

CURRICULUM VITAE

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Joseph Daniel Blackburn

James A. Speyer Professor of Production Management, Emeritus
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Research Interests

Time-Based Competition; Supply Chain Management; Design Strategies for Reverse Supply Chains

Education

Ph.D., Operations Research, Stanford, University, 1971.

M.S., Chemical Engineering, University of Wisconsin, 1964.

B.S. *Summa Cum Laude*, Chemical Engineering, Vanderbilt University, 1963.

Academic and Administrative Positions

September, 2012 to present: James A. Speyer Professor of Production Management, Emeritus, Owen Graduate school of Management, Vanderbilt University

January, 1992 to Sept., 2012: James A. Speyer Professor of Production Management, Owen Graduate school of Management, Vanderbilt University

March, 2005 to July, 2007: Senior Associate Dean, Owen Graduate School of Management, Vanderbilt University

September, 2000 to June, 2001: Visiting Research Scholar, INSEAD, Fontainebleau, France

February, 1999 to July, 2000: Interim Dean, Owen Graduate School of Management, Vanderbilt University

May-July, 1995: Visiting Professor of Operations Management, Australian Graduate School of Management, Sydney

Spring, 1992: Visiting Professor, Catholieke Universiteit, Leuven, Belgium

June, 1985 to present: Professor of Management, Owen Graduate School of Management, Vanderbilt University.

September, 1979 to June, 1985: Associate Professor of Management, Owen Graduate School of Management, Vanderbilt University.

September, 1975 to August 1979: Associate Professor of Operations Management, School of Management, Boston University.

June, 1971 to August, 1975: Assistant Professor of Management Science, Graduate School of Business, University of Chicago.

September, 1972 to August, 1973: Visiting Assistant Professor of Decision Sciences, Graduate School of Business, Stanford University.

August, 1970 to June, 1971: Instructor, Graduate School of Business, University of Chicago.

September, 1969 to July, 1970: Teaching fellow, Graduate School of Industrial Administration, Carnegie-Mellon University.

Industrial Employment

September, 1964 to August, 1966: Chemical Engineer, Eastman Kodak, chemical process design and economic analysis.

Honors and Awards

2015: Jo Van Nunen Prize for Pioneering Research in Closed-Loop Supply Chains

2008: Fellow, Production and Operations Management Society

1963 Founder's Medalist for First Honors, Vanderbilt University;

1963-64, 1966-69: NSF Graduate Fellowships.

Editorial Positions

2011 to 2014: Senior Editor, Sustainable Operations, *Production and Operations Management Journal*

Editorial Boards: *Production and Operations Management Journal*, *Journal of Operations Management*.

Membership and Service to Professional Societies

Production and Operations Management Society, INFORMS

2014: President, Production and Operations Management Society

2013-2014: President-Elect, Production and Operations Management Society

2004-2006: V-P Finance and Board Member, Production and Operations Management Society

Research Publications

Books

Time-Based Competition: The Next Battleground in American Manufacturing, (ed.) Business One Irwin, Homewood, IL, 1991.

Journal Publications

Abbey, J.D., Blackburn, J.D. and Guide, V.D.R., Jr., 2015. "Optimal Pricing for New and Remanufactured Products", *Journal of Operations Management*, 36, May, 2015, 130-146.

Abbey, J. D., Meloy, M.G., Blackburn, J.D., and Guide, V.D.R., Jr. 2015, "Consumer Products for Remanufactured and Refurbished Products", *California Management Review*, 57, 4, 26-42.

Bischak, D.P., Robb, D.J., Silver, E.A. and Blackburn, J.D., 2012. "Analysis and Management of Periodic Review, Order-up-to-level Inventory Systems with Order Crossover", *Production and Operations Management*, 23, 5, 762-772.

Blackburn, J.D., 2012. "Valuing Time in Supply Chains: Establishing Limits of Time-based Competition", *Journal of Operations Management*, 30, 5, 396-405.

Blackburn, J.D., 2012. "The Value of Time (and the value of waste): Time-based Supply Chain Design", *Pannon Management Review*, 1,1, 49-66.

