Dr. Yong Shin Park, Assistant Professor

St. Edward's University

Department of Marketing/Ops/Analytics

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## EDUCATION

* Ph.D, North Dakota State University at Fargo, 2018.

Major: Transportation and Logistics

Dissertation Title: Three Essays on Sustainability of Transportation and Supply Chain

* Graduate Degree Certificate, North Dakota State University, 2018.

Major: Statistics

* Master, North Dakota State University, 2013.

Major: Managerial Logistic

* BS, North Dakota State University, 2012.

Major: Industrial and Manufacturing Engineering

**ANALYTICAL SKILL**

* Statistical Software: R, SPSS, Excel, Python
* Machine Learning (Decision Trees, Random Forest, Logistic Regression, Cluster Analysis, Text Analytics, Data Mining etc.)
* Optimization Software: Excel Solver, CPLEX
* Visualization Software: PowerBI, Tableau, ggPlot
* Database Management Software: MySQL
* Simulation Software: Arena
* Other Analytic Software: ArcGIS, OpenLCA, MaxDEA

## TEACHING EXPERIENCE

### St. Edward's University

*Associate Professor (2024- Present)*

*Program Director, MS Business Analytics (2024- Present)*

*Assistant Professor (2018-2023)*

*Course Taught*

BUSI 2305, Business Statistics

BUSI 3333, Business Intelligence

MGMT 3340, Principles of Operations

MGMT 6330, Big data, Busi Intel, Analytic

MGMT 6332, Strategies in Operations mgt

MGMT 6356, Decision Support Models

MGMT 6399, Special Topics in Management

BANA 6312, Data Summarization and Visualization

BANA 6330, Big Data and Database Management

BANA 6360, Simulation Modeling

BANA 6370, Business Analytics Practicum

**North Dakota State University**

*Instructor (2016-2018)*

*Course Taught*

MGMT 360, Operations Management

TL 711, Logistic Systems

TL 723, Advanced Supply-chain Across the Enterprise

TL 831, Modeling for Transportation & Logistics Decision Analysis

TL 753, Transportation System Modeling

## Professional Positions

### Academic - Post-Secondary

Research Assistant, Upper Great Plains Transportation Institute. (June 2012 - May 2018).

Research Assistant, North Dakota State University. (September 2013 - May 2015).

Research Assistant, North Dakota State University. (May 2011 - May 2012).

### Industry

Plant Manager Assistant, Soyko International INC. (October 2011 - May 2012).

## PROFESSIONAL DEVELOPMENT

## Published Intellectual Contributions

### Book Chapters

Park, Y. S., Egilmez, G., Kucukvar, M. (2017). *Cradle-to-gate Life Cycle Analysis of Agricultural and Food Production in the US: A TRACI Impact Assessment* (pp. 274). Oxford: Sustainability Challenges in the Agrofood Sector, John Wiley & Sons.

### Dissertation

Park, Y. S. (2018). *Three Essays on Sustainability of Transportation and Supply Chain*. North Dakota State University. https://hdl.handle.net/10365/28948

### Refereed Journal Articles

Xu,Y.,Park,Y.,Park,J.D., & Sun,B. (2024). Predicting Nurse Turnover for Highly Imbalanced Data

Using the Synthetic Minority Over-Sampling Technique and Machine Learning Algorithms

Han, B., Zhang, Y., Wang, S., & Park, Y. (2023). The efficient and stable planning for interrupted supply chain with dual-sourcing strategy: a robust optimization approach considering decision maker's risk attitude. *Omega*, 102775.

Xu,Y., Park,Y.S., Jadidi,O., Loucks, J.,& Szmerekovsky, J. (2022). Multi-objective programming for designing sustainable biogas supply chain: a case study in North Dakota, USA. Journal of Business Analytics 1-13.

Jadidi, O., Firouzi, F., Loucks, J., Park, Y. (2022). Multi-Criteria Supplier Selection Problem with Fuzzy Demand: A Newsvendor Model. *Computational Management Science*. 1-20

Saber, M., Eğilmez, G., Gedik, R., & Park, Y. S. (2021). A Comparative Time-Series Investigation of China and US Manufacturing Industries’ Global Supply-Chain-Linked Economic, Mid and End-Point Environmental Impacts. *Sustainability*, *13*(11), 5819.

Xu, Y., Park, Y. S., & Park, J. D. (2021, March). Measuring the response performance of US States against COVID-19 using an integrated DEA, CART, and logistic regression approach. In *Healthcare* (Vol. 9, No. 3, p. 268). MDPI.

