

**Faculty Research Day
Presentation Abstracts**

**Professor David Louton
Professor Hakan Saraoglu
Finance**

Title:

How Many Mutual Funds Are Needed to Form a Well-Diversified Asset Allocated Portfolio?

Abstract

Funds of funds, which have become a popular investment vehicle in recent years, diversify across asset classes as well as managers with different styles and expertise. Lifecycle funds are a good example of funds of funds where investors can invest in a group of asset classes in different proportions depending on their investment horizon, risk tolerance, and objectives. Given that the number of mutual funds in the portfolios of lifecycle funds offered by different investment companies varies significantly even for those with similar targets, it is important to investigate the relationship between the number of mutual funds in an asset allocated portfolio and the resulting diversification benefits. In this study we use a survivorship bias free sample to assess the impact of the number of mutual funds in an asset allocated portfolio on the variability and shortfall risk of its terminal wealth. We focus on three asset allocation scenarios based on different portfolio weights of equity and bonds. Our results for each scenario, which we report for 5-year and 10-year investment horizons, indicate that holding 10 to 12 funds in the portfolio instead of the minimum possible 2 funds as dictated by the asset allocation to equity and bonds reduces the standard deviation of terminal wealth by about 60%. Similarly, the mean shortfall of terminal wealth and the semivariance of terminal wealth are reduced by 60% and 85%, respectively.

**Professor Kristen Berkos
Communication**

Title:

Students' Use of Imagined Interactions when Emailing Teachers with Requests

Abstract:

Hypothesis:

Students who use proactive imagined interactions (IIs) will utilize more prosocial compliance-gaining strategies than students who do not have IIs prior to emailing their professors.

Methods:

- **Participants:** N = 94 Undergraduates (51 females, 43 males) from a small, private university in the northeast
- **Procedure:** Students enrolled in communication courses were instructed to bring their laptops to class. Students logged on to the internet and accessed their email, but then to close their laptops. Students completed demographic information about themselves, and then were told to think of the professor they had in their class prior to the one where the experiment was occurring. Students reported on that professor's sex and estimated age. Students were told to imagine one of three situations that would require them to write an email to their professors. Based on Golish's (1999) research on student compliance gaining techniques, three scenarios were selected to stimulate a student email. Students were told they would be writing this email and sending it in three minutes. During the following three minutes, the instructions stimulated an II or engaged the students in a distracter task (Allen & Honeycutt, 1997). Students in the II condition were instructed to think about what they wanted to say, and to imagine the professor's reaction and response, whether it be via email or in person. In the distracter condition, students were told that the researchers were interested in language abilities. Students were given a list of three words and instructed to make as many additional words out of the letters in the first word, then to move on to the second, and then to the third. Following the three minutes, students were given two minutes to construct an email to the hypothetical professor. Students then sent the email to an account set up for this experiment, instead of their actual professor.
- **Coding:** Two independent coders were trained to identify prosocial or antisocial compliance gaining techniques. The coders read each of the emails and labeled them as prosocial or antisocial, with 88% agreement. Disputes were discussed and settled by the researcher. After being coded as prosocial or antisocial by all coders, the emails were matched up to the condition (II or distracter task) based on a 4 digit number students put on both the email subject line as well as their instruction packet. The results were interpreted.

Results:

A one-way analysis of variance was used to test the hypothesis. The hypothesis was supported. $F(1, 91) = 30.29, p < .001, \eta^2 = .25$. When students engaged a proactive II prior to writing their professor an email, they were more likely to utilize prosocial

compliance-gaining strategies as compared to students who did not engage in an II prior to writing their email.

Professor Richard Holtzman
History and Social Sciences

Title:

Presidential Rhetoric as Policy: The Bush Administration's Post-9/11 'Call to Service'

Abstract:

Modern American presidents commonly make use of rhetoric, or symbolic language, to advantageously shape public opinion, which, in a representative political system, can serve as a means to nearly any end. Within the policymaking arena in particular, presidents strategically employ popular leadership and public persuasion to augment their influence within the legislative process. Consequently, presidential rhetoric is often conceived as a means to a means to an end—a tool used to rally public support for the administration's policy agenda in an effort to indirectly pressure congressional lawmakers into falling in line behind White House initiatives. This legislative strategy, commonly referred to as “going public,” is present in the story of President George W. Bush's “call to service” and his promotion of the USA Freedom Corps; yet it only represents one of the significant roles played by presidential rhetoric in this policymaking process. I argue that much of the rhetoric used in this case exemplifies a kind of popular leadership that was not part of a legislative strategy as we might expect, but rather a unique style of governing. More specifically, as the policymaking process unfolded and prospects for legislative success on the citizen service issue appeared increasingly limited, the Bush administration relied more and more upon symbolic language to accomplish concrete policy objectives. While the president's leadership of public opinion in this case may originally have been conceived as an instrument of policymaking, it soon transformed into policymaking itself—more specifically, rhetorical policymaking—a direct effort to bring about attitudinal, behavioral, and cultural change within the American public by promoting “a culture of responsibility, service, and citizenship.”