Fang, X., Zhang, C., Robb, D.J. and Blackburn, J., 2013. "Decision Support for Lead Time and Demand Variability Reduction", *Omega*, 41, 2, 390-396.

Galbreth, M. and J.D. Blackburn (2010). "Offshore Remanufacturing with Variable Used Product Condition", *Decisions Sciences*, vol. 41, no.1 (Feb, 2010), 5-20. Volume 41, Number 1, February 2010, pp. 5-20.

Galbreth, M. and J.D. Blackburn (2010). "Optimal Acquisition Quantities in Remanufacturing with Condition Uncertainty", *Production and Operations Management (POMS) Journal*, vol. 19, no.1 (Jan-Feb, 2010), 61-69.

Blackburn, J.D. & Scudder, G. (2009). "Supply Chain Strategies for Perishable Products: The Case of Fresh Produce". *Production and Operations Management*, vol. 18, no. 2, pp. 129-137.

Galbreth, M. & Blackburn, J.D. (2006) Managing Variable Used Product Condition: Optimal Sorting Policies for Remanufacturing. *Production and Operations Management*, vol. 15, no. 3, pp. 384-392.

Souza, G.C., Guide, V.D., Van Wassenhove, L.N. & Blackburn, J.D. (2006). Time Value of Commercial Product Returns. *Management Science*, vol. 52, no. 8, pp. 1200-1214.

Blackburn, J.D., Guide, V.D., Souza, G.C. & Van Wassenhove, L.N. (2004). Reverse Supply Chains for Commercial Returns. *California Management Review*, vol. 46, No. 2, pp. 1-17.

Blackburn, J.D., "Limits of Time-Based Competition: Valuing Time in Make-to-Stock Manufacturing", *Quantitative Approaches to Distribution Logistics and Supply Chain Management*, Chapter 3, A. Klose, M. G. Speranza, L. N. Van Wassenhove (eds.), Springer-Verlag, 2002.

Corbett, C.J., Blackburn, J.D. and Van Wassenhove, L.N. (2001), "Pellton International: Developing a Supply-Chain Partnership", *Supply Chain Forum*, 2:1, pp. 60-63.

Blackburn, J.D., Scudder, G.D. and Van Wassenhove, L.N. (2000) "Concurrent Software Development: Resolving the Time and Productivity Paradoxes", *Communications of the ACM*, April, 2000.

Hoedemaker, G., Blackburn, J.D. and Van Wassenhove, L.N. (1999) "Limits to Concurrency", *Decision Sciences*, vol. 30, No. 1, pp. 1-18.

Corbett, C.J., Blackburn, J.D. and Van Wassenhove, L.N. (1999) "Partnerships to Improve Supply Chains," co-authors Charles J. Corbett and Luk N. Van Wassenhove, *Sloan Management Review*, vol. 40, No. 4, pp. 71-82.

Corbett, C.J., Blackburn, J.D. and Van Wassenhove, L.N. (1998) "A Roadmap for Joint Supply-Chain Improvement Projects based on Real-Life Cases," *Advances in Distribution Logistics*, B. Fleischmann, Jo A.E.E. van Nunen, M. Grazia Speranza, P. Stahly (eds.), pp. 27-54, Springer Verlag.

Blackburn, J.D., Scudder, G. and Van Wassenhove, L.N. (1996) "Improving Speed and Productivity of Software Development: A Global Survey of Software Development," *IEEE Transactions on Software Engineering*, December, 1996.

Hoedemaker, G., Blackburn, J.D. and Van Wassenhove, L.N. (1996) "Concurrent Software Engineering: Prospects and Pitfalls," *IEEE Transactions on Engineering Management*, vol. 43, no. 2, pp. 179-188.

Blackburn, J.D., Gary D. Scudder, Luk Van Wassenhove, and Craig Hill (1996). "Time-Based Software Development," *International Journal of Integrated Manufacturing Systems*., volume 7, no. 2, pp. 60-66.

Blackburn, J.D. (1993) "Reengineering for Time-Based Competition," *Holland Management Review*, December.