Xu, Y., Park, Y. S., Park, J. D., & Cho, W. (2021). Evaluating the environmental efficiency of the US airline industry using a directional distance function DEA approach. *Journal of Management Analytics*, *8*(1), 1-18.

Badarch, B., & Park, Y. S. (2020). Downside risk of major crops in selected six regions in North Dakota. *Asian Journal of Management Science and Applications*, *5*(1), 75-91.

Park, Y. S., Szmerekovsky, J., Dybing, A. (2019). Optimal Location of Biogas Plants in Supply Chains under Carbon Effects: Insight from a Case Study on Animal Manure in North Dakota. *Journal of Advanced Transportation, 2019*, 13. https://www.hindawi.com/journals/jat/2019/5978753/

Park, Y. S., Szmerekovsky, J., Osmani, A., Aslaam, N. M. (2018). Integrated Multimodal Transportation Model for a Switchgrass-Based Bioethanol Supply Chain: Case Study in North Dakota. *Transportation Research Record: Journal of the Transportation Research Board*(2628), 32--41.

Park, Y. S., Mohamed Abdul Ghani, N Muhammad Aslaam, Gebremikael, F., Egilmez, G. (2018). Benchmarking environmental efficiency of ports using data mining and RDEA: the case of a US container ports. *International Journal of Logistics Research and Applications*, 1--16.

Park, Y. S., Lim, S. H., Egilmez, G., Szmerekovsky, J. (2018). Environmental efficiency assessment of US transport sector: a slack-based data envelopment analysis approach. *Transportation Research Part D: Transport and Environment, 61*(Part A), 152-164.

Park, Y. S., Egilmez, G., & Kucukvar, M. (2017). Cradle‐to‐gate Life Cycle Analysis of Agricultural and Food Production in the US: A TRACI Impact Assessment. *Sustainability Challenges in the Agrofood Sector*, *274*.

Egilmez, G., Bhutta, K., Erenay, B., Park, Y. S., Gedik, R. (2017). Carbon footprint stock analysis of US manufacturing: a time series input-output LCA. *Industrial Management \& Data Systems, 117*(5), 853--872.

Gumus, S., Egilmez, G., Kucukvar, M., Park, Y. S. (2017). Integrating expert weighting and multi-criteria decision making into eco-efficiency analysis: the case of US manufacturing. *Journal of the Operational Research Society, 67*(4), 616--628.

Egilmez, G., Kucukvar, M., Park, Y. S. (2016). Mode-specific eco-efficiency analysis of the freight transportation in the USA: an integrated life cycle assessment and linear programming approach. *World Review of Intermodal Transportation Research, 6*(1), 16--42.

Park, Y. S., Egilmez, G., Kucukvar, M. (2016). Emergy and end-point impact assessment of agricultural and food production in the United States: A supply chain-linked Ecologically-based Life Cycle Assessment. *Ecological indicators, 62*, 117--137.

Park, Y. S., Al-Qublan, H., Lee, E., Egilmez, G. (2016). Interactive Spatiotemporal Analysis of Oil Spills Using Comap in North Dakota. *Informatics, 3*(2), 4.

Egilmez, G., Kucukvar, M., Park, Y. S. (2016). Supply chain-linked sustainability assessment of the US manufacturing: an ecosystem perspective. *Sustainable Production and Consumption, 5*, 65--81.

Choi, J., Park, Y. S., Park, J. D. (2015). Development of an aggregate air quality index using a PCA-based method: a case study of the US transportation sector. *American Journal of Industrial and Business Management, 5*(02), 53.

Egilmez, G., Park, Y. S. (2015). TRACI assessment of transportation manufacturing nexus in the US: a supply chain-linked cradle-to-gate LCA. *Environmental Management and Sustainable Development, 4*(2), 51--68.

Park, Y. S., Egilmez, G., Kucukvar, M. (2015). A novel life cycle-based principal component analysis framework for eco-efficiency analysis: case of the United States manufacturing and transportation nexus. *Journal of Cleaner Production, 92*, 327--342.

Egilmez, G., Park, Y. S. (2014). Transportation related carbon, energy and water footprint analysis of US manufacturing: An eco-efficiency assessment. *Transportation Research Part D: Transport and Environment, 32*, 143--159.

