Business Economics Program Sessions

Wednesday, April 9, 2025

BUSINESS ECONOMICS

1:30 – 2:45 p.m. ……. 7th Floor

Theme: Topics in Applied Economics (Includes Graduate Student Research)

Chair: Irais Ortiz, Andrews University

The Impact of the Social Security Fairness Act on the Optimal Switching Between Defined Benefit and Defined Contribution Plans

Matthew Kutch, Ohio Northern University

Abstract: The 2025 Social Security Fairness Act (ACT) of 2025 ends the Windfall Elimination Provision (WEP) and Government Pension Offset (GPO). These past provisions impacted Social Security benefits for individuals with earnings subject to Social Security taxes and earning from a pension not subject to Social Security taxes. While participation rates in pension systems in the United States decreased over the last four decades, a significant number of workers continue to participate in these defined benefits retirement plan. Many of these workers have lifetime earnings that include earnings subject to Social Security taxes. This paper considers the optimal timing for an individual to switch between a defined contribution and a defined benefits plan. The primary outcome considered is expected retirement income. The impact of the ending the WEP and GPO is incorporated into the model, including income growth, contribution rate, employer match, and rate of return.

A Multivariate Analysis of the Impact of COVID-19 on the Consumer Price Index by Category in Selected Major Developed Countries

Herimamy Rafaliniony, Andrews University
Jerry Chi, Andrews University
Williams Peprah, Andrews University

Abstract: The global COVID-19 pandemic significantly impacted economies worldwide, leading to varied inflationary trends across different countries and consumer sectors. This study investigates the changes in the Consumer Price Index (CPI) across 12 expenditure categories including food, beverages, clothing, housing, furnishing, health, transport, communication, recreation, education, restaurants, and miscellaneous in six countries: Canada, the United States, Germany, Italy, the United Kingdom, and France. Using secondary data from the International Monetary Fund (IMF) International Financial Statistics Database, a two-way mixed design was employed to explore both within-subjects effects of time period (Pre-COVID-19 vs. Post-COVID-19) and between-subjects effects of country on CPI changes.

A two-way mixed MANOVA with a general linear model (GLM) framework was conducted to examine differences in CPI between the pre- and post-COVID-19 periods. Significant effects were found for both country (Wilks' Lambda = .038, $F(60, 2593.26) = 43.75$, $p < .001$, partial $\eta^2 = .48$) and time period (Wilks' Lambda = .559, $F(12, 553) = 36.42$, $p < .001$, partial $\eta^2 = .44$), with substantial interaction effects between country and time period (Wilks' Lambda = .400, $F(60, 2593.26) = 9.34$, $p < .001$, partial $\eta^2 = .17$). Post-hoc analyses using Scheffe tests revealed that Germany and Italy experienced the most pronounced CPI increases in categories such as food and housing, while Canada and France showed more moderate inflationary trends. In contrast, communication CPI declined significantly in Canada while increasing in the United Kingdom.

A Multivariate Analysis of the Impact of the COVID-19 pandemic on unemployment in the US

Irais Ortiz, Andrews University
Jerry Chi, Andrews University

Abstract: This study will investigate the impact of the pandemic on COVID-19 on multiple indicators in 51 states of the US. Using secondary data from the U.S. Bureau of Labor Statistics database, A Multivariate analysis of Variance (MANOVA) was conducted to assess the differences in unemployment before, during, and after the pandemic. There are three main reasons for unemployment: structural, frictional, and cyclical. Structural unemployment is caused by a mismatch in skills or a loss of interest in available jobs due to consumer preferences and companies acquiring and adapting technology to their different departments. Frictional unemployment occurs when people look for new jobs. Cyclical unemployment occurs due to new policies in the economy (CRS, 2022). Recently, in 2020, the world suffered a pandemic that caused high unemployment worldwide. Unemployment affects the government, corporations, and individuals. When individuals and corporations do not profit, tax payments are reduced. Corporations reduce revenues and consequently lay off employees. The effect on individuals is similar: loss of income and less acquisition. Other effects of unemployment are the increase in crimes and increases in government support through different programs.

