

MELTEM DENIZEL

Iowa State University
Ivy College of Business/Supply Chain Management

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Education

1993 Ph.D. Decision and Information Sciences, University of Florida, USA

1986 M.S. Industrial Engineering, Middle East Technical University, METU, Turkey

1983 B.S. Industrial Engineering, Middle East Technical University, METU, Turkey

Academic Work Experience

2016 – Present Associate Professor, Iowa State University, Ivy College of Business,
Supply Chain Management Department

2009 – 2016 Professor, Ozyegin University, Faculty of Business

2007 – 2009 Professor, Faculty of Management, Sabanci University

2007 – 2008 Visiting **Fulbright** Scholar, College of Management, Georgia Institute of
Technology

1999 - 2007 Associate Professor, Faculty of Management, Sabanci University

1996 - 1999 Visiting Assistant Professor, Department of Decision and Information Sciences,
University of Florida

1995 - 1996 Assistant Professor, Department of Industrial Engineering, Middle East Technical
University METU

1994 - 1995 Visiting Assistant Professor, NEOS MBA, International Program for Business
Studies, Pordenone, Italy

1993 - 1994 Visiting Assistant Professor, Department of Decision and Information Sciences,
University of Florida

Research

Publications:

Denizel M. and Schumm C., Z., (2023) “Closed loop supply chains in apparel: Current state and future directions”, *Journal of Operations Management*, Published online: doi:10.1002/joom.1274

Yoshinori S. and Denizel, M., (2023): “An efficient system of incentivizing truck drivers to accept night loads”, *International Journal of Production Research*, Published online: doi: 10.1080/00207543.2023.2250008

- Zhuang, Y., Denizel, M., and Montabon, F. (2023) "Examining Firms' Sustainability Frontier: Efficiency in Reaching the Triple Bottom Line", *Sustainability*, Vol. 15, p. 8871, doi.org/10.3390/su15118871
- Sternberg, H., S., Denizel M., (2021) "Towards the Physical Internet – Logistics service modularity and design implications" *Journal of Business Logistics*, Vol. 42, No. 1, pp. 144-166, doi.org/10.1111/jbl.12261
- Soytas, M.A., Usar, D.D., Denizel M., (2022) "Estimation of the Static Corporate Sustainability Interactions Model," *International Journal of Production Research*, Vol. 60, No. 4, pp. 1245-1264, doi.org/10.1080/00207543.2020.1856435
- Yanikoglu, I., Denizel M., (2020) "A Robust Optimization Approach to Multi-period Remanufacturing Planning with Uncertain Quality of Inputs" *International Journal of Production Research*, Vol 59, No. 3, pp. 839-859
- Denizel, M., Yoshi, S., Anderson, C.J., (2020) "Increasing Biofuel Proliferation via the Optimal Use of Government Incentives," *Transportation Journal* Vol. 59, No. 4, pp. 399-419
- Usar, D.D., Denizel, M., Soytaş, M.A., (2019) "Corporate sustainability interactions: A game theoretical approach to sustainability actions." *International Journal of Production Economics*, Vol. 218, pp. 196-211
- Soytas, M.A, M. Denizel, D. D. Usar, (2019) "Addressing endogeneity in the causal relationship between sustainability and financial performance." *International Journal of Production Economics*, Vol. 210, pp. 56-71
- Solyali O., M. Denizel, and H. Sural, (2015) "Effective Network Formulations for Lot Sizing with Backlogging in Two-Level Serial Supply Chains," *IIE Transactions* Vol. 47, 1-13; DOI: 10.1080/0740817X.2015.1027457
- Ozdemir, O., M. Denizel, and M. Ferguson, (2014) "Allocation of Returned Products among Different Recovery Options through an Opportunity Cost based Dynamic Approach," *Decision Sciences*, Vol 45, No. 6, pp 1083-1116
- Denizel, M., M. Ferguson, and B. Toktay (2013) "Incorporating Sustainability into Humanitarian Aid Operations: Recipient Selection in Donations of Medical Supplies," *Operations Management Education Review*, No. 7, pp. 49-78
- Ozdemir O., M. Denizel, D. Guide, (2012) "Recovery Decisions of a Producer in a Legislative Disposal Fee Environment," *European Journal of Operational Research*, Vol 216, No. 2 pp. 293–300
- Kosedag, A., M. Denizel, and O. Ozdemir (2011) "Testing for convergence in bank efficiency: a cross-country analysis," *The Service Industries Journal*, Vol 31, No. 9, pp. 1533–1547
- Sural H., O. Solyali, M. Denizel (2010) "The one-warehouse multi-retailer problem with an order-up-to level inventory policy," *Naval Research Logistics*, Vol 5, No. 7, pp. 653-666
- Denizel, M., M. Ferguson, and G. Souza (2010) "Multi-Period Remanufacturing Planning with Uncertain Quality of Inputs," **(2008 Wickham Skinner Best Unpublished Paper Award, First Prize)**, *IEEE Transactions on Engineering Management*, Vol. 57, No. 3, pp. 394 - 404