Blackburn, J.D., J. Welch and L. Cook, (1992). "The Bridge to Competitiveness: Building Supplier-Customer Linkages," *Target*, Nov-Dec.

Blackburn, J.D., J. Welch and L. Cook (1992). "Mending the Supply Chain: Improving the Competitiveness of the US Auto Industry," *International Motor Business* (The Economist Intelligence Unit), April, pp. 170-200.

Blackburn, J.D. (1992). "Time-Based Competition: White-Collar Activities," *Business Horizons*, 35, 4, July-August, pp. 96-101.

Blackburn, J.D., W. Lindsley and T. Elrod (1991). "Time-Based Competition in the Book Distribution Industry," *Journal of Operations Management*, 10, 3, pp. 344-362.

Blackburn, J.D. and A.J. Zahorik (1991). "A Tale of Two Industries, Machine Tools and Plastic Injection Molding," *Target*, 7, 2, pp. 13-21.

Blackburn, J.D. (1991). "Time-Based Competition: JIT as a Weapon," *APICS-The Performance Advantage*, 1, 1, pp. 30-34.

Blackburn, J.D. (1990). "The Time Factor," *National Productivity Review*, Vol. 9, No. 4, pp. 395-408 (excerpted from *Time-Based Competition: The Next Battleground in American Manufacturing*, Chapter 1).

Blackburn, J.D., P. Billington, J. Maes, R. Millen and L.N. Van Wassenhove (1994). "Multi-Product Scheduling in Capacitated Multi-Stage Serial Systems," *IIE Transactions*, March, 1994.

Blackburn, J.D. (1988). "The New Manufacturing Environment," *Journal of Cost Management for the Manufacturing Industry*, 2, 2, pp. 4-10.

Blackburn, J.D., D. Kropp and R. Millen (1987). "Alternative Approaches to Schedule Instability: A Comparative Analysis," *International Journal of Production Research*, 25, 12, 1739-1750.

Blackburn, J.D. and R. Millen (1986). "Perspectives on Flexibility in Manufacturing: Hardware vs. Software," *Modelling and Design of Flexible Manufacturing Systems*, Andrew Kusiak (ed.), Elsevier Science, pp. 157-170.

Blackburn, J.D. and R. Millen (1985). "A Methodology for Predicting Single-Stage Lot-Sizing Performance: Analysis and Experiments," *Journal of Operations Management*, 5, 4, pp. 433-448.

Blackburn, J.D., D. Kropp and R. Millen (1986). "A Comparison of Strategies to Dampen Nervousness in MRP Systems," *Management Science*, 32, 4, pp. 413-429.

Blackburn, J.D. and R. Millen (1985). "An Evaluation of Heuristic Performance in Multi-Stage Lot-Sizing Systems," *International Journal of Production Research*, 23, 5, pp. 857-866.

Blackburn, J.D., D. Kropp and R. Millen (1985). "MRP System Nervousness: Causes and Cures," *Engineering Costs and Production Economics*, 9, nos. 1-3, pp. 141-146.

Blackburn, J. D. and K. Clancy (1984). "Commentary on An Empirical Comparison of Awareness Forecasting Models of New Product Introduction by Mahajan, Muller and Sharma," *Marketing Science*, vol. 3, no. 3. , pp. 198-201.

Blackburn, J.D. and R. Millen (1984). "Simultaneous Lot-Sizing and Capacity Planning in Multi-Stage Assembly Processes", *European Journal of Operational Research*, vol. 16, no. 1, pp. 84-93.

Blackburn, J.D. and R. Millen (1982). "The Impact of a Rolling Schedule in a Multi-Level MRP System," *Journal of Operations Management*, vol. 28, no. 1.

Blackburn, J.D. and R. Millen (1982). "Improved Heuristics for Multi-Stage Requirements Planning Systems," *Management Science*, vol. 28, no. 1, pp. 44-56.

Shwartz, M., J.D. Blackburn et al. (1981). "The Effect of a Thirty Percent Reduction in Physicians Fees on Medicaid Surgery Rates," *The American Journal of Public Health*, vol. 71, no. 4, pp. 370-376.