BUSINESS ECONOMICS

3:00 – 4:15 p.m. …….. 7th Floor

Theme: Topics in Education Economics

Chair: Matthew Kutch, Ohio Northern University

The Distribution of Grade Probabilities for Undergraduate Economics Students: Model and Survey Evidence

Colin Corbett, Bradley University
Joshua Lewer, Bradley University
Tanya Marcum, Bradley University
Haoran Zheng, Bradley University
Jannett Highfill, Bradley University

Abstract: This paper contributes the optimal grading policy literature by presenting theoretical and empirical evidence supporting the idea that students benefit from grading policies emphasizing grade distribution probabilities instead of average course GPA. The student effort model suggests that utility-enhancing grading systems apply flexible tools like extra credit, and overall student utility is enhanced when flexible grading strategies are employed. Changes in grading policies have disparate effects on different types of students, so instructors should consider how their policies are targeted. A complementary national panel survey of college instructors finds that instructors overwhelmingly view flexibility in grading as beneficial to students.

College Retention, Graduation Rates, and Enrollment

Jeffrey Cline, Purdue University Fort Wayne
Nodir Adilov, Purdue University Fort Wayne

Abstract: The continued decline in college enrollment in the United States will intensify competition among colleges to attract new students. This, in turn, will also increase the impetus for colleges to retain current students. While past work has primarily focused on the examination of best practices for student success and increased retention rates, this paper models the relationships between retention, academic progress, enrollment, and graduation outcomes to generate new policy insights. By calibrating the model using publicly reported data from U.S. colleges, we estimate that the enrollment elasticity of retention in public institutions (77.1%) to be statistically higher than in private not-for-profit (75.9%) and private for-profit (75.6%) institutions, implying that improving retention rates will lead to larger gains in enrollment in public colleges. On average, the theoretical cap on enrollment decline that could be offset by improving first-year retention is around 25%. The model also predicts that an increase in the first-year retention rate in U.S. public institutions from 75.1% to 85% is expected to increase the four-year and five-year graduation rates from 35.6% to 40.3% and from 48.1% to 54.4%, respectively. The findings have important implications for college administrators and policymakers.

A Classroom Assignment Using Real-World Data to Better Understand the Lorenz Curve and Gini Coefficient

Matthew Kutch, Ohio Northern University

Abstract: The paper presents an assignment where students identify real-world data on a topic of their choosing to enhance their understanding of the Lorenz curve and Gini coefficient. Students identify a topic with real-world data for this short project. Student summarize key background information in the topic, identify the unit of analysis in the data, and the measurable outcome used to calculate inequality. Using Excel, students create a Lorenz-like graph and calculate a Gini-like measure of inequality using their real-world data. Students practice critical thinking, visual communication, and analytical skills in this assignment. The connection between Lorenz, Gini, variation, and regression can be included to conclude the presentation. Interesting examples include inequality between Presidents and US States, county-level flu hospitalizations, MLB salaries, Big Ten Football championships, downloads and revenue of TikTok, network Emmy nominations, and global precipitation.

Thursday, April 10,2025

BUSINESS ECONOMICS

8:00 – 9:00 a.m. ……………………………………………………………………………………………………….. 7th Floor

Theme: Graduate Research Session II

Chair: Rabih Al Khatib, Andrews University

Navigating Fiscal Resilience in the Asia-Pacific: A Multivariate Exploration of Government Net Lending and Borrowing Amidst the Covid-19 Crisis

Francky Rakotoarimanga, Andrews University
Jerry Chi, Andrews University

Abstract: COVID-19 challenges the effectiveness of institutional risk mitigation strategies. Disaster risk management and reduction are crucial in influencing a country's development across both micro and macro levels. The Asia and Pacific region, comprising 37 countries, was one of the first areas to encounter the economic repercussions of COVID-19, which initially emerged in this region. Examining the trends in General Government Net Lending/Borrowing (GGnLoB) within this region is essential for comprehending the policies countries implemented to address the financial challenges resulting from the pandemic. This study employs Multivariate ANOVA models to assess GGnLoB across 37 countries during pre-COVID, during-COVID, and post-COVID periods, with an emphasis on policy interventions and the forecasting of fiscal recovery. The results underscore the significance of prompt fiscal interventions and offer essential insights for policymakers focused on developing resilient economies that can endure future crises. The research illustrates the essential relationship between fiscal policies and economic stability within the Asia-Pacific region

