

Transportation Tidbits



December 2016

Greetings,

Welcome to the December issue of the Transportation Tidbits Newsletter! This issue features the latest happenings within the transportation industry along with a list of upcoming transportation conferences and webinars. You can also find some of the latest news from our faculty and students! If you have questions or comments about this month's issue, please [let us know](#). Enjoy!

Important Dates for NDSU Students

12/20: Grades due
(12:00 p.m.)

12/21: Fall grade
access begins online

12/26: Holiday-
Christmas Day
Observed (offices
closed)

1/2: Holiday - New
Years Day Observed
(offices closed)

Recent News Updates

We would like to congratulate all of the students who presented their projects. Below are the authors, titles, and abstracts. For more information on the projects please contact Makenzie.lee.Schmidt@ndsu.edu.

Yong Shin Park

Title: An integrated multimodal transportation model for switchgrass-based bioethanol supply chain with a case study based on North Dakota

Abstract: This study formulates a mixed integer linear programming (MILP) model that integrates multimodal transport into the switchgrass-based bioethanol supply chain (MTSBSC). The two transport modes are truck and rail. The objective of this study is to minimize the total cost for cultivation/harvesting, infrastructure, storage process, bioethanol production, and transportation. Strategic decisions, including the number and location of intermodal facilities and biorefineries, and tactical decisions, such as amount of biomass shipped, processed, and converted into bioethanol are validated using the state of North Dakota as a case study. It was found that the multimodal transport scenario is more cost effective than a single mode of transport (truck), which results in cheaper bioethanol cost. A sensitivity analysis was conducted to demonstrate the impact of key factors on MTSBSC decision and bioethanol cost.

Yuan Xu

[#TranspoStory: Meet Lessie](#)

[Recipients Announced for University Transportation Center Grants](#)

[Helping First Responders Prepare for Hazmat Transportation Emergencies](#)

[DOT seeks Proposals for Beyond Traffic Innovation Centers](#)

[FTA Safety Oversight Resulting in WMATA Metrorail Improvements](#)

UGPTI in the Spotlight

[Annual North Dakota Elevator Marketing Report](#)

[North Dakota Grain and Oilseed Transportation Statistics](#)

[Exploring Transit's Contribution to Livability in Rural Communities: Case Study of Valley City,](#)

Title: A system dynamics model for energy savings in the US food industry

Abstract: Owing to oil shortage, air pollution and climate change, energy savings and emission reductions are top priorities for governments. The food industry, which accounts for 30% of the global energy consumption and 20% of greenhouse gas (GHG) emissions, has been increasingly recognized for its potential for energy savings. Thus, the objective of this study is to evaluate policy alternatives for reducing food-related energy consumption in the mid run. Influential factors for energy consumption in the food sector include population growth rate, GDP, agriculture's share of GDP, food waste, technologies, and agricultural investment. In this research, based on the causal relationships and feedback loops between these factors and energy consumed for each stage of the life cycle of the food supply chain, a system dynamics model was built to dynamically model the problem for the US food system. Policy options of reducing waste percentage and improving energy productivity in industrial processing are incorporated for building the energy-use mitigation scenarios. By implementing the integrated mitigation scenarios, a 9.43% reduction in total food system energy consumption can be attained by 2030.

Mingwei Guo

Title: Brief research on global third-party logistics and consolidation for e-commerce retailers using simulation

Abstract: The increasing globalization and development of e-commerce has triggered a considerable increase in profits for logistic companies. The decline in profit margins has forced the manufacturers and retailers to use third party logistic providers and stop their own logistics systems, especially for international freight and retail transportation. Based on recent developments and the practices of global retailers and manufacturers, this paper provides a brief analysis of global third party logistics and formulates a consolidation method for third party logistics service providers.

Neeraj Dhingra

Title: The value of Halal in the US market: Implications for the Logistics Industry.

Abstract: Halal is an adherence to Islamic Sharia dietary laws mostly practiced by Muslim communities. Demand for halal meat is growing rapidly in the US primarily because of the rapidly growing Muslim population (expected to increase to 8.1 million by 2050) and availability of agricultural and livestock resources. The objective of the study is to examine the determinants that could influence customer willingness to pay (WTP) for halal logistics services. Consumer WTP analysis for halal food logistics is an essential attribute for understanding customer response to halal supply and determining the corresponding change in the logistics industry

Webinars

[ND, and Dickinson, ND](#)

[North Dakota Grain Industry Data \(Grain Trax\)](#)

[NDLTAP Safety Talk](#)

[Rural Transit Fact Book](#)

There are no webinars to report at this time. Please check back in January 2017 for more information.

Upcoming Conferences

- **Geotechnical Frontiers 2017 Conference**
 - [March 12-15, 2017](#)
 - [Orlando, Florida](#)
- **10th International Conference on Managing Fatigue in Transportation**
 - [March 20-23, 2017](#)
 - [San Diego, California](#)
- **11th International Bridge and Structures Management Conference: Abstracts Due November 12, 2016**
 - [April 25-27, 2017](#)
 - [Mesa, Arizona](#)
- **2017 Conference on Ecology and Transportation**
 - [May 14-18, 2017](#)
 - [Salt Lake City, Utah](#)

Workshops/ Meetings

- **2017 Planning for Shifting Trade Workshop**
 - [January 8-12, 2017](#)
 - [Tampa, FL](#)
- **96th TRB Annual Meeting**
 - [January 8-12, 2017](#)
 - [Washington, D.C.](#)
- **Geotechnical Frontiers 2017 Conference**
 - [March 12-15, 2017](#)
 - [Orlando, Florida](#)



New Student Biography

Bukola Bakare is from Lagos. She earned her B.S. from Georgia State University and her M.S. from Kennesaw State University. Bakare is pursuing a Ph.D. in transportation and logistics from North Dakota State

University. Her research is in the transportation and logistics field with an emphasis on community and public health. Her goal for

the future is to be a professor and a leading researcher in the area of healthcare transportation and logistics. In her spare time, Bakare enjoys reading, gardening, photography, and learning new languages. She is also involved in the graduate school council and campus bible study.

Kid President is Over it!



NDSU UPPER GREAT PLAINS
TRANSPORTATION INSTITUTE

If you have items that you would like to submit for our next monthly Transportation Tidbits newsletter, please email Makenzie Schmidt at makenzie.lee.schmidt@ndsu.edu by the 15th of the month.