Professor Francis Kemegue
Economics

Title:

Hysteresis in Unemployment: Panel Unit Roots Tests Using State Level Data

Abstract:

Most studies that use classical unit-root tests in OECD countries support the hysteresis hypothesis. However, similar classical tests performed on US data yield mixed results, uncovering specification issues. This study uses an extensive number of panel unit root tests, which are known to overcome specification problems, to check the existence of hysteresis in unemployment data from seven Massachusetts regions. The empirical results strongly reject unit root in the unemployment rates, refuting the unemployment hysteresis hypothesis.

The objective of this paper is to test empirically the existence of hysteresis in unemployment in the state of Massachusetts by applying monthly unemployment rate panel data for seven regions in Massachusetts in the time period of 1990 to 2006.

The unemployment rate in this study is household-based and reflects the labor market status of the residents of each region. Thus, the unemployment rate is a measure of the amount of unutilized labor in the region and represents the proportion of unemployed individuals in the labor force. The calculation comes from monthly estimates for the size of the local labor force, the number of employed and unemployed residents for all regions under study.

It is interesting to test the hysteresis in unemployment in this particular state because Massachusetts has been recognized for having its dramatic turnaround in its economy since the 70's. In early 1970s, soaring unemployment, staggering state budget overruns, and tough competition beyond its borders had driven Massachusetts' aging economy to its knees. In the 80's, the state's robust high-tech based economy and its record low unemployment had focused worldwide attention on what has been called the "miraculous" economic revival (Lampe, 1988). Massachusetts has been one of the most important centers of technological innovation in the United States and a host of high-technology research and enterprise. However, with the melting down of the information technology sectors in the beginning of the century and a slowing down in the overall economic activity in the United States, Massachusetts experiences another dramatic turnaround in its economy.

This paper contributes to the literature in two ways. First, we employ and compare four panel unit roots tests to monthly data from the period of 1990:1 to 2006:8. Second, we test the validity of unemployment hysteresis hypothesis using regional data for the state of Massachusetts. To our knowledge, this is the first time monthly state level regional data has been applied to test unemployment hysteresis.

Professor Martha Kuhlman
English and Cultural Studies

Title:

What does it mean to be part of the European Union? The view from Prague.

Abstract:

The Czech Republic, along with nine other countries, joined the European Union in 2004. But to what extent do Czechs identify with the EU? What are the implications of the European Union slogan “unity in diversity” in the cultural realm? Does the European Union represent a form of solidarity between nations, or is it merely understood by the general public as a vehicle for the common market? Professor Kuhlman will discuss three art projects—“Cow Parade 2004,” the documentary film *Czech Dream* (2003), and the European Identity International Poster Contest (2006)—to examine how these works reveal the anxieties and aspirations associated with EU membership in the New Europe.

Professor Richard Glass
Computer Information Systems

Title:

An Investigation of Expert and Novice Problem Solving Strategies for Knowledge Intensive Tasks

Abstract:

Experts and novices were both observed to utilize the same hypothetico-deductive problem solving strategy to diagnose two knowledge intensive software diagnosis tasks of varying familiarity. We found significant differences in the implementation of the strategy by skill groups. The differences lie in the experts' superior ability to: (1) conduct directed information search sequences that generate hypotheses for the diagnosis of the problem, (2) recognize the implications of the findings of a search for potential diagnosis solutions (generate hypotheses) and (3) direct the search to find relevant data that would verify the hypotheses. The implications of the findings for research and development of computer-based decision-aids are discussed.

Professor Lynda St. Clair
Assistant to the Vice President of Academic Affairs Elizabeth Powers
Former Director of Faculty Development Ron Pitt
Administration/Management

Title:

*The Relationship Between Accreditation Processes and Academic Quality:
Theoretical Ideals and Practical Realities*

Abstract:

Recent criticisms of business education have taken aim at what is taught, how it is taught, to whom it is taught, and who is doing the teaching. Some critics have even suggested that accrediting organizations may be less fit to rank business schools than mass media outlets. The benefit of business school accreditation for strategic decision making has also been questioned. At the nexus of all these criticisms and questions surrounding accreditation is the issue of academic quality – what is it, how do we measure it, and how do accreditation processes relate to it? The assumption underpinning the concept of accreditation is that it helps to assure and improve academic quality. But what evidence is there to support this assumption? To address these questions, we review the literature on academic accreditation with a focus on AACSB-International standards and consider issues related to the areas of Standardization and Assessment, External Oversight, and Institutional Accountability. We provide arguments that the theoretical ideals expressed in current AACSB standards are consistent with improving academic quality. However, the manner in which those ideals are implemented in practice warrants attention. To address those issues, we suggest improvements in the areas of openness of the accreditation process and findings, separation of the auditing and consulting functions of accrediting bodies, oversight of accrediting organizations, embedding of accreditation processes into academic life, and promoting institutional courage.