Analyzing Policy Interventions Using Multivariate Analysis

Rabih Al Khatib, Andrews University

Abstract: This research paper investigates the effectiveness of policy intervention stages on macroeconomic and social indicators using a Multivariate Analysis of Variance (MANOVA) framework. The study evaluates the Country Policy and Institutional Assessment (CPIA) stages across three intervention phases: Pre-CPIA Improvement, CPIA Reform Implementation, and Post-CPIA Reform Consolidation. The analysis covers 27 countries, assessing changes in economic and social outcomes. While the multivariate tests show no significant overall differences across stages, univariate analyses highlight notable variations in specific countries, suggesting that targeted interventions during critical phases yield measurable improvements.

9:15 – 10:30 a.m. ……. 7th Floor

Theme: Graduate Research Session III

Chair: Hlib Miasnychenko, Roosevelt University

The Impact of GDP, Geographic Region, and Development Status on Commodity Export Price Index: A Comprehensive Multivariate Analysis

Jerry Chi, Andrews University
Chao Min Lin, Andrews University

Abstract: This study investigates the trends and determinants of the Commodity Export Price Index across four major regions—Asia, Americas, Europe, and Africa—over ten years (2014-2023), distinguishing between developed and developing countries. Using descriptive statistics, multivariate analyses, and graphical interpretations, the research reveals that GDP significantly impacts the Commodity Export Price Index, but its effect varies by region. Asia, particularly developed countries, showed consistently higher indices, while developing countries in the Americas and Africa experienced significant variability, reflecting economic vulnerability. During global disruptions like COVID-19, a temporary convergence in export prices occurred, but long-term trends indicate region-specific patterns. The study concludes that development status alone cannot explain these variations, suggesting the need for tailored regional strategies.

Global Monetary Responses to the 2008 Financial Crisis: An Analysis of Interest Rate Adjustments Across Fourteen Countries

Kevin Lembono, Andrews University
Jerry Chi, Andrews University

Abstract: This study examines the impact of the 2008 Global Financial Crisis on central bank interest rates across fourteen countries (C1 to C14), using data spanning from 1993 to 2022. Our analysis categorizes the timeline into three segments: pre-crisis (1993-2006), during the crisis (2007-2009), and post-crisis (2010-2022). Utilizing multivariate analysis techniques including Pillai's Trace, Wilks' Lambda, and Hotelling's Trace, we assess the statistical significance of changes in interest rates over these periods. The results indicate a significant reduction in interest rates during the crisis, with this downward trend persisting into the post-crisis period. For instance, the Russian Federation (C10) saw a reduction from an average interest rate of 21.712% pre-crisis to 9.798% post-crisis, while Brazil (C11) observed a decrease from 65.052% to 35.982%. The study confirms that the 2008 crisis had a profound and lasting impact on global monetary policies, as central banks across the analyzed nations lowered rates significantly to counteract the recessionary effects and stimulate economic recovery. This comprehensive analysis provides insights into the dynamic responses of central banks during one of the most challenging periods in recent financial history.

Do Industries Shape Business Survival? A Mixed-Methods Perspective

Hlib Miasnychenko, Roosevelt University

Abstract: This study investigates the impact of industry affiliation on the survival rates of U.S. businesses from 1994 to 2023. Using data from the Bureau of Labor Statistics, it applies advanced statistical methodologies, including Linear Mixed Effects (LME) models and ANCOVA, to determine whether survival rates vary significantly across industries. Findings reveal that industry affiliation accounts for a substantial proportion of the variance in survival rates, with sectors such as Agriculture, Utilities, and Management demonstrating statistically significant higher resilience compared to Information. The study highlights the importance of industry-specific dynamics, the role of external pressures, and temporal trends in shaping business longevity. These insights contribute to strategic planning and policy development aimed at fostering resilience in high-risk industries.

