

**26:620:662 Event Data in Social Science**

Spring 2018

Monday 1:00 – 4:00 pm

1WP – 204

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Office hours by appointment

**Courses Description:**

This course is a doctoral level research seminar primarily focusing on methods for analyzing categorical and event history data, and continuous time series data. The focus of this course is different methods that can be utilized to analyze even histories and their applications in social sciences. Event history analysis has applications in economics, management, marketing, political science, sociology and many other areas. The goal of this course is for students to learn powerful methodological tools that they can apply to their own research. For each topic students will be assigned core readings and, when appropriate, data to apply the methods that they learn. Students are required to bring laptops with Stata to each class.

**Required Text:**

Blossfeld, Golsch, and Rohwer, 2007, *Event history analysis with Stata*, Publisher: Lawrence Erlbaum, USA. Paperback. ISBN-10: 0805860479; ISBN-13: 978-0805860474

**Stata is required.** Please contact Rutgers Business School computing services and also check [software.rutgers.edu](http://software.rutgers.edu).

**Course Requirements:**

Students are expected to read weekly readings and come to class prepared to discuss and debate the material. Absences and unpreparedness are not acceptable since class discussion is an integral part of this course. Students will be assigned several exercises during the semester that will be an application of the methods being covered. Students will also be required to complete an empirical research paper that addresses a research question of their choice.

- Assignments: 20%
- Participation: 20%
- Research Paper: 60%

**Assignments and Participation**

Half of the assignment grade will be based on assigned article summaries. Each student is expected to summarize on one page (single spaced, Times new roman 12 font) the article he/she is assigned. The student is responsible to bring copies of the one page summary for everyone in the class, including the professor. The student is going to lead the discussion of the article in class, and he/she should be ready to answer any questions from the professor and other students. The remaining portion of the assignment grade will be based on the exercises that will be assigned in class and the students are expected to bring one hard copy of their results to the following class.

**Research Paper**

Each student will write a research proposal for a study that uses the methods learned in this class. The student will present his/her proposal in the last two weeks of classes. Completed papers are due a week after the course ends. Please use grammarly to check for errors before submitting the paper.

## **Class Schedule:**

### **Jan 22 - Class #1 Introduction**

- Event coding, Dummy variables, Interpretation, Basics of Event Data Modeling

### **Jan 29 - Class #2 DISCRETE TIME: models for single destinations.**

#### Methods:

- BGR Chapters 1-2
- Allison, Paul. 1982. "Discrete-time methods for the analysis of event histories." *Sociological Methodology*: 61-98.
- Carroll, Glenn R. 1983. "The analysis of discrete dependent variables: A didactic essay." *Quality and Quantity*, 17: 425-460.

#### Application:

- Burns, L. R. & Wholey, D. R. 1993. Adoption and abandonment of matrix management programs: Effects of organizational characteristics and interorganizational networks. *Academy of Management Journal*, 36: 106-138.
- Palmer, D., Jennings, P. D., & Zhou, X. 1993. Late adoption of the multidivisional form by large U. S. corporations: Institutional, political, and economic accounts. *Administrative Science Quarterly*, 38: 100-131.
- Wade, James 1990. Golden Parachutes: CEOs and the Exercise of Social Influence. *Administrative Science Quarterly*, 35: 587-603.
- Louwers, Timothy J., Messina, Frank M. and Michael D Richard. 1999. The Auditor's Going-Concern Disclosure as a Self-Fulfilling Prophecy: A Discrete-Time Survival Analysis. *Decision Sciences*, 30(3): 805-824.
- Lieberman, Marvin B. 1989. The Learning Curve, Technology Barriers To Entry, And Competitive Survival In The Chemical Processing Industries. *Strategic Management Journal*, 10(5): 431-447.
- Rao, Vithala R. and Edward W. McLaughlin. 1989. Modeling the Decision to Add New Products by Channel Intermediaries, *Journal of Marketing*, 53(1): 80-88

### **Feb 5 - Class #3 DISCRETE TIME: models for multiple destinations.**

#### Methods:

- Hachen, D. S. Jr. 1988. The competing risks model: A method for analyzing processes with multiple types of events. *Sociological Methods and Research*, 17: 21-54
- Winship and Mare. 1984. Regression Models with Ordinal Variables, *American Sociological Review*, 49: 512-525.

