

Dr. Matt D. Lindsey
Professor

CURRICULUM VITAE
Five Year Data as of December 31, 2023
With Historical Education
And Professional Employment

PROFESSIONAL ADDRESS

Stephen F. Austin State University
Management & Marketing
BUSI - R.E. McGee Business 403A
Nacogdoches, TX 75962
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EDUCATION

PHD, 2007.

Institution: University of North Texas
Specialization/Major: Management Science
Dissertation: Reliable prediction intervals and Bayesian estimation for demand rates of slow-moving inventory
Honors: Summa cum laude

MBA, 2000.

Institution: Stephen F Austin State University
Specialization/Major: Management

BS, 1990.

Institution: Texas A&M University
Specialization/Major: Engineering Technology

PROFESSIONAL EMPLOYMENT

Department Chair

Stephen F Austin State University, August 2017 - Present
Position Description:
Serve as Management and Marketing Department Chair

Associate Professor

Stephen F Austin State University, September 1, 2014 - Present
Position Description:
Promoted to Associate Professor

Interim Department Chair

SFASU Business Communications and Legal Studies Department, September 1, 2014 - August 16, 2016
Position Description:
Serve as Interim Department Chair

Assistant Professor

Stephen F. Austin State University, September 1, 2009 - August 31, 2014

Position Description:

Promoted to Associate

Assistant Professor

The University of Texas at Tyler, September 1, 2005 - August 31, 2009

Position Description:

Assistant Professor in College of Business, taught Operations Management and Quantitative Methods

Teaching Fellow

The University of North Texas, September 1, 2001 - August 31, 2005

Position Description:

Teaching Fellow for BCIS department at UNT while working on PhD.

Quality Manager

Citation Texas Foundries, July 1, 1999 - August 31, 2001

Position Description:

Last served as Quality Manager at Citation Texas Foundries in Lufkin Texas.

Sales Administration Manager

Citation Mansfield Foundry, January 1, 1998 - June 30, 1999

Position Description:

Sales Administration Manager at Citation Mansfield Foundry in Mansfield, Ohio

Various Management Positions

Citation Texas Foundries, June 8, 1990 - December 31, 1997

Position Description:

Various management positions at foundry in Lufkin Texas

TEACHING & RESEARCH INTERESTS

Teaching Interests:

Operations Management

Quantitative Methods

Research Interests:

Forecasting intermittent demand

Quality Management

PUBLICATIONS

Lindsey, M. (2019). Effects of Delayed Demand on Intermittent Forecasting. *Federation of Business Disciplines Journal*, 2019 Volume 8(2), 4-10.

<https://www.fbdonline.org/Documents/lindsey%20pavur.pdf>

Abstract:

Intermittent forecasting methods, such as Croston's Method, are recommended when slow-moving demand is presence. Understanding how to classify the type of slow-moving demand may have a substantial effect on the methodology. In this study, a simulation experiment is performed to illustrate the effect of delayed demand. That is, if demand really occurs every period, but is only realized in certain periods, then there is cumulative demand. Demand is realized as the result of a sum of random variables where the number of random variables is the realization of a Poisson random variable and represents a time component. A similar approach is used in this study to generate data to gain insight into the performance of simple exponential smoothing forecast, Croston's method forecast. This study looks a type of intermittent demand that might be considered "lumpy."

Lindsey, M. (2023). *TRACKING COMMON WEAKNESS RATES IN SOFTWARE VULNERABILITIES*. Houston, TX: SWDSI.

Abstract: Knowledge of trends related to software vulnerabilities provides managers with the ability to allocate necessary resources to address cyber security risks. Information from the National Vulnerability Data Base is used in this study. This data set consists of a variety of scores that are computed for several identified vulnerabilities to inform managers of their severity, likely access points, and authentication. A general base score is computed as well. This paper analyzes the two computational versions of the base score to determine if either yields unique information or if they just provide similar information on a different scale.

Lindsey, M. (2022). *ESTIMATION OF VULNERABILITIES RATES IN SOFTWARE OPERATING SYSTEMS*. New Orleans, LA: Southwest Decision Sciences Institute.

Abstract: The ability to forecast software vulnerabilities allows managers to determine what resources might be needed to address possible security risks. Some software vulnerability data exhibits features of intermittent demand. This paper explores the applicability of techniques suited for forecasting intermittent data on software vulnerability data. Information from the National Vulnerability Data Base for two browsers are examined for vulnerabilities related to the Safari and Firefox browsers from 2015 to 2020.

Lindsey, M. (2022). *A Decision Rule for Selecting Optimum Forecasting Methodology: Applied to Australian Fire Forecasting* (vol. 2022). Houston, TX: Decision Sciences Institute.