BUSINESS ECONOMICS

10:45 a.m. – 12:00 p.m. ………………………………………………………………………………………………….. 7th Floor

Theme: Special Topics in Applied Macroeconomics

Chair: Abdus Samad, Utah Valley University

The influence of COVID-19 on Employment and Valued Added at factor cost in the Facility Service Sector in the EU

Eva Stopajnik, Vienna University of Technology
Alexander Redlein, Vienna University of Technology

Abstract: Until now it is unclear how COVID-19 affected the Facility Services (FS) industry. Most studies about the FS sector and COVID-19 rather emphasize on hygiene measures or new ways of working. This study is a cross sectoral analysis (including the FS sector) about employment and value added at factor cost in the EU and selected European countries before and in the first year of the corona pandemic. The European norm EN 15221-4 defines which services are FS. Eurostat offers data about employment, value added at factor cost and other economic indicators for detailed economic activities. The list of FS was matched to the list of economic activities and the relevant activities for FS were picked to estimate the numbers of employees and value added in FS. Results were compared to different economic sectors. Compared to the rest of economy employment in FS decreased less in the EU in 2020. In Italy and Spain, the number of employees in FS even increased in 2020. In most countries value added of the FS industry also decreased less than the rest of economy. In Austria and Romania value added of FS even increased. The sector that was hit most was the food and accommodation sector.

The Impact of Access to Financial Services on Economic Growth in Developing Countries

Samuel Afriyie, Park University

Abstract: Sustainable economic development builds upon financial inclusion by providing citizens the required financial services including storage facilities and borrowing options and insurance protection. This research evaluates financial inclusion effects on economic growth across China, Ukraine, Mexico, Brazil and Kenya from 2009 until 2023. This research analyzes financial inclusion measurements (domestic credit along with bank account possession) by employing World Development Indicators (WDI) data to conduct both descriptive studies and multiple regression models as well as correlation analysis and IV regression in combination with panel data analysis for investigating economic outcome (GDP growth and unemployment) patterns. Research findings support Financial Development Theory and Endogenous Growth Theory together with Credit Rationing Theory where financial inclusion creates employment opportunities and fosters entrepreneurship but these effects are balanced through macroeconomic aspects that consist of inflation levels and market access and state expenditures. Financial institutions should implement integrated policies which combine enhanced infrastructure with strong regulations and education programs and partnerships and macroeconomic stability to optimize inclusion benefits. The research acknowledges its limitations because it depends on secondary data and studies developing economies thus setting directions for future academic work.

Does Monetary Policy have Impact on Islamic Banks Deposit Mobilizations: An IS-LM Approach and an Evidence from Bahrain

Abdus Samad, Utah Valley University

Abstract: The study of the monetary policy impact on Bahrain's economy, particularly focusing on Islamic banks' deposits, is important for several reasons. Bahrain has established itself as a leading financial hub in the Middle East, with Islamic banking playing a significant role in its economy. Understanding how monetary policy influences the deposit mobilization of Islamic banks provides crucial insights into the dynamics of Bahrain's financial system.

Islamic banks operate under distinct principles that avoid interest-based transactions and instead rely on profit-sharing and ethical investments. This makes their response to conventional monetary policy tools, such as interest rate changes, unique compared to conventional banks. By studying how these banks' deposits are affected by monetary policy shifts, this research can identify potential challenges and opportunities for the stability and growth of Islamic banking in Bahrain.

The study of the impact of monetary policy on Bahrain's Islamic banks' deposit mobilization is crucial for both academic and policy-oriented reasons. Islamic banks play a key role in Bahrain's financial sector, operating under a distinct set of principles that prohibit interest (riba) and encourage profit-sharing and ethical investments. Understanding how monetary policy—traditionally designed around conventional interest-based systems—affects deposit mobilization in these banks can offer insights into the broader interaction between Islamic finance and macroeconomic stability.

This research helps fill a gap in the existing literature by shedding light on how the unique characteristics of Islamic banks influence their responsiveness to monetary policy changes. The findings could have significant implications for policymakers who need to craft strategies that accommodate both Islamic and conventional financial institutions in Bahrain's dual banking system. In addition, the study will offer comparative insights that could be useful for other countries with growing Islamic banking sectors, thus contributing to the global discourse on Islamic finance and its role in economic development.

