Zeithammer, 2004, 2005

SELECTED PH.D. LEVEL COURSEWORK

Area	Course	Instructor
Marketing	Pro-seminar Advanced Marketing Theory: Behavior Perspective Advanced Marketing Theory: Quant Perspective Bayesian Statistics and Marketing Marketing Literature Seminar	All Marketing Faculty Chris Hsee Pradeep Chintagunta Peter Rossi Aparna Labroo / Günter Hitsch
Information Economics	Price Theory III Economics of Information Auctions	Pierre-André Chiappori Milton Harris Ali Hortacsu
Industrial Organization	Advanced Industrial Organization I Advanced Industrial Organization III	Dennis Carlton Amil Petrin
	Industrial Organization and Prices I Topics in Industrial Organization (Dynamics) (Economics Department, Northwestern University)	Aviv Nevo / Michael Whinston Aviv Nevo / Igal Hendel
Other Economics	Price Theory I (Microeconomic Theory) Price Theory II (General Equilibrium / Game Theory) Numerical Methods in Economics	Gary Becker / Kevin M. Murphy Hugo Sonnenschein / Philip Reny Kenneth Judd
	Microeconomics III (Game Theory) (Economics Department, Northwestern University)	Michael Whinston
Econometrics	Empirical Analysis II Empirical Analysis III Applied Econometrics	Lars Peter Hansen Han Hong Amil Petrin
Statistics	Probability and Statistics Statistical Inference Applied Linear Statistical Methods Intro to Probability Models	Nicholas Polson Nicholas Polson Wei-Biao Wu Yali Amit

REFERENCES

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Joseph T. and Bernice S. Lewis Professor of Marketing and Statistics
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Jean-Pierre Dubé
Professor of Marketing and Neubauer Family Faculty Fellow
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