Abstract: Managing wildfires is a challenge in many parts of the world. The ability to forecast the average number of outbreaks is important for first responders, health care workers and the general public. The ability to adapt the forecasting procedure and change forecasting methodology based on a proposed switching rule is important for fire managers as well as minimizing environmental, societal and economic threats from wildfires. A hybrid methodological approach will be applied to forecasting average outbreak of wildfires using data from the Global Fire Emissions Database from 2002 to 2018.

Lindsey, M. (2021). *Croston's Method: 50 years of forecasting intermittent demand* (vol. 2021). Houston, TX: Decision Sciences Institute 52nd Annual Conference.

Abstract: In 1972 J.D. Croston proposed an elegant solution to overcoming issues forecasting demand using exponential smoothing. Since that time almost 1000 articles have cited his paper "Forecasting and Stock Control for Intermittent Demands". Furthermore, it has become the main methodology for forecasts used in stock control systems when intermittent demand is present. This paper will analyze the 947 papers from Google Scholar that cited the work since it was published. An analysis using Contextual Analysis was used to analyze the abstracts and identify research clusters.

Lindsey, M. (2020). *Detecting Shifts in Distributions of Search Inquiries: A Simplified Tool to Assess Influenza Averages* (vol. 2020). Houston, Texas: DECISION SCIENCES INSTITUTE.

Abstract: The ability to build a model to identify above average flu seasons can provide hospital managers important information to schedule limited resources effectively. In addition business managers and educators can anticipate when absenteeism will be above historical averages due to flu sickness. While the model is built using Google searches for "influenza", it could possibly be applied to other Influenza Like Illnesses (ILI)s that are searched for on the search engine. Many sophisticated methodology has been used in modeling ILI outbreaks. The approach in this paper is designed to address assessments what is considered "average" for a flu season.

Lindsey, M. (2020). *Effects of Method and Distribution on Forecasting with Obsolescence* (vol. 2020). San Antonio, Texas: Southwest Decision Sciences.

Abstract: Intermittent demand forecasting methods, such as Croston's Method, are recommended when slow-moving demand occurs. Special cases of slow-moving demand deserve additional attention to insure the optimal forecasting. Obsolescence is an example of a special case. Often times when a particular SKU is going obsolete, the demand rate is decreasing overtime, so it is not constant as assumed in Croston's Method and should be

investigated. Croston's method and two extensions are each examined with varying distributions with decreasing demand rates that approach but do not reach obsolescence.

- Lindsey, M. (2019). *Exploring Forecasting Methodology With Switching Rule For Periods Of Slow And Fast Demand* (vol. 2019, pp. 12). Houston, TX: DECISION SCIENCES INSTITUTE.
Abstract: Selecting the optimal forecasting methodology when demand patterns change from slow-moving demand to fast may benefit the inventory manager by reducing cost and increasing customer satisfaction. This research assesses an approach that uses the probability of demand and the size of the demand to determine the appropriate forecasting methodology. Simulations are conducted to assess the proposed methodology in choosing Croston's method or SES. Practitioners need guidance to help determine the proper forecasting methodology. The proposed procedure outperforms either the Croston method or Single Exponential Smoothing in this simulation.
- Lindsey, M. D. (2018). *An Experimental Study of Croston's Forecasting Method under Cross Correlation Conditions* (vol. 2018). Chicago, IL: DECISION SCIENCES INSTITUTE.
Abstract: Croston's method (1972) has shown promise in forecasting average demand per period for items with intermittent demand. A variety of modified procedures have been proposed. This paper examines how Croston's method and Croston's method corrected for bias performs when demand is correlated with the time between demands. In addition, we assess the performance under two distribution for time between demands. Results reveal that the distribution for the time between demands may have a stronger effect on the performance of these methods.
- Lindsey, M. (2018). *Revisiting the Assumption of Geometric Distribution in Modeling Intermittent Demand* (vol. 2018). Albuquerque, NM: SOUTHWEST DECISION SCIENCES INSTITUTE.
Abstract: The majority of research related to intermittent demand has used a geometric distribution for the interval between demands. Many articles investigate the effect of the distribution of the demand when it occurs on estimates of the population demand per period. However, a gap in the literature occurs in examining the effect of the distribution for the interval between demands. This research will investigate how popular forecasting techniques for intermittent demand perform when certain discrete Beta-Binomial distributions model the distribution of the interval between demands instead of the geometric distribution. Single Exponential Smoothing, Croston's method, and the Syntetos Boylan Approximation (SBA) Bias Corrected Croston Method are investigated with various demand distributions.