BUSINESS ECONOMICS

1:30 – 2:45 p.m. …….. 7th Floor

Theme: Topics in Applied Microeconomics

Chair: Dan Friesner, University of Akron

Empirically Disentangling Non-Profit Operating Objectives from Inefficient Production
Dan Friesner, University of Akron

Abstract: A vast literature exists in the fields of economics and operations research that attempts to evaluate the efficiency of production processes. Panwar, Olfati, Pant, and Snasel (2022), for example, identified over 9,000 papers published between 1981 and 2021 that utilize or reference some form of efficiency analysis. A critical component of each method, and application, of efficiency analysis is the existence of an objective that defines the term “efficiency”. The challenge inherent in this assumption is that market structures, legal considerations, and institutional factors often conflict with presumed firm objectives. To date, few methodologies in the literature have been proposed to assess the efficiency of production in a way that simultaneously accounts for the ramifications of exercising market power, and/or firms operating in markets with varied structural characteristics that are not consistent with perfectly competitive markets. This manuscript adapts the methodology of Tofallis (2001) to address this issue. As an illustrative example, the methodology is applied to a sample of primary care clinics operating in the state of California in 2023.

Do Survey Items Assessing Specific Experiences Yield More Informative Responses than Items Assessing More General Experiences?

Dan Friesner, University of Akron
Carl Bozman, Gonzaga University

Abstract: Organizations that produce and sell services are keenly interested in the satisfaction of their customers with those services. Because customer satisfaction with a service is a fundamentally subjective, perceptual evaluation, customer satisfaction surveys are one of the most efficient and effective means to characterize and assess consumer satisfaction. Designing surveys that accurately, precisely, and efficiently quantify customer satisfaction are critical component of the marketing of those services. It is especially difficult to design customer satisfaction surveys for products that are a complex bundle of services. It is unclear whether customers are better able to characterize their satisfaction with specific services within the bundle, or an overall (bundled) set of services. This manuscript uses information entropy methods to assess the quantity of information contained in customer satisfaction surveys that elicit perceptions of an overall bundle of services, relative to otherwise identical survey items that elicit perceptions about a more narrowly defined set of services sold as a part of the overall bundle. The methodology is applied to survey data drawn from an initiative to assess alumni satisfaction with their college experience.

Do the Distribution of Exempt-Eligible Assets and the Choice of Exemption Schedules Lead to Different Chapter 7 Bankruptcy Outcomes?

Donald Hackney, Gonzaga University
Dan Friesner, University of Akron
Matthew McPherson, Gonzaga University

Abstract: The goal of the Chapter 7 bankruptcy process is to allow U.S. households who i) have average monthly incomes below the median income in their state of residence; and ii) who are either cash flow or balance sheet insolvent, to liquidate (non-exempt) assets and use the proceeds (net of attorney and court administration costs) to repay outstanding obligations. Many (but not all) remaining financial obligations are discharged by the Court. In doing so, households whose incomes are below the state's median (and who are presumably unable to repay their debts within a reasonable time frame) are allowed a means to efficiently and effectively re-establish themselves financially. A critical policy issue within the Chapter 7 bankruptcy process is the use of asset exemptions. In particular, the U.S. Bankruptcy Code allows the filer to retain certain types of assets that are (presumably) necessary for the filer to sustain themselves financially during, and after the resolution of, the bankruptcy process. Examples of asset exemptions including a filer's home, automobile, clothes, and other household goods. Concomitantly, the use of asset exemptions shields those assets from seizure and liquidation, thereby increasing the social costs of the bankruptcy process. The distribution of assets that are eligible for exemption vary across states. At the current time, 36 states require filers to use an exemption schedule defined by the state in which an individual files for bankruptcy protection. The remaining 14 states allow the filer to choose to exempt assets under the state guidelines, or Federal guidelines. Several important policy questions remain unresolved in the literature. First, while exemptions allow filers to retain their assets at the conclusion of the Chapter 7 bankruptcy process, there is little empirical evidence suggesting whether the distribution of different exempt eligible assets, inclusive of the value of these assets relative to the exemption limit in each of these types of assets, allow filers to reach a fundamentally different outcome from bankruptcy. For example, are filers with assets disproportionately held in the form of homes and household items, fundamentally different from, and less comparable to, filers whose assets are held in the form of automobiles and personal effects? As a corollary, in debtor choice states, does the filer's choice of exemption guidelines lead to fundamental differences in bankruptcy filings and the outcomes of those filings? If such differences exist, the implication is that different groups of bankruptcy filers are made disproportionately better or worse off through the bankruptcy process than other groups of filers. The current manuscript adopts the financial statement comparability methodology developed by Brajcich and Friesner (2022) and Friesner and Brajcich (2023) to address these questions. More specifically, we apply their methodology to Chapter 7 bankruptcy filers in the Eastern District of Washington State during the 2023 and 2024 calendar years. The methodology is used to identify peer groups of bankruptcy filers, based on their reported distributions of assets (both exempt and non-exempt) and liabilities. We investigate whether filers who report different distributions of exempt eligible assets are statistically distinct from other types of Chapter 7 filers. Additionally, we investigate whether the choice to use state or federal exemptions impacts peer group formation. The findings of the study are twofold. First, the distribution of asset exemptions plays a statistically significant role in the formation of peer groups. This implies that filers who report specific combinations of exempt and non-exempt assets, represent a fundamentally distinct group of Chapter 7 filers. By extension, this implies that these filers fare differently at the conclusion of the bankruptcy process compared to other Chater 7 filers. Second, we find evidence that filers who choose to use federal exemptions are a statistically distinct peer group as well, which also indicates a different outcome for this group of filers viz-a-viz other Chapter 7 filers.