Sural H., M. Denizel, and L.V. Wassenhove, 2009, "Lagrangean Relaxation Based Heuristics for Lot-sizing with Setup Times," *European Journal of Operational Research* Vol. 194, No. 1, pp. 51–63

Denizel, M., F. T. Altekin, H. Sural, and H. Stadtler, 2008, "Equivalence of the LP Relaxations of Two Strong Formulations for the Capacitated Lot-Sizing Problem with Setup Times," *OR Spectrum*, Vol. 30, No.4, pp. 773-785

Batıslam, E., M. Denizel, and A. Filiztekin, 2007, "Empirical Validation and Comparison of Models for Customer Base Analysis," *International Journal of Research in Marketing*, Vol. 24, No.3, pp. 201–209

Denizel, M., U. Ekinci, G. Ozyurt, D. Turhan, "Ford-Otosan Optimizes Its Stocks Using a Six-Sigma Framework," 2007, *Interfaces*, Vol. 37, No.2, pp. 97-107

Denizel, M., H. Sural, "On Alternative Mixed Integer Formulations and LP-based Heuristics for Lot-sizing with Setup Times," 2006, *Journal of Operational Research Society* Vol. 57, pp. 389-399

Denizel, M., B. Usdiken, and D. Tuncalp, "Drift or Shift? Continuity, Change and International Variation in Knowledge Production in OR/MS," 2003, *Operations Research* Vol. 51, No. 5, pp. 711-720

Denizel, M., "Minimization of Number of Tool Magazine Setups on Automated Machines: A Lagrangean Decomposition Approach," 2003, *Operations Research*. Vol. 51, No. 2, pp. 309-320

Denizel, M. and S. Sayin, "Part-type Selection in Flexible Manufacturing Systems: A Bicriteria Approach with Due Dates," 1998, *Journal of Operational Research Society*, Vol. 49, pp. 659-669

Denizel, M. and S. S. Erenguc, "Exact Solution Procedures for a Class of Production Planning Problems in Flexible Manufacturing Systems," 1997, *Computers and Operations Research*, Vol. 24, No.11, pp. 1043-1055

Denizel, M., S. S. Erenguc, and H. Benson, "Dynamic Lot-Sizing with Setup Cost Reduction," 1997, *European Journal of Operational Research*, Vol.100 pp. 537-549

Denizel, M., S. S. Erenguc, and H. D. Sherali, "Convex Envelope Results and Strong Formulations for a Class of Mixed Integer Programs," 1996, *Naval Research Logistics*, Vol. 43, No. 4, pp. 503-518

Denizel, M., and S. S. Erenguc, "A Branch and Bound Procedure for Setup Problems in Flexible Manufacturing Systems," 1993, *Production and Operations Management* Vol. 2, No. 4, pp. 289-305

Denizel, M., and S. S. Erenguc, "A Polynomial Algorithm for a Multi-item Capacitated Production Planning Problem," 1993, *Operations Research Letters*, Vol. 13, No. 5, pp. 287-293

Saatcioglu, O., M. Denizel, N. Karabakal and L. Tuncel, "Industrial Engineering Applications in Middle East Technical University Management," 1989, *Endustri Muhendisligi Dergisi* (Turkish Journal of Industrial Engineering), Vol. 1, No. 2, pp. 3-7, (in Turkish)