#### Application:

- Halaby. 1986. Worker Attachment and Workplace Authority, *American Sociological Review*, 51: 634-649.
- Chang, Sea-Jin and Philip M. Rosenzweig 2001. The Choice Of Entry Mode In Sequential Foreign Direct Investment. *Strategic Management Journal*, 22(8): 747-776.
- Talay, Seggie, and Cavusgil. 2009. Exploring Correlates of Product Launch in Collaborative Ventures: An Empirical Investigation of Pharmaceutical Alliances, *Journal of Product Innovation Management*, 26(4): 360-370
- Petersen, Spilerman and Dahl. 1989. The Structure of Employment Termination, *Acta Sociologica*, 32: 319-338.

### **Feb 12 - Class #4 CONTINUOUS TIME: Descriptive methods and distribution tests.**

#### Methods:

- BGR Chapters 3, 8

Application:

- Tolbert, P. S. & Zucker, L. G. 1983. Institutional sources of change in the formal structure of organizations: The diffusion of civil service reform, 1880-1935. *Administrative Science Quarterly*, 28: 22-39.
- Brüderl, J., Preisendörfer, P., & Ziegler, R. 1992. Survival chances of newly founded business organizations. *American Sociological Review*, 57: 227-242.
- Carroll and Delacroix. 1982. Organizational Mortality in the Newspaper Industries of Argentina and Ireland, *Administrative Science Quarterly*, 27: 169-199.

**Feb 19 - Class #5** CONTINUOUS TIME: Exponential and piecewise exponential.

Methods:

- BGR Chapters 4, 5

Application:

- Edelman. 1992. Legal Ambiguity and Symbolic Structures: Organizational Mediation of Civil Rights Law, *American Journal of Sociology*, 97: 1531-1576.
- Zhou, X. 1993. Occupational power, state capacities, and the diffusion of licensing in the American states: 1890-1950. *American Sociological Review*, 58: 536-552.
- Zhou, X., Tuma, N. B., & Moen, P. 1997. Institutional change and job-shift patterns in urban China, 1949 to 1994. *American Sociological Review*, 62: 339-365.
- Dobrev, S. D., Kim, T.-Y., & Hannan, M. T. 2001. Dynamics of niche width and resource partitioning. *American Journal of Sociology*, 106: 1299-1337.

**Feb 26 - Class #6** CONTINUOUS TIME: Time-varying covariates.

Methods:

- BGR Chapter 6

Application:

- Sutton, Dobbin and Scott. 1994. The Legalization of the Workplace. *American Journal of Sociology*, 99: 944-971.
- Meyer, J. W., Frank, D. J., Hironaka, A., Schofer, E., & Tuma, N. B. 1997. The structuring of a world environmental regime, 1870-1990. *International Organization*, 51: 623-651.
- Gaynor, J. J. 1987. The Use of Time Dependent Covariates in Modeling Data from an Occupational Cohort Study, *Journal of the Royal Statistical Society*, 36: 340-351.

**March 5 - Class #7** Parametric Models of Time Dependence

Methods:

- BGR, Chapter 7

Application:

- Freeman, Carroll and Hannan, 1983. The Liability of Newness, *American Sociological Review*, 48: 692-710.
- Brüderl, J. & Schüssler, R. 1990. Organizational mortality: The liabilities of newness and adolescence. *Administrative Science Quarterly*, 35: 530-547.
- Spurr, S. J. & Sueyoshi, G. T. 1994. Turnover and Promotion of Lawyers: An Inquiry into Gender Differences. *Journal of Human Resources*, 29: 813-842.
- Li, B. & Walder, A. G. 2001. Career advancement as party patronage: Sponsored mobility into the Chinese administrative elite, 1949-1996. *American Journal of Sociology*, 106: 1371-1408.
- Tellis G. J., Stremersch, S. and E. Yin, 2003. The International Takeoff of New Products: The Role of Economics, Culture, and Country Innovativeness, *Marketing Science*, 22(2): 188 – 208
- Machado, F. S. and R. K. Sinha. 2007. Smoking Cessation: A Model of Planned vs. Actual Behavior for Time-Inconsistent Consumers, *Marketing Science*, 26(6): 834 - 850.