Are Hospitals Becoming More or Less Reliant on Specialized and Specialty Care Revenues?

Cassandra Henson, Widener University
Dan Friesner, University of Akron

Abstract: The purpose of this manuscript is to conduct an empirical assessment that assesses whether general, acute care hospitals with specific operating characteristics, institutional characteristics and/or market specific factors have consistently shifted reliance on revenues towards specialty and ambulatory care services. The data used in the study come from the American Hospital Association's Annual Survey over the years 2018-2023. Multivariate regression (two sided Tobit) analysis is used to assess whether the share of hospital revenues derived from specific ambulatory and/or specialty care services has changed over the duration of the panel, holding other specified regressors constant. The results of the study shed light on how hospitals respond to regulatory and other market pressures to ensure continued financial viability.

BUSINESS ECONOMICS
3:00 – 4:15 p.m. …….. 7th Floor

Theme: Topics in Microeconomics

Chair: Elva Resendez, Purdue University Fort Wayne

Risk, Reward, and Responsibility: CEO Compensation Structures and CSR

Donghoon Shin, University of Wisconsin Whitewater

Abstract: This study examines whether CEOs with different types of equity-based incentives devote differently to CSR. Based on the difference between two equity-based incentives in promoting CEOs' risk-taking strategic initiatives, we find that firms led by CEOs with a risk-based incentive (i.e., *Vega*) devote more to CSR. In contrast, firms led by CEOs with a performance-based incentive (i.e., *Delta*) dedicate less to CSR since subtle differences in equity-based compensation designs affect the CEOs' risk preferences and long-term perspective. We also find that environmental dynamism and a firm's risky strategic investment strengthen the relationship between the CEO incentive types and CSR by affecting CEOs' risk

perception, thus providing further validation of our arguments. These results suggest that using relevant CEO incentive types may encourage or discourage CEOs regarding enhancing a firm's CSR.

Assessing the Economic Impact and Effect on Quality of Life of Fatigue, Pain, and Sleep Disturbance in People Affected by Dysautonomia: A Patient-Reported Outcome Study

Daniel Parisian, The University of North Carolina at Pembroke
Silvia Smith, The University of North Carolina at Pembroke
John O'Dell, The University of North Carolina at Pembroke
Andrew Latham, The University of North Carolina at Pembroke
Holly Hansen, The University of North Carolina at Pembroke

Abstract: This research study aims to test the hypothesis that the triad of symptoms that afflict many dysautonomia patients, fatigue, pain, and sleep disturbances impose a significant financial effect and negatively impact the quality of life of this patient population. Our hypothesis will be tested by meeting four aims: 1) to determine the prevalence of fatigue and associated pain and sleep disturbance in dysautonomia, 2) to determine the financial effect and impact of this triad of symptoms on quality of life, 3) to characterize the relationship(s) among pain, fatigue, and sleep disturbance, and 4) to validate two NIH-PROMIS® and one NEURO QOL questionnaires in dysautonomia. This study will serve as a proof of concept to illustrate that the commonly reported symptoms of fatigue, pain, and sleep disturbances by dysautonomia patients negatively impact quality of life.