Conference Proceedings:

Denizel, M., "The Zero Inventory Rule in Lot Sizing for Spare Parts and Refurbished Cores in a Remanufacturing Environment," in *International Workshop on Lot-Sizing, IWLS2018*, 2018

Nurlu-Deniz N., Denizel, M., “Lot-sizing in a remanufacturing environment” *International Workshop on Lot Sizing August 23rd - 25th, 2016, Hannover, Germany.*
<http://iwls2016.emse.fr/program.html>

Nurlu-Deniz N., Denizel, M., “Lot Sizing for Spare Parts and Refurbished Cores in a Remanufacturing Environment,” in *International Workshop on Lot-Sizing, August 26th - 28th, 2013 Brussels, Belgium.* <http://iwls2013.emse.fr/>

Solyali O., M. Denizel, and H. Sural, “Effective Network Models for the Two-Level Serial Lot Sizing Problems,” in *International Workshop on Lot-Sizing, IWLS2012, 2012.*

Denizel, M., O. Solyali, and H. Sural, “Tight formulations for the two and three level serial lot-sizing problems,” in *International Workshop on Lot-Sizing, IWLS2010, 2010.*

Ozdemir, O. and M. Denizel, “A resource based and context dependent model of firm competitiveness,” *POMS 2006 17th Annual Conference Proceedings, 004-0557, April 28-May 1 2006*

Tuncalp D, A. Oncu, and M. Denizel, “Enterprise resource planning technology as a source of change and stability in organizations” *Proceeding of the EuroMA Conference - Operations as a Change Agent INSEAD and EuroMA 2004, 1167 – 1177 (on CD ROM)*

Denizel, M., Y. Arikan, G. Ulusoy, and B. Catay “Conceptual Design of an E-Marketplace for Small and Medium Size Enterprises in the Turkish Machine Industry,” 2002, *Proceedings of the Fifth International Conference on Electronic Commerce Research ICECR-5, Montreal, Canada (on CD Rom)*

Denizel, M., and S. S. Erenguc, "Production Planning in a Flexible Manufacturing Environment", 1991, *Proceedings of the 1991 Annual Meeting of the Decision Sciences Institute, Vol. 3, 1206-1208*

Dogrusoz H., M. Denizel, and N. Karabakal, "Replacement of Garbage Collection Trucks Under Deterioration in Cost and Availability," 1987, *Proceedings of the 11th National Meeting of the Operations Research Society of Turkey (in Turkish)*

Denizel, M., N. Karabakal, O. Saatcioglu, and A. Toker, "An Information System and Organizational Design for Solid Waste Management," 1987, *Proceedings of the 11th National Meeting of the Operations Research Society of Turkey (in Turkish)*

Working Papers

Denizel, M., T., Altekin, and Z., P., Bayindir, “Multi-Item Disassembly Lot-Sizing with Parts Commonality,” Targeting *Manufacturing and Service Operations Management* journal. Analytical modelling and theoretical work are complete, working on experimental design and computational analysis.

Sternberg, H., Denizel, M., A., Ritchie, and N., Karabakal, “the Physical Internet-“Boot-strap Theory” and Collaboration,” Targeting *Journal of Business Logistics*. Working on model development and data preparation.

Schumm, C., Z., M., Denizel, and R., J., Eike, “Tensions in Moving from Linear to Circular and the Resulting Innovations/Creation of Dynamic Capabilities”, Targeting *Journal of Supply Chain Management*. Coding the data.

Schumm, C., Z., M., Denizel, and R., J., Eike, V, “An Empirically Grounded Analytics Study for Viability and Scalability of Remanufacturing in the Apparel Industry”, Targeting *Journal of Operations Management*. Coding the data and developing the preliminary model.