## Research in Progress

* Port Productivity Measure using DEA
* Farmer’s decision-making process: herd behavior and principal component analysis (Under revision: Asian J. of Management Science and Applications)
* Assessing the readiness of OECD countries for industry 4.0 adoption
* A responsive closed-loop supply chain network design under demand uncertainty
* Measuring the construction sector’s sustainability performance using DEA approach

## Presentations Given

Park, Y. S. (Presenter), INFORMS Annual Meeting, "Eco-efficiency assessment of U.S tourism industry using the LCA +DEA framework," INFORMS, Seattle. (October 22, 2019)

Park, Y. S. (Author & Presenter), Xu, Y. (Author), INFORMS Annual Meeting, "Integrating multimodal transport into biofuel supply chain design under supply and demand uncertainties," Phoenix. (November 3, 2018).

Park, Y. S. (Author $ Presenter), Transportation Research Forum, "Evaluating environmental efficiency of U.S airline industry with flight delays using a directional distance function DEA," Minneapolis. (May 11, 2018).

Park, Y. S. (Author & Presenter), Szmerekovsky, J. (Author), INFORMS Annual Meeting, "Economic and Environmentally Conscious Supply Chain Network Optimization and Determination of Potential Infrastructure and Production of Biogas," Houston. (October 22, 2017).

Park, Y. S. (Author), Yuan, F. (Author & Presenter), INFORMS Annual Meeting, "Measuring Nursing Home Efficiency using PCA-DEA Approach," Houston. (October 22, 2017).

Park, Y. S. (Author & Presenter), Aslaam, N. (Author), Szmerekovsky, J. (Author), 58th Annual Transportation Research Forum, "Carbon Sensitive Optimization of Biogas Supply Chains Produced from Animal Waste," Chicago. (April 20, 2017).

Park, Y. S. (Author), Aslaam, N. (Author & Presenter), Vogiatzis, C. (Author), Szmerekovsky, J. (Author), 58th Annual Transportation Research Forum, "Potential biogas production from animal manure: A supply chain perspective," Chicago. (April 20, 2017).

Park, Y. S. (Author & Presenter), Aslaam, N. (Author), Szmerekovsky, J. (Author), Osmani, A. (Author), 96th Transportation Research Board Annual Meeting, "An Integrated Multimodal Transportation Model for Switchgrass-based Bioethanol Supply Chain with a Case Study based on North Dakota." (January 8, 2017).

Park, Y. S. (Author), Egilmez, G. (Author & Presenter), Kucukvar, M. (Author), Institute of Industrial and Systems Engineers Annual Conference, "Emergy and End-point Impact Assessment of Agricultural and Food Production in the US," Anaheim. (May 21, 2016).

Park, Y. S. (Author & Presenter), Lim, S. (Author), Egilmez, G. (Author), Szmerekovsky, J. (Author), 95th Transportation Research Board Annual Meeting, "Environmental efficiency assessment of U.S. transportation sector: A slack based data envelopment analysis approach," Washington DC. (January 10, 2016).

Park, Y. S. (Author), Khan, O. (Author & Presenter), ND GIS User Conference, "Impact of Weekdays, Season and Population Density on Motor Vehicle Fatalities in North Dakota, A Hotspot Analysis," Fargo. (September 28, 2015).

Park, Y. S. (Author & Presenter), ND GIS User Conference, "Spatiotemporal analysis of oil spill in case of transportation accidents in North Dakota, USA," Fargo. (September 28, 2015).

Park, Y. S. (Author), Egilmez, G. (Author & Presenter), Kucukvar, M. (Author), IIE Annual Conference and Expo, "Integrating scope-based carbon footprint modeling into global manufacturing supply chains," Nashville. (May 30, 2015).

Park, Y. S. (Author & Presenter), Egilmez, G. (Author), 56th Annual Transportation Research Forum, "Assessing the Ecosystem Goods and Service of U.S Modal Freight: Supply Chain Linked Cradle-to-Gate Ecological Based Life Cycle Model," Atlanta. (March 12, 2015).

Park, Y. S. (Author), Aslaam, N. (Author & Presenter), Lee, E. (Author), 56th Annual Transportation Research Forum, "Eco-efficiency of U.S. Container Ports Using Data Envelopment Analysis (DEA)," Atlanta. (March 12, 2015).

Park, Y. S. (Author), Gebremikael, F. (Author & Presenter), Egilmez, G. (Author), 56th Annual Transportation Research Forum, "U.S Freight Transportation Eco-efficiency Performance Measure and Benchmarking State by State," Atlanta. (March 12, 2015).