Predictions Not Paradoxes: Allais and Ellsberg Reinterpreted

John Stinespring, University of Tampa

Abstract: The assumption of consumer rationality is foundational to standard economics. Yet one of rationality's core axioms has been under attack ever since studies began to show consumers fall prey to choice reversals due to seemingly irrelevant changes when in situations of risk and uncertainty. The Allais Paradox (1953) and Ellsberg Paradox (1961) are the earliest and most famous examples of these irrational choice reversals. Under risk, the Allais paradox is illustrated by giving an agent two options: a gamble or a "sure thing." The gamble has a known probability and the sure thing is its riskless alternative. Under uncertainty, the Ellsberg paradox is similarly illustrated but with an unknown probability replacing the gamble and a "sure probability" replacing the "sure thing". Subjects in both scenarios are shown to reverse their choices under a simple reframing of them. Both authors argue that expected utility theory (EUT) fails to predict these choice reversals and attribute them to a violation of rationality's *independence axiom*.[1] This paper applies utility theory's tools of expected willingness to pay and willingness to accept (EWTP/EWTA) rather than EUT to these two paradoxes to argue no violation of the independence axiom occurs. Each choice reversal is rational because their reframing of the choices creates a relevant qualitative difference in both scenarios. In fact, modeling utility theory with EWTP/EWTA rather than EUT reveals that Allais' and Ellsberg's famous examples should be considered predictions rather than paradoxes of standard utility theory. The paper provides multiple examples to illustrate the implications of these results under familiar situations under risk and uncertainty.

[1] The axiom is also known as the *Savage Independence Principle* or *Sure Thing Principle*. The Allais Paradox is also known as the *common consequence effect* or *common ratio effect*.

A Valid and Reliable Framework for Small Business People Analytics: The Case of Texas Nameplate Company (TNC) and Dale Crownover

Elva Resendez, Purdue University Fort Wayne

Abstract: Identifying and affirming specific metrics on how social capital, network analysis and leader development create the role, scope and value of employee, organization and leader development is critical to HRD development and practice. The proposed piece encompasses the process and scope of such development using an existing federal framework called the Malcolm Baldrige National Quality Award maintained under the US Department of Commerce and created by President Ronald Reagan in 1988 (NIST, 2022). While most of today's people analytics processes focus specifically on metrics and databases, a more comprehensive tool remains available to US companies. With a focus on customer outcomes, leadership, and workforce outcomes, the award showcases best management practices, principles and strategies created by and utilized by people today.

"The Malcolm Baldrige National Quality Award is the highest level of national recognition for performance excellence a US organization can receive" (NIST, 2022).

Winners of the national award overseen by the US Department of Commerce exude organizational excellence in their respective companies and organizations in the categories of manufacturing, service, small business, education, health care, and nonprofit (NIST, 2022). Part of the winner's responsibility is to be recognized and to share best practices as role-model organizations in perpetuity. Part of the application requires an assessment of what has developed in management literature to be called people analytics or relational analytics. By highlighting the case of Texas Nameplate Company and its leader/CEO/President, Dale Crownover, this submission will create an affordable metric for use by small-to medium sized businesses for not only creating a system of metrics, but also for organizational development as a whole.

In leadership development, the role of coaching has successfully been driven by deep values about managers relationships with employees. Leaders must bring out the best in employees (Stowell, 1988). Dale Crownover knows how to motivate people and to bring out the best in them. His family-owned company has two State of Texas awards and two Malcolm Baldrige National Quality Awards to affirm his tremendous reputation for people, performance and quality (LinkedIn, 2022). His company, (TNC) was the first small business in history to win the award twice, first in 1998, next in 2004 (NIST, 2022). Based on a personal interview with the CEO within the last 5 years, the piece focuses on the process used by TNC to continue the tradition of excellence, both globally and locally, the 76-year-old company has come to be known for. More specifically, we look at the metrics involved and the development and implementation of his processes leading to organizational development and excellence.