Blackburn, J.D. and R. Millen (1981). "Guidelines for Lot-Sizing Selection in Multi-Echelon Requirements Planning Systems," pp. 57-66 of The Economics and Management of Inventories, part B, edited by A. Chikan, Elsevier.

Blackburn, J.D. and K. Clancy (1980). "LITMUS: A New Product Planning Model," pp. 43-61 in Marketing Planning Models, vol. 18 of TIMS studies in the Management Sciences, edited by A.A. Zoltners, North-Holland, 1982, (also appears in Proceedings of Second ORSA/TIMS Conference on Market Measurement and Analysis, Austin, TX, 1980).

Blackburn, J.D. and R. A. Millen (1980). "Heuristic Lot-Sizing Performance in a Rolling Schedule Environment," *Decision Sciences*, vol. 11, no. 4.

Blackburn, J.D. and R.A. Millen (1979). "Selecting a Lot-Sizing Technique for a Single-Level Assembly Process: Part I - Analytical Results," *Production and Inventory Management*, vol. 20, Number 3.

Blackburn, J.D. and R.A. Millen (1979). "Selecting a Lot-Sizing Technique for a Single-Level Assembly Process: Part II - Empirical Results," *Production and Inventory Management*, vol. 20, Number 3.

Blackburn, J.D. and H. Kunreuther (1974) "Planning Horizons for the Dynamic Lot Size Model with Back-logging," *Management Science*, November, 1974. Also appears in *Algorithms for Production Control and Production Scheduling*, vol. 1, pp. 125-131, Karlovy Vary, 1973.

Blackburn, J.D. (1972). "Optimal Control of a Single Server Queue with Balking and Reneging." *Management Science*, November, 1972, pp. 297-313.

Book Chapters

"Time-Based Competition," Chapter 2, Part I, pp. 15-24 of Thomas F. Wallace and Steven Bennett (eds.), *World Class Manufacturing*, Omneo, 1994.

"The Strategic Value of Response Time and Product Variety," co-authors T. Elrod, W. Lindsley and A. Zahorik, Chapter 13 in *Manufacturing Strategy: Process and Content*, Christopher A. Voss (ed.), pp. 262-282, Chapman & Hall, London, 1992.

"Time-Based Competition: Beyond JIT," Chapter 10 in *Strategic Directions in Manufacturing*, P. Moody (ed.), Dow Jones-Irwin, 1989.

"Trends in Manufacturing and Time-Based Competition," Chapter A2 in *Handbook of Cost Management*, Barry J. Brinker (ed.), Warren, Gorham & Lamont, New York, 1992.

“Time-based Competition”, *The International Encyclopedia of Business and Management*, 2nd Ed., Malcolm Warner (ed.), pp. 6459-6470. Thomson Learning, London, 2001.

"Expert Systems in Operations Management," co-authors Brian Barkocyc and Paul Makens, *Foundations of Expert Systems for Management*, Robert W. Blanning (ed.), 1985.

Ph.D. Thesis

"Optimal Control of Queueing Systems with Intermittent Service," 1971, Stanford University.

Cases

"Pellton International: Partnerships or Tug of War?" (A), (B), (C) and Teaching Note, co-authors Charles J. Corbett and Luk N. Van Wassenhove, European Case Clearing House #697-045,046,047, 1997.

“Volunteer Manufacturing,” Fall, 2001.

Recent Working Papers

Holweg, M., Blackburn, J., Reichhart, A. and Hong, E. (2008). “A Total Cost Model of Global Supply Chains,” Judge Business School Working Paper, University of Cambridge.

Lapre, M., J.D. Blackburn and L.N. Van Wassenhove (2002). “Brooks’ Law Revisited: Improving Software Productivity by Managing Complexity,” OGSM Working paper # 02-19, 2002.

“Limits of Time-based Competition: Strategic Sourcing Decisions in Make-to-Stock Manufacturing”, Owen Graduate School of Management Working Paper #01-19, Summer, 2002.

Proceedings

"Lot-Sizing in Multi-Level Inventory Systems," Proceedings of 1978 National AIDS Conference, October, 1978, co-author Robert A. Millen.