### March 19 - Class #8 Cox model.

#### Methods:

- BGR Chapter 9
- Paik, M. C. & Tsai, W.-Y. 1997. On using the Cox proportional hazards model with missing covariates. *Biometrika*, 84: 579-593

#### Application:

- Davis, G. F. 1991. Agents without principles? The spread of the poison pill through the intercorporate network. *Administrative Science Quarterly*, 36: 583-613.
- S. Siddarth and A. Chattopadhyay. 1998. To Zap or Not to Zap: A Study of the Determinants of Channel Switching During Commercials, *Marketing Science*, 17(2): 124 - 138
- Bolton, Ruth N. 1998. A Dynamic Model of the Duration of the Customer's Relationship With a Continuous Service Provider: The Role of Satisfaction, *Marketing Science*, 17(1): 45-65
- Agarwal R., and B. L. Bayus, 2002. The Market Evolution and Sales Takeoff of Product Innovations, *Management Science*, 48(8): 1024 - 1041.
- Golder P. N., and G. J. Tellis, 2004. Growing, Growing, Gone: Cascades, Diffusion, and Turning Points in the Product Life Cycle, *Marketing Science*, 23(2): 207 - 218.
- Ramdas K., and T. Randall. 2008. Does Component Sharing Help or Hurt Reliability? An Empirical Study in the Automotive Industry, *Management Science*, 54(5): 922 – 938
- Cleeren, Kathleen, Dekimpe, Marnik G. and Kristiaan Helsen, 2008. Weathering product-harm crises. By:. *Journal of the Academy of Marketing Science*, 36(2): 262-270

### March 26 - Class #9 Shared frailty, Repeated Events

#### Application:

- Haveman and Cohen 1994. The Ecological Dynamics of Careers: The Impact of Organizational Founding, Dissolution, and Merger on Job Mobility, *American Journal of Sociology*, 100: 104-152.
- Amburgey, T. L., Kelly, D., & Barnett, W. P. 1993. Resetting the clock: The dynamics of organizational change and failure. *Administrative Science Quarterly*, 38: 51-73.
- Aboulnasr, Khaled; Narasimhan, Om; Blair, Edward and Rajesh Chandy. 2008. Competitive Response to Radical Product Innovations, *Journal of Marketing*, 72(3): 94-110.
- Yenyurt, S., Townsend, J.D., Cavusgil, T.S. and P.N. Ghauri. 2009. Mimetic and Experiential Effects in International Marketing Alliance Formations of US Pharmaceuticals Firms: An Event History Analysis, *Journal of International Business Studies*, 40 (2): 301-320.
- Yenyurt, S. Watson, S., Carter, C. and C.K. Stevens. 2010. Drivers of Bidding Behavior in Electronic Reverse Auctions, *Journal of Supply Chain Management*, forthcoming.

### April 2 - Class # 10 Diffusion Models

#### Application:

- Greve 1995 Jumping Ship: the Diffusion of Strategy Abandonment, *Administrative Science Quarterly*, 40: 444-473.
- Greve 1996 Patterns of Competition: The Diffusion of a Market position in Radio Broadcasting, *Administrative Science Quarterly*, 41: 29-60.
- Strang, D. & Tuma, N. B. 1993. Spatial and temporal heterogeneity in diffusion. *American Journal of Sociology*, 99: 614-639.
- Davis, G. F. & Greve, H. R. 1997. Corporate elite networks and governance changes in the 1980s. *American Journal of Sociology*, 103: 1-37.
- Soule, S. A. & Zylan, Y. 1997. Runaway train? The diffusion of state-level reform in the ADC/AFDC eligibility requirements, 1950-1967. *American Journal of Sociology*, 103: 733-762.
- Greve, H. R. 1998. Managerial cognition and the mimetic adoption of market positions: What you see is what you do. *Strategic Management Journal*, 19: 967-988.