CONFERENCE PRESENTATIONS

- Stoehr, L. E. (Discussant), Lindsey, M. (Discussant), Straub, S. M. (Discussant), Ezelle-Thomas, V. M. (Discussant), Camp CTL, "Beyond Study Abroad: Intercultural Experiences for Students, A Faculty Panel", SFASU's Center for Teaching and Learning / Office of International Programs, Nacogdoches, Texas. (August 10, 2022).
Abstract: Presented to faculty who are interested in study abroad considerations in leading a completely faculty-planned and led international study trip with SFA students.
- Lindsey, M. (Presenter & Author), DECISION SCIENCES INSTITUTE ANNUAL MEETING, "Detecting Shifts in Distributions of Search Inquiries: A Simplified Tool to Assess Influenza Averages", DECISION SCIENCES INSTITUTE, Houston/Virtual Online. (November 15, 2020).
Abstract: The ability to build a model to identify above average flu seasons can provide hospital managers important information to schedule limited resources effectively. In addition business managers and educators can anticipate when absenteeism will be above historical averages due to flu sickness. While the model is built using Google searches for "influenza", it could possibly be applied to other Influenza Like Illnesses (ILI)s that are searched for on the search engine. Many sophisticated methodology has been used in modeling ILI outbreaks. The approach in this paper is designed to address assessments what is considered "average" for a flu season.

Lindsey, M. (Author Only), Rogers, P. P. (Presenter & Author), Southwest Decision Sciences Institute Annual Meeting, "Assessing Experiential Learning in Business Policy Courses", Southwest Decision Sciences Institute, San Antonio Texas. (March 13, 2020).
Abstract: Assessment data was analyzed and presented to assess experiential learning in a business policy course.

Lindsey, M. (Presenter & Author), Southwest Decision Sciences Conference, "Effects of Method and Distribution on Forecasting with Obsolescence", Southwest Decision Sciences Institute, San Antonio, TX. (March 12, 2020).
Abstract: Intermittent demand forecasting methods, such as Croston's Method, are recommended when slow-moving demand occurs. Special cases of slow-moving demand deserve additional attention to insure the optimal forecasting. Obsolescence is an example of a special case. Often times when a particular SKU is going obsolete, the demand rate is decreasing overtime, so it is not constant as assumed in Croston's Method and should be investigated. Croston's method and two extensions are each examined with varying distributions with decreasing demand rates that approach but do not reach obsolescence.

Rogers, P. P. (Presenter & Author), Lindsey, M. (Author Only), Decision Sciences Institute Annual Meeting - New Orleans, "Assessing applied business concepts: How do we know they are learning?", Decision Sciences Institute, New Orleans, LA. (November 2019).
Abstract: We explore assessment results of recent curriculum changes. Based on research and advisory board feedback, undergraduate program student learning outcomes were modified. New assessment instruments were necessary to determine student attainment for the new outcomes. Three semesters of data were analyzed and results discussed.

Lindsey, M. (Presenter & Author), DECISION SCIENCES INSTITUTE Conference, "Exploring Forecasting Methodology With Switching Rule For Periods Of Slow And Fast Demand", DECISION SCIENCES INSTITUTE, New Orleans, LA. (November 20, 2019).
Abstract: Selecting the optimal forecasting methodology when demand patterns change from slow-moving demand to fast may benefit the inventory manager by reducing cost and increasing customer satisfaction. This research assesses an approach that uses the probability of demand and the size of the demand to determine the appropriate forecasting methodology. Simulations are conducted to assess the proposed methodology in choosing Croston's method or SES. Practitioners need guidance to help determine the proper forecasting methodology. The proposed procedure outperforms either the Croston method or Single Exponential Smoothing in this simulation.

Lindsey, M. (Presenter & Author), Southwest Decision Sciences Conference, "EFFECTS OF DELAYED DEMAND ON INTERMITTENT FORECASTING", Southwest Decision Sciences Conference, Houston, TX. (March 15, 2019).
Abstract: Intermittent forecasting methods, such as Croston's Method, are recommended when slow-moving demand is presence. Understanding how to classify the type of slow-moving demand may have a substantial effect on the methodology. In this study, a simulation experiment is performed to illustrate the effect of delayed demand. That is, if demand really occurs every period, but is only realized in certain periods, then there is cumulative demand. A compound Poisson random variable is the result of a sum of random variables where the number of random variables is the realization of a Poisson random variable. A similar approach is used in this study to generate data to gain insight into the performance of simple exponential smoothing forecast, Croston's method forecast, and two modifications of Croston's method to correct for bias. Some results are counter-intuitive.

