

**Chia-Hung Chuang**  
The University of North Dakota  
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## Education

Ph D, The State University of New York at Buffalo, 2012.  
Major: Operations Management and Supply Chain Management  
Dissertation Title: An Econometric Analysis of Finished Goods Inventory in the U.S.  
Automotive Industry: Bayesian and Classical Approaches

MBA, Saint Louis University, 2002.  
Major: MBA

## Professional Memberships

Production and Operations Management Society. (May 2013 - Present).

Secretary (2014-2015), ICISA-International Chinese Information Systems Association.  
(November 2012 - Present).

Decision Sciences Institute. (November 2008 - Present).

## TEACHING

### Teaching Experience

#### The University of North Dakota

Management 301, Operations Management, 18 courses.  
Management 309, Quantitative Methods for Mgrs, 1 course.  
Management 433, Logistics in the Supply Chain, 2 courses.  
Management 494, Readings in Management, 2 courses.

## RESEARCH

### Published Intellectual Contributions

#### Refereed Journal Articles

Chuang, C.-H., Chiang, C.-Y. (2016). Dynamic and Stochastic Behavior of Coefficient of Demand Uncertainty incorporated EOQ variables: An Application in Finished-goods inventory in the U.S. Automobile Dealerships. *International Journal of Production Economics*, 172, 95-109.  
doi:10.1016/j.ijpe.2015.10.019

Chuang, C.-H., Wang, C. X., Zhao, Y. (2014). Closed-Loop Supply Chain Models for a High-Tech Product under Alternative Reverse Channel and Collection Cost Structures. *International Journal of Production Economics*, 156.  
<http://www.sciencedirect.com/science/article/pii/S0925527314001649>

Lin, W. T., Chuang, C.-H. (2013). Investigating and Comparing the Dynamic Patterns of the Business Value of Information Technology Over Time. *European Journal of Operational Research*, Volume 228(Issue 1, 1 July 2013), 249–261.

Lin, W. T., Chuang, C.-H., Choi, J. H. A partial adjustment approach to evaluating and measuring the business value of information technology. *International Journal of Production Economics*, 127(1), 158-172.

## **Presentations Given**

Chuang, C.-H. (Author Only), 24th Production and Operations Management Society 2013, "Closed-Loop Supply Chain Models for a High-Tech Product under Alternative Reverse Channel and Collection Cost Structures," Production and Operations Management Society, Denver CO.

Chuang, C.-H. (Author Only), The 2011 Annual Meeting of the Decision Sciences Institute, "Closed-Loop Decentralized Reverse Supply Chain with Remanufacturing: Reverse Supply Chain Performance and Business Performance," Decision Sciences Institute, Boston, MA.

Chuang, C.-H. (Author Only), The 2012 Annual Meeting of the Decision Sciences Institute, "Closed-Loop Supply Chain Models for a High-Tech Product under Alternative Reverse Channel and Collection Cost Structures," Decision Sciences Institute, San Francisco, CA.

Chuang, C.-H., The 2015 Annual Meeting of the Decision Sciences Institute, "Empirical Examinations of Reverse Supply Chain Management," Seattle, WA. (November 19, 2015).

Chiang, C.-Y., Chuang, C.-H., The 2014 Annual Meeting of the Decision Sciences Institute, "A Time Series Perspective on Volatility of the Supply Chain Inventory," Decision Sciences Institute, Tampa, FL. (November 22, 2014).

Chuang, C.-H., The 2013 Annual Meeting of the Decision Sciences Institute, "Dynamic and Stochastic Behavior of Coefficient of Demand Uncertainty in EOQ Model: An Application in Finished-goods inventory in the U.S. Automobile Industry," Baltimore. (November 16, 2013).

Chuang, C.-H. (Author Only), The 2010 Annual Meeting of the Decision Sciences Institute, "Investigating and Comparing the Dynamic Patterns of the Business Value of Information Technology Over Time," Decision Sciences Institute, San Diego, CA. (November 2010).

## **Contracts, Grants and Sponsored Research**

### **Grant**

Chuang, Chia-Hung, "SSAC Research Grant," Sponsored by SSAC, The University of North Dakota, \$2,407.23, Funded. (October 21, 2014 - October 31, 2015).

Chuang, Chia-Hung, "The CoBPA Summer Research Grand," \$7,000.00. (May 2015 - August 2015).

Chuang, Chia-Hung, "The CoBPA Summer Research Grand," Sponsored by CoBPA, The University of North Dakota, \$2,500.00. (May 2014 - December 2014).

Chuang, Chia-Hung, "SSAC Travel Fund," Sponsored by SSAC, The University of North Dakota, \$207.22. (September 25, 2014 - November 2014).

Chuang, Chia-Hung (Principal), "The CoBPA Summer Research Grand," Sponsored by CoBPA, The University of North Dakota, \$2,500.00, Currently Under Review. (May 2013 - December 5, 2013).