- Greve, H. R., Tuma, N. B., & Strang, D. 2001. Estimation of diffusion processes from incomplete data: A simulation study. *Sociological Methods and Research*, 29: 435-467.

#### **Apr 9 - Class #11 Market Entry Models**

##### Application:

- Henisz, W. J. & Delios, A. 2001. Uncertainty, imitation and plant location: Japanese multinational corporations, 1990-1996. *Administrative Science Quarterly*, 46: 443-475.
- Vermeulen, Freek and Harry Barkema 2001. Learning Through Acquisitions, *Academy of Management Journal*, 44(3): 457-476.
- Mitra, D., and P.N. Golder, 2002. Whose Culture Matters? Near-Market Knowledge and Its Impact on Foreign Market Entry Timing, *Journal of Marketing Research*, 39(August): 350-365.
- Yenyurt, Townsend, and Talay. 2007. Factors Influencing Brand Launch in a Global Marketplace, *Journal of Product Innovation Management*, 24 (September): 471-485.
- Townsend, J.D., Yenyurt, S. and M.B. Talay. 2009. Getting to Global: An Evolutionary Perspective of Brand Expansion in International Markets, *Journal of International Business Studies*, 40(4): 539-558.

#### **Apr 16 - Class #12 Problems of Model Specification**

##### **Class #13 Event Study Models**

##### Method:

- BGR Chapter 10
- Guo 1993. Event history Analysis for Left truncated Data. *Sociological Methodology*, Vol 23.
- Petersen and Koput, 1992. Time Aggregation Bias in Hazard-Rate Models with Covariates, *Sociological Methods and Research*, 21: 25-51.
- McWilliams, Abigail and Donald Siegel 1997. Event Studies In Management Research: Theoretical And Empirical Issues. *Academy of Management Journal*. 40(3): 626-657.
- Park, Namgyoo K. 2004. A Guide To Using Event Study Methods In Multi-Country Settings. *Strategic Management Journal*, 25(7): 655-668.

##### Application:

- Mizik, Natalie and Robert Jacobson 2003. Trading Off Between Value Creation and Value Appropriation: The Financial Implications of Shifts in Strategic Emphasis, *Journal of Marketing*, 67(1): 63-76
- Kang, Eugene, 2008. Director Interlocks And Spillover Effects Of Reputational Penalties From Financial Reporting Fraud, *Academy of Management Journal*, 51(3): 537-555
- D. G. Markovitch and P. N. Golder. 2008. Using Stock Prices to Predict Market Events: Evidence on Sales Takeoff and Long-Term Firm Survival, *Marketing Science*, 27(4): 717 - 729.
- Godfrey, Paul C. and Craig B. Merrill, 2009. The relationship between corporate social responsibility and shareholder value: an empirical test of the risk management hypothesis. *Strategic Management Journal*, 30(4): 425-445

#### **Apr 19 – Class #14 Negative Binomial Models**

##### Applications:

- Carnovale, S., and S. Yenyurt, 2015. The Role of Ego Network Structure in Facilitating Ego Network Innovations. *Journal of Supply Chain Management*, 51(2): 22-46.
- Dotzel, T., Shankar, V. and L.L. Berry. 2013. Service Innovativeness and Firm Value. *Journal of Marketing Research*, 50: 259-276.
- Gittelman, M. 2007. Does Geography Matter for Science-Based Firms? Epistemic Communities and the Geography of Research and Patenting in Biotechnology. *Organization Science*, 18(4): 724-741.
- Trinh, G., Rungie, C., Wright, M., Driesener C., and J. Dawes. Predicting future purchases with the Poisson log-normal model. *Marketing Letters*, 25:219–234.
- Wang, C., Rodan, S., Fruin, M., and X. Xu. 2014. Knowledge Networks, Collaboration Networks, and Exploratory Innovation, *Academy of Management Journal*, 57(2): 484-514.

- Xu, S. 2014. Balancing the Two Knowledge Dimensions in Innovation Efforts: An Empirical Examination among Pharmaceutical Firms. *Journal of Product Innovation Management*. 32(4): 610-621.

**Apr 30 - Paper Proposal Presentations**

**May 7 – TERM PAPER SUBMISSION**