"Backgammon Strategy: An Application of Markovian Decision Processes," co-author Paul Berger, Proceedings of 1979 Southeast AIDS Conference, February, 1979.

"Implementing a Style Goods Inventory Model in a Small Business," Boston University, School of Management Working Paper, Proceedings of 1979 Northeast AIDS Conference, March, 1979.

"Heuristic Lot-Sizing Performance in a Dynamic Environment," co-author Robert A. Millen, Proceedings of 1979 National AIDS Conference, November, 1979.

"Effective Strategies for Less-Nervous MRP Systems," co-authors Dean Kropp and Robert Millen. Proceedings of 1982 National AIDS Conference, San Francisco.

"Lot-Sizing Strategies for Multi-Stage Material Requirements Planning Systems," co-author Robert Millen, Proceedings of Second International Symposium on Inventories, Budapest, 1982.

"An Assessment of Recent Research on the Single-Stage Lot-Sizing Problem," co-author Robert Millen, Proceedings of 1983 National AIDS Conference, San Antonio.

"LITMUS II: An Evolutionary Step in New Product Planning Models from Marketing Plan Evaluation to Marketing Plan Generation," co-author Kevin Clancy, Advances and Practices of Marketing Science 1983 ORSA/TIMS Marketing Science Conference, Los Angeles.

"LITMUS II: A New Model to Help Optimize Marketing Plans for New Products and Services," co-author Kevin J. Clancy, Proceedings of ESOMAR Conference, November, 1984, pp. 133-154.

"Nervousness in MRP Systems: Effects of Forecast Error and Lot-Sizing Decisions," co-authors Dean Kropp and Robert Millen, Proceedings of 1984 AIDS Meeting, Toronto, November, 1984.

"Forecasting Short, Non-Seasonal Time Series Using Nonlinear Smoothers," co-author Paul K. Makens, Proceedings of 1985 National AIDS Meeting, Las Vegas.

"Lot-Sizing in Multi-Product, Multi-Stage Settings," co-authors Peter Billington, J. Maes, R. Millen and L. van Wassenhove, Proceedings of National Decision Sciences Institute Meeting, vol. 2, pp. 664-665, Boston, November, 1987.

"Trends in Manufacturing," Proceedings of First Annual Management Accounting Symposium on Cost Accounting, Robotics and the New Manufacturing Environment, Robert Capettini and D. Clancy (eds.), pp. 1-21, February, 1987.

"Multi-Product Scheduling in Multi-Stage Serial Systems," co-authors P. Billington, J. Maes, R. Millen and L. van Wassenhove, The Economics of Inventory Management, A. Chikan and M.C. Lovell (eds.), Elsevier, 1988, pp. 345-355.

"Time-Based Competition: Speeding New Product Development," Proceedings of International Conference on Modern Production Concepts: Theory and Applications, Fern Universitat, Hagen, Germany, August, 1990.

"The Bridge to Competitiveness: Building Supplier-Customer Linkages," with James Welch and Laddie Cook, Proceedings of the Third Biennial High Technology Management Conference, Boulder, CO, June, 1993, pp. 405-414.

"Time-Based Software Development," with Gary D. Scudder, Luk Van Wassenhove, and Craig Hill, *Operations Strategy and Performance: Proceedings of the First European Operations Management Association*, K.W. Platts, M.J. Gregory and A.D. Neely (eds.), Cambridge, June, 1994, pp. 169-174.

"Managing Software Development for Speed and Productivity through Concurrent Software Engineering," pp. 123-134 in *Software Quality Engineering*, Proceedings of International Conference on Software Quality Engineering, Udine, Italy, May, 1997, Tasso, Pighin and Adey (eds.), Computational Mechanics Publications, Southampton.

"Valuing Time in Make-to-Stock Manufacturing: Calculating the Limits of Time-Based Competition", to appear in proceedings of 6th International Conference on Distribution and Logistics," St. Gallen, October, 2000.

"Limits of Just-in-Time: A Methodology for Evaluating the Effects of Changing Response Time", Proceedings of Production and Operation Management Society (POMS) Annual Conference, San Francisco, April, 2002.