Current Research Interests:

Analytical and empirical modelling and applications in:

Circular Economy/Sustainable Operations
Closed Loop Supply Chains/ Disassembly Lot Sizing
Supply Chain Management/ Multi Level Lot Sizing

Teaching Experience

2016-2022 SCM 424 Process Management, Analysis, and Improvement
 SCM 460 Decision Tools for Logistics and Operations Management
 SCM 524 Strategic Process Analysis and Improvement
 SCM 605 Seminar in Operations Management

Courses Taught at Other Universities:

Ozyegin University:

2009-2012 Data, Models, and Decisions, Graduate MBA
2009-2014 Operations Management, Graduate MBA/EMBA
2011-2013 Operations Research
2012-2016 Linear Programming and Extensions Graduate, PhD.

Developer and Organizer, *Certificate Program in Sustainability in Business*, Ozyegin University

Sabanci University:

2000 Business Statistics, MBA
2000, 2002 Operations Management, MBA
2001, 2007 Business Process Analysis & Design, MBA
2002-2007 Operations Management, MBA
2002-2007 Supply Chain Management, MBA
2003, 2005 Operations and Decision Systems, Ph.D. Level
2003 Operations Modeling, Ph.D. Level
2001, 2006 Special Topics in OM, Ph.D. Level
2002, 04-05 Professional Development Seminar I – II, Ph.D. Level

University of Florida:

1997-1999 Management Science with Excel, Graduate
1996 Production and Operations Management, Undergraduate
1996-1997 Knowledge Based Systems, Undergraduate
1996-1999 Discrete Event System Simulation, Graduate
1993, 1997 Manufacturing Planning and Control, Graduate
1993 Statistics for Business, Undergraduate

Middle East Technical University

1995-1996 Discrete Event System Simulation, Undergraduate

1996 Seminar in Flexible Manufacturing Systems, Graduate
1988 Quantitative Methods, Undergraduate

NEOS MBA 1994 Statistic for Business, Graduate

Teaching Case:

Denizel, M., E. Batislam, C. Akkan (2006) “TEMSA: A time of Crisis”, *ECCH The case for learning*, No 606-029-1, UK

Dissertation/ Thesis Supervision:

Co-Advisor

Ph.D. Student Caroline, Z., Schumm
Dissertation: Remanufacturing in the Apparel and Textile Industry
Expected completion 2024, Iowa State University

Co-advisor

Ph.D. Student: Damla Durak-Usar.
Dissertation: Corporate Sustainability Interactions and Corporate Financial Performance
Completed November 2017, Ozyegin University

Advisor

Ph.D. Student: Oznur Ozdemir Completed July 2009, Sabanci University,
Dissertation: Product Recovery Systems: Policy Issues and Disposition Decisions
Completed July 2009, Sabanci University

Co-advisor

Ph.D. Student: Deniz Tuncalp,
Dissertation: Recursive Dualism of Technology: Restructuring Technology Adaptation in Organizations
Completed February 2006, Sabanci University

Awards/ Honors/ Research Grants/ Fellowships

IVY College of Business 2022 Summer Research Grant

IVY College of Business 2021 Summer Research Grant

TUBITAK 1001 Grant (Turkish Science and Technology Foundation) – March 2014 – August 2016 (with Mehmet Ali Ozsoy) “Sustainability in Business: Database construction and economics-based modelling”

TUBITAK 1001 Grant (Turkish Science and Technology Foundation) – September 2013– August 2015, (with Erim Kardes) “Robust Optimization for Remanufacturing Planning with Uncertain Quality of Inputs”

February 2008 – August 2008 **TUBITAK Post Doctoral Research Scholarship**, Hosting University: Georgia Institute of Technology, Atlanta, Georgia; Project Title: Product Recovery Systems for Sustainable Development

2008 Wickham Skinner Best Unpublished Paper Award First Prize, “Multi-Period Remanufacturing Planning with Uncertain Quality of Inputs” (with M. Ferguson and G. Souza),

Presented at the 19th Annual Conference of POMS (production and Operations Management Society), May 2008, La Jolla, CA, USA

August 2007– January 2008 *Fulbright Senior Research Scholarship* Fulbright Turkey-USA Cultural Exchange Commission, Hosting University: Georgia Institute of Technology, Atlanta, Georgia; Project Title: Product Recovery Systems for Sustainable Development

Industry Grants/Consulting Projects:

Project Title: Supply Chain Network Optimization for the Renewable Energy Group (REG), Ames Iowa – 2017-2018 Project Team: Meltem Denizel, Yoshinori Suzuki

Project Title: Inventory Optimization for TEMSA Spare Parts Management, Industry funded project, 2006.