Park, Y. S. (Author), McAvoy, D. (Author & Presenter), Egilmez, G. (Author), 94th Annual Transportation Research Board, "Integrating Self-Organizing Maps into Road Safety Benchmarking to Provide Improvement Paths: DEA-Based Kohonen Network Approach," Washington DC. (January 11, 2015).

Park, Y. S. (Author & Presenter), Egilmez, G. (Author), Kucukvar, M. (Author), INFORMS Annual Meeting, "Life Cycle based Environmental Impact Intensity Assessment of National Freight Transportation," San Francisco. (November 9, 2014).

Park, Y. S., Department of Industrial and Manufacturing Engineering Graduate Seminar, "Eco-efficiency Analysis of Manufacturing and Transportation Nexus in the United State: A Life Cycle based Principal Component Analysis," North Dakota State University, Fargo. (October 31, 2014).

Park, Y. S. (Author), Kucukvar, M. (Author & Presenter), Egilmez, G. (Author), IIE Annual Conference and Expo, "Ecological Footprints of U.S. Manufacturing Industry," Montreal. (May 31, 2014).

Park, Y. S. (Author), Egilmez, G. (Author & Presenter), Kucukvar, M. (Author), IIE Annual Conference and Expo, "Transportation-focused Environmental Impact Assessment of U.S. Manufacturing: A Life Cycle Analysis," Montreal. (May 31, 2014).

## Development Activities Attended

* Online Course Quality, Community based Learning, Activity and Applied Learning Assignments “Center for Teaching Excellence (May 2022 – June 2022)
* Reflecting and Revising, Center for Teaching Excellence. (December 10, 2018 - Present).
* Canvas workshop, St. Edward's University, Austin, TX, United States. (August 2018 - Present).
* Learn BI tool, Tableau Conference, Tableau. (November 2021 - December 2021).

**Grant, Awards and Honors**

* External Funding (PI), “A study on Port Infrastructure Sufficiency Index (PISI) for the Americas”, Total award: $75,000, Gyeongsang National University, South Korea (December 1, 2023 - December 7, 2025)
* Munday School of Business Dean’s Excellent Research Grant, St. Edward’s University, $5000 (May 2023)
* Munday School of Business Dean’s Excellent Research Grant, St. Edward’s University, $5000 (May 2022)
* Innovation Institute Fellowship, Center for Teaching Excellence, St. Edward’s University, $1200 (May 2022)
* Encouragement Paper Award, Asian Association of Management Science and Application (March 2021)
* Excellent Student Paper Award, Korean Transportation Association in America, Transportation Research Board. (January 2017).
* 1st Place: Best Poster Presentation Award, ND GIS User Conference. (September 2015).

## SERVICE

**University Service**

* Impact Committee (curriculum development related to computing and technology)
* Faculty Evaluation Committee (2023-Present)
* McNaire Journal Faculty Reviewer (2022)
* Distinguished Teaching Award Committee (2022)
* Committee Member, TLTR Committee. (February 12, 2020 - December 10 2023)
* TLTR Pilot Reviewer (2022)
* Digital Pedagogy Panel Discussion- Panelist (04/20/2022)
* Lessons learned from Teaching Online-Panelist (July 2020)
* Study Abroad Proposal Development. (January 1, 2020 - March 10, 2020).
* Committee Member, Hiring Committee for Wild Basin Research Director. (May 2019 - August 2019).
* Attendee, Meeting, Full Faculty Meeting. (August 20, 2019).
* Attendee, Graduation, Undergraduate commencement. (2019, 2022)
* Attendee, Meeting, Faculty Conversation Gathering with Dr. Martin. (April 2019).
* Attendee, Convocation, St. Edward’s University Annual Christmas party. (December 2018).
* Special Institutional Assignment, Faculty Editorial Board for Volume XI of the McNair Scholars Program Research Journal. (September 2018 - November 2018).