CONSULTING

Texas Certified Public Manager Program, SFASU Campus, approximately 12 hours spent for the year. (January 2, 2014 - Present).

Provide various courses for SFA Texas Certified Public Manager Program and serve on advisory board.

TEACHING EXPERIENCE (Two-year)

- Stephen F. Austin State University, Fall 2023
SFAS 1101 32, New Lumberjack Exp
MGMT 5371 720, Operations Management
- Stephen F. Austin State University, Summer 2023
MGMT 5375 1, Study Abroad: Portugal
- Stephen F. Austin State University, Spring 2023
MGMT 3380 600, Business Analytics
MGMT 4170 600, Study Abroad: Portugal
MGMT 5375 1, Study Abroad: Portugal
- Stephen F. Austin State University, Fall 2022
SFAS 1101 22, New Lumberjack Experience
MGMT 5371 720, Operations Management
- Stephen F. Austin State University, Summer 2022
MGMT 5375 1, Advanced Graduate Studies
MGMT 4170 1, Study Abroad - Paris France
- Stephen F. Austin State University, Spring 2022
MGMT 3380 1, Business Analytics
- Stephen F. Austin State University, Fall 2021
MGMT 5371 720, Operations Management
SFAS 1101 22, Success Seminar-Business RLC
- Stephen F. Austin State University, Spring 2021
MGMT 3380 600, Business Analytics
- Stephen F. Austin State University, Fall 2020
MGMT 5371 720, Operations Management
- Stephen F. Austin State University, Spring 2020
MGT 380 1, Business Analytics
- Stephen F. Austin State University, Fall 2019
SFA 101 25, Freshman Seminar
MGT 571 720, Operations Management
- Stephen F. Austin State University, Spring 2019
MGT 380 1, Business Analytics
MGT 475 4, Special Problems in Management
- Stephen F. Austin State University, Fall 2018
SFA 101 32, Freshman Seminar
MGT 480 1, Sports Analytics
- Stephen F. Austin State University, Maymester 2018
MGT 575 1, Advanced Graduate Studies
MGT 470 1, Topics in Management

Stephen F. Austin State University, Spring 2018
MGT 380 1, Business Analytics

PROFESSIONAL SERVICE OR VOLUNTEER WORK

Chairs Forum, Member, approximately 24 hours spent for the year. (September 2017 - Present).

Activity Description
Provided input to administration
Provided input to administration

LIT TEAM, Member, approximately 20 hours spent for the year. (September 1, 2021 - August 29, 2022).

Activity Description
Served on LIT team for Work Week
Served on LIT team for Work Week

University Hearing Board, Member, approximately 40 hours spent for the year. (May 17, 2016 - May 2020).

Activity Description
serve on Hearing Boards as needed
serve on Hearing Boards as needed

SFA 101 Advisory Panel, Member, approximately 12 hours spent for the year. (January 2013 - December 2018).

Activity Description
Served as advisory board for SFA 101 coordinator
Completed accreditation process and recommended updates

Study Abroad Portugal, Coordinator, approximately 200 hours spent for the year. (April 1, 2022 - May 30, 2023).

Activity Description
Organized, recruited and executed Study Abroad trip to Portugal
Organized, recruited and executed Study Abroad trip to Portugal

Study Abroad Paris, Coordinator, approximately 200 hours spent for the year. (April 1, 2021 - May 24, 2022).

Activity Description
Planned, organized and executed trip for 25 to Paris.
Planned, organized and executed trip for 25 to Paris.

Study Abroad Coordinator, Coordinator, approximately 100 hours spent for the year. (May 2019 - April 2020).

Activity Description
Planned trip to Poland, Czech Republic and Germany and recruited 38 students
Cancelled trip due to Covid

Study Abroad Coordinator, Coordinator, approximately 200 hours spent for the year. (May 2018 - May 2019).

Activity Description
Recruited 44 students for study abroad trip
Study abroad to Germany, Austria and Italy

Study Abroad UK and Iceland, Coordinator, approximately 120 hours spent for the year. (May 2017 - May 2018).

Activity Description
Study abroad to Iceland, Ireland and Scotland

Study abroad to Iceland, Ireland and Scotland

Operations Management Course Coordinator, Coordinator, approximately 8 hours spent for the year.

(September 2013 - Present).

Activity Description

Coordinate foundation course

selected text books, etc..

Nacogdoches Rotary, Nacogdoches, TX. Member, approximately 120 hours spent for the year, (January 2020 - Present).