Chuang, Chia-Hung, Sponsored by Senate Scholarly Activities Committee, The University of North Dakota. (November 2013).

Chuang, Chia-Hung, Sponsored by Senate Scholarly Activities Committee, The University of North Dakota, Funded. (November 2012).

## **Intellectual Contributions in Submission**

### **Journal Articles**

Chuang, C.-H. Finished-goods Inventory Management and Demand-Stimulation Effects: Evidence from U.S. Automobile Dealership Industry. *International Journal of Production Economics*.

## **Research Currently in Progress**

"An Empirical Evidence of Demand Stimulation in Finished-Good Inventory: An US Automobile Industry" (Writing Results).

This project proposes to develop the simultaneous equation systems to examine the finished-goods inventory management in the dealerships of the U.S. automobile industry. The research starts with the classical economic order quantity (EOQ) model. The specification of the classical EOQ model is based on several fundamental assumptions. The extension of the EOQ model has been doing by testing and adjusting the assumptions in the previous literature. The objective of this project is to investigate inventory policies by relaxing the assumption of the constant and deterministic demand, which is an unrealistic assumption underlying the EOQ model.

In this research, a two-equation simultaneous equation system and a three-equation simultaneously system are developed and applied empirically to the U.S. automotive industry. The objectives of these two systems are to answer the following research questions: (1) Is the demand endogenous rather than exogenous? If the demand is endogenous, are the demand and the order quantity in the EOQ model correlated and jointly determined? (2) Do the service rate effect and demand-stimulation effect exist simultaneously in U.S. auto dealerships? The empirical results should demonstrate many avenues for considering new inventory policies incorporating related automobile industry wide variables with the classical EOQ model. The econometric methodology should in many ways to revisit and empirically test the wisdom OM theories in the previous literature. Thus, this research should contribute to the literature on the methodological and empirical fronts. Overall, this research should provide another directions to inventory decision-makers with different managerial implications and strategic improvements.

"Closed-Loop Decentralized Reverse Supply Chain with Remanufacturing: Reverse Supply Chain Performance and Business Performance" (On-Going).

This research project will involve 3 research papers using the survey method. The project was passed by the IRB at University of North Dakota in 2013 and pilot test was conducted. The research project now is under the status of preparing and sending survey data. The analytical methods will be structural equation modeling and regression for survey data.

## **SERVICE**

### **Editorial and Review Activities**

Ad Hoc Reviewer, Papers, "Optimization of a closed-loop supply chain of multi-items with returned subassemblies," *International Journal of Production Economics*. (December 10, 2015 - January 8, 2016).

Ad Hoc Reviewer, Papers, "Optimization of a closed-loop supply chain of multi-items with returned subassemblies," international Journal of Production Economics. (September 12, 2015 - October 11, 2015).

"Green product and process design in supply chains under competition," international Journal of Production Economics. (June 16, 2015 - August 24, 2015).

"Production control problem integrating overhaul and subcontracting strategies for a quality deteriorating manufacturing system," international Journal of Production Economics. (June 11, 2015 - July 9, 2015).

"Optimization of a closed-loop supply chain of multi-items with returned subassemblies," international Journal of Production Economics. (April 5, 2015 - May 24, 2015).

Ad Hoc Reviewer, Papers, "Consumer Preference Mismatch and Channel Choice Decisions under Competition," International Journal of Production Economics. (November 25, 2014 - January 9, 2015).

Ad Hoc Reviewer, Papers, "Production control problem integrating overhaul and subcontracting strategies for a quality deteriorating manufacturing system," International Journal of Production Economics, 1 review. (August 14, 2014 - October 1, 2014).

Ad Hoc Reviewer, Papers, "Information and Management," Information and Management. (June 6, 2014 - July 8, 2014).

Ad Hoc Reviewer, Papers, "European Journal of Operational Research," 1 review. (January 27, 2014 - March 26, 2014).

Ad Hoc Reviewer, Papers, "The Impacts of Information Technology on Total Factor Productivity: A Look at Externalities and Innovations," International Journal of Production Economics. (January 24, 2014 - March 15, 2014).

## **General Service**

### **College**

The Dean's Advisory Committee. (August 2015 - Present).

Committee Member, Technology Committee, Member. (November 2013 - Present).

The Alice Clark Mentoring Program: Second Year Program, Member. (September 2013 - May 2014).

### **Department**

Committee Member, Assurance Assessment in SC&OM. (September 2012 - Present).

Attendee, Meeting, Department Meeting, Member. (August 2012 - Present).

Co-Faculty Advisor, The Fifth Annual General Motors/Wayne State University Supply Chain Case Competition, Faculty Advisor to the supply chain student case competition team. (September 2015 - October 11, 2015).

### **Other**

The International Chinese Information System Association, Secretary. (November 2014 - November 2015).

**The University of North Dakota**

Attendee, Meeting, The Alice Clark Mentoring Program, Member. (August 2012 - May 2013).