Project Title: Business Excellence and E-Business Strategies in The Turkish Machine Industry, TUSIAD Projesi, 2001-2002. Project Team: G. Ulusoy, B. Catay, M. Denizel, and Y. Arıkan

Project Title: Customer Base Analysis and Customer Loyalty Measurement in a Grocery Retailer, Industry funded project, 2003-2004. Project Team: E. Batislam, M. Denizel, A. Filiztekin, and Y. Saygin

Project Title: Solid Waste Collection, Transportation and Disposal System for the Metropolitan Area of Istanbul, 1985-1986. Project Team: H. Dogrusoz, N. Erkip, O. Kirca, C. Beseli, M. Denizel, H. Sural, A. Toker.

Administrative Work Experience:

Iowa State University

2019-2022 University Faculty Senate (2022 - Continuing)
College Faculty Executive Committee (2022- Continuing)
College Academic Standards Committee (2020 – 2022)
Department PhD Committee (2016- 2022)
Department P&T Committee (2016- Continuing)
University Faculty Senate Appeals Committee (2016 -2021)
Department Recruiting Committee (2017-18, 2020-22)
College Diversity Committee (2016-2019)
Department Ivy Speaker Series Committee (2018-2019)
Voorhees Supply Chain Conference Organization Committee (2016)

Ozyegin University

2013-2016 **Dean,**
Faculty of Business, Ozyegin University

2009-2016 Member, University Senate, Ozyegin University
Member, University Administrative Board, Ozyegin University
Member, Graduate School Administrative Board, Ozyegin University
Member, Business Faculty Administrative Board, Ozyegin University

2009-2013 Director, Business PhD Program, Ozyegin University

Sabanci University

2000-2006 Chair, Faculty of Management PhD Committee, Sabanci University
2005-2009 Member, Graduate School Administrative Board, Sabanci University
2003-2007 Member, University Administrative Board, Sabanci University
2003-2007 Member, University Senate, Sabanci University
2002-2007 Member, University Research Council, Sabanci University

Professional and Public Services:

Editor/Editorial board memberships in scientific journals:

Editorial Review Board member for Decision Sciences Journal (2020-)

Editorial Board Member for Flexible Services and Manufacturing Systems (2011-2018)

Advisory Board Member for OR Spectrum (SCI)

Associate Editor for POMS Chronicle 2009-2013

Referee: Operation Research, Transportation Research Part E: Logistics and Transportation Review, IIE Transactions, Decision Sciences, 4OR A Quarterly Journal of Operations Research, Computers and Operations Research, OR Spectrum, IEEE Transactions on Engineering Management, Transactions on Operational Research, Flexible Services and Manufacturing

Organizer/Coordinator of Academic Conferences:

Voorhees Supply Chain Conference – April 28, 2007, Organizing Committee member

Track Chair: POM 2013 - Twenty Fourth Annual Conference, Denver, Colorado, U.S.A. May 3 – May 6, 2013

Organizer, IWLS (International Workshop on Lot-Sizing), August 24 – 26, 2011, Istanbul, Turkey (Hosted by Ozyegin University)

Co-organizer: Twelfth Annual Decision and Information Sciences (DIS) Workshop on the “*Globalization of Business Processes*”. June 2000 Istanbul. Jointly hosted by Graduate School of Management (GSM), Sabanci University and Department of Decision and Information Sciences Warrington College of Business Administration, University of Florida

Co-organizer: Organized a session on “Sustainability and Competitiveness” in the 2nd Workshop on Competitiveness; Organized by Competitiveness Forum of Sabanci University and TUSIAD (Turkish Industrialists and Businessmen Association), Hosted by Sabanci University on October 6-7, 2006

Professional Affiliations:

Institute for Operations Research and Management Sciences (INFORMS, USA)

Decision Sciences Institute (DSI)