Activity Description

Support local Rotary Projects

Support local Rotary Projects

East Texas Manufacturing Group, Nacogdoches, TX. Committee Member, approximately 30 hours spent for the year, (April 2019 - Present).

Activity Description

I am one of the SFA representatives for the East Texas Manufacturing Alliance.

Work with local manufacturers. Held a manufacturing day event.

Boy Scout National Committee, Dallas, TX. Advisor, approximately 200 hours spent for the year, (April 2018 - Present).

Activity Description

Advise Area Committee for Scouting Honor Society for 10 councils in North half of Texas,

Arkansas and Louisiana

Training, Area camping event,

Boy Scout Troop 333, Tyler, TX. Committee Member, approximately 40 hours spent for the year, (January 2018 - Present).

Activity Description

Coordinate troop activities and organize high adventure

Coordinate troop activities and organize high adventure

Southwest Decision Science Conference, Oklahoma, OK. Reviewer, approximately 6 hours spent for the year, (October 2012 - Present).

Activity Description

Reviewed Papers for Conferences

Reviewed Papers for Conferences

Decision Science Institute. Member, approximately 24 hours spent for the year, (January 1, 2009 - Present).

Philmont Staff Association, BSA, Cimarron, TX. Officer, President, approximately 250 hours spent for the year, (June 1, 2021 - December 31, 2022).

Activity Description

Oversee activities with an annual budget of \$400,000+ and evaluate Executive Director and staff and work with board of directors to achieve the mission of the organization to support Philmont Scout Ranch.

A \$1,600,000 Capital campaign

Contributions for fire mitigation support on ranch

\$75,000 in Staff scholarships per year

SW Decision Sciences, Nacogdoches, Texas. Officer, President, approximately 150 hours spent for the year, (March 11, 2020 - March 15, 2022).

Activity Description

Served as organization executive officer

Planned and executed 2021 conference

Federation of Business Disciplines, Monroe, LA. Board of Directors, approximately 24 hours spent for the year, (March 16, 2019 - March 14, 2022).

Activity Description

Serve on board of FBD representing SWDSI
Sponsor spring conference

Journal of Modern Applied Statistical Methods, Detroit, MI. Reviewer, approximately 20 hours spent for the year, (June 1, 2020 - August 1, 2020).

Activity Description

Conducted reviews for Journal of Modern Applied Statistical Methods.
Conducted reviews for Journal of Modern Applied Statistical Methods.

SW Decision Sciences, Nacogdoches, Texas. President Elect, approximately 50 hours spent for the year, (March 20, 2019 - March 10, 2020).

Activity Description

Support SWDSI organization and assist president
Presented 2020 conference

Federation of Business Disciplines Journal, Tyler, Texas. Editor, approximately 12 hours spent for the year, (August 1, 2019 - February 20, 2020).

Activity Description

Served as guest editor for Southwest Decision Sciences Special Issue of the Federation of Business Disciplines Journal winter 2020 edition.
Worked with Pam Roger to produce special journal issue

FBD Journal, Tyler, TX. Editor, approximately 20 hours spent for the year, (August 1, 2019 - December 31, 2019).

Activity Description

Guest Editor for special FBD journal issue with Pam Rogers
Published Special Issue of SWDSI Conference best papers.

Philmont Staff Association BSA, Cimarron, NM. Officer, Treasurer, approximately 200 hours spent for the year, (January 1, 2014 - December 31, 2019).

Activity Description

Treasurer for Staff Association that supports Boy Scout Philmont Scout Ranch. Manage operating and capital campaign funds
Completed 1.4 million dollar capital campaign and worked with executive director to manage operating finances of \$400,000.

Southwest DSI, Houston, TX. Program Coordinator, approximately 40 hours spent for the year, (March 2017 - March 2019).

Activity Description

Program chair for 2017-2019
Program chair for 2017-2018

Southwest Decision Sciences Institute, Houston, TX. Program Coordinator, approximately 60 hours spent for the year, (March 1, 2017 - March 1, 2019).

Activity Description

Program Chair
Program chair elect and program chair for 2019 conference

Boy Scout National Committee, Dallas, TX. Associate Advisor, approximately 200 hours spent for the year, (September 2017 - April 2018).

Activity Description

Advise Area Committee for Scouting Honor Society for 10 councils in North half of Texas,
Arkansas and Louisiana
Training, Area camping event,

Southwest Decision Sciences Institute, Oklahoma City, OK. Committee Chair, approximately 40 hours
spent for the year, (October 1, 2013 - March 2018).

Activity Description

Served as conference track chair 2014, 2015, 2016, 2017, 2018

Recruited, organized and scheduled track papers for conference