**School Service**

* NCSAC Analytics Championship Feb 22, 2024)
* MSB Research and Service Awards Chair (2022-Present)
* Tokyo Electronic Visit
* Explore MSB event (October 12, 2022)
* Choose SEU Event (2022)
* Attendee, Meeting, MSB School Meeting. (2018- Present).
* Development of New Courses for MS-BA program (2020-Present)
* Committee Member, MS Business Analytics Program Development. (2020- 2021).  
  Committee Member, MSB Promotion and Tenure Committee. (August 2021 - August 2022).
* Committee Member, MS Business Analytics Search Committee. (August 2020 - October 2021).  
  Searched candidates and interviewed
* Faculty Advisor, Honor Student Advising. (September 2020 - May 2021).
* Special Institutional Assignment, Faculty Outreach Campaign. (November 2020 - December 2020).
* Special Institutional Assignment, Business Statistics Online Course Development. (January 1, 2020 - May 17, 2020).
* Committee Member, MSB Curriculum Committee. (April 8, 2020).
* Attendee, Meeting, Assessment of Learning. (January 10, 2020).  
  Discuss AoL fall artifacts, evaluations, and potential continuous improvement
* Attendee, Orientation, MSB Assurance of Learning. (January 10, 2020).
* Fall 2019 faculty outreach campaign. (December 10, 2019 - December 31, 2019).  
  Attendee, Meeting, MSB AACSB Discussion Meeting. (November 1, 2019).
* Attendee, Meeting, MSB Strategic Planning Meeting. (October 11, 2019).
* Attendee, Meeting, Management Department Meeting. (September 20, 2019).
* Attendee, Meeting, MSB Dean search. (March 2019).
* Attendee, Meeting, MSB Entrepreneurship faculty search: Dr. Jacobs. (March 2019).  
  Evaluation of teaching and research presentation
* MSB Entrepreneurship faculty search: Dr. Beverly. (February 2019).  
  Evaluation of teaching and research presentation
* Attendee, Meeting, MSB Management faculty search: Dr. Huang. (February 2019).
* MBA Concentration in Operations and Supply Chain Management, Curriculum committee. (September 2018 - January 2019).  
  Attendee, Convocation, MSB holiday breakfast. (December 2018).
* Attendee, Meeting, MSB Advisory Board Meeting. (December 7, 2018).  
  Committee Member, MBA supply chain concentration program development. (January 1, 2018 - August 10, 2018).

**Professional Service**

* Editor, Logistics. (November 2020 - Present).
* Topic Editor, Sustainability. (November 2020 - Present).
* President of North Dakota Chapter Korean-American Scientist Engineering (2014-2018)

**Reviewer**

* Energy Efficiency.
* Sustainable Chemistry and Engineering.
* ACS Sustainable Chemistry and Engineering.   
  Applied Science.
* Waste and Biomass Valorization (WAVE).
* Sustainability.
* Cleaner Production. (August 9, 2019 - Present).  
  Environmental Impact Assessment Review. (2014 - Present).
* International Journal of Logistics Research and Applications. (2014 - Present).
* Journal of Geoscience and Environment Protection. (2014 - Present).
* RAIRO - Operations Research. (2014 - Present).
* Research in Transportation Economics. (2014 - Present).
* The Korean Society of Climate Change Research.
* Transportation Research Record.

**Public Service**

* Judge, First robot Competition Feb 2022
* Deacon, Church. (August 2020 - August 2021).  
  Actively participated in service in Church
* Reviewer, Korean-American Scientists and Engineers Association, Austin, TX. (April 13, 2019).  
  Preparation of exam and grading

**Directed Student Learning**

* Hook Fellowship Advisor, “ A Study of the Wild Basin Soundscape and the Intricate Web of Factors that Contribute to the Acoustic Environment.” Advised: Susheel Palakurthi (2022- Present)
* Master's Thesis Committee Member, "Goal specific PCA model to create sustainability index score of OECD countries," Other (Outside St. Edward's University). (2019 - 2021).  
  Advised: Shyam Lamichane
* Dissertation Committee Member, "Crop yield potential in North Dakota based on climate and soil texture information," Other (Outside St. Edward's University). (2019 - 2021).  
  Advised: Bayarbat Badarch
* Undergraduate Honors Thesis, "Sustainable Transportation in Supply Chain in OECD Countries: A DEA Analysis," Other (Within St. Edward's University). (August 2020 - May 2021).  
  Advised: Angeles Sanchez
* Undergraduate Honors Contract, “Measuring construction sector’s sustainability performance using DEA approach (Within St. Edward’s University). (January 2022- May 2022)

**Media Contributions**

* "Demysify Your Dissertation: Communicating to a General Audience," Doctoral Dissertation Video | North Dakota State University. (May 2018).

**Licensures and Certifications**

* Tableau Desktop Specialist
* Graduate Learning and College Teaching certificate, North Dakota State University. (June 2015 - Present).

**Professional Memberships**

* Korean-American Scientist Engineering Association. Austin Chapter (2019 – Present)
* Member, Decision Science Institute. (2017 - Present).
* Member, Institute for Operations Research and the Management Sciences. (2014 - Present).
* Member, Transportation Research Forum. (2013 - Present).
* Secretary, Korean-American Scientist Engineering Association. (2014 - 2017).