Professor Joseph Trunzo
Applied Psychology

Title:

Social problem solving, distress, and risk behaviors in head, neck, and lung cancer patients and their relatives: A pilot study

Abstract:

Cancer diagnoses may adversely affect emotional functioning in patients and their family members, which in turn may increase risk behaviors (tobacco/alcohol use). Twenty-one head/neck/lung cancer patients (\bar{M} age=49.7, $SD=15.7$ years, 68.5% married/living w/partner, 76.2% Caucasian, 85.7% at least high school graduates, 57.2% employed) and their relatives ($n=11$, \bar{M} age = 70.3 years, $SD=12.7$, 63.6% married/living with partner, 90.9% Caucasian, 81.8% at least high school graduates, and 27.3% employed) were surveyed shortly after the patients' diagnosis. Patients and relatives completed demographics, measures of distress (Profile of Mood States), social problem solving ability (SPS, Social Problem-Solving Inventory), tobacco, and alcohol use. Total SPS ability was significantly higher in patients compared to family members ($t[1,27]=-2.5$, $p=.02$), and total distress was significantly lower in patients as well ($t[1,30]=2.3$, $p=.03$). Mean comparisons also indicate that family members smoked more cigarettes per day than patients and drank more alcoholic beverages, but results were not statistically significant. These data indicate that family members and caregivers of head/neck/lung cancer patients may experience higher levels of distress, a decreased ability to solve problems, and engage in more frequent risk behaviors than patients. This suggests that this population may be at risk and warrant further study and supportive intervention. Study design prevents causative conclusions and limited sample size prohibits more complex analyses. Further research on SPS, distress, and risk behaviors may reveal more robust relationships and provide insight for intervention development in this population.

Professor Esha Chatterjee
Mathematics

Title:

Non Linear Difference Equations and Applications

Abstract:

We begin with an introduction to Difference Equation. The basic definition of a Difference Equation will be presented. We will look at some well known examples such as the Fibonacci Sequence, Logistic Growth Equation, Fractals, Chaos and Julia and Mandelbrot Sets. We will discuss how the models have been developed. Examples of Difference Equations from different fields will be presented. May's Host-Parasitoid Model and Lotka – Volterra Predator Prey models from Ecology and Money Demand Model from Economics will be presented.

Next, my basic research area of Rational Difference Equation will be introduced. Well known examples such as Riccati Difference Equation, Beverton-Holt Fisheries Model and Pielou's Discrete Delay Logistic Equation will be presented. The summary of main results and basic characteristics of a particular Rational Difference Equation will be presented to give a flavor of the mathematics involved. The main result describes a trichotomy character of the solutions. That is, depending on the trichotomy relationship between two parameters of the equation the long term behavior of the solution will be determined. We will look at boundedness of solutions, periodicities and convergence of solutions to the stable state or equilibrium. The techniques and methods used to analyze the equation are quite general and work for a variety of other equations. This equation is part of a completed paper.

Finally, some current work will be presented. The Money-Demand Equation from Economics will be investigated. The linearization of the equation and the local stability character will be presented. This is a joint work with Dr. Ramesh Mohan.

Professor Buky Folami
Accounting

Title:

Managerial and Functional Influences on Perceived Environmental Uncertainty

Abstract:

Previous research suggests management should be used in the measurement of perceived environmental uncertainty (PEU), though many studies continue to ignore the distinction between management and non-management in the measurement of PEU. The distinctness of constructs and scales has important implications for the integrity of prior research. This paper examines the differences in PEU between management and non-management personnel, and between job classifications. The research also examines the effect of demographic factors on PEU. The research is based on a sample of 504 professionals in public accounting. The results indicate that management and non-management personnel have a significantly different level of PEU, thus confirming the criticism of studies that ignore the distinction between management and non-management measurement of PEU. There was no difference in PEU based on job classification. Except for CPA Certificate holders who have a lower level of PEU than non-CPAs, demographic factors did not impact PEU.

Professor Brian Blais
Science & Technology

Title:

Teaching Bayesian Model Comparison with the Three-sided Coin

Abstract:

In this presentation we introduce the problem of determining the probability that a rotating and bouncing cylinder (i.e. flipped coin) will land and come to rest on its edge. We present this problem and analysis as a practical, nontrivial example to introduce the reader to Bayesian model comparison. Several models are presented, each of which take into consideration different physical aspects of the problem and the relative effects on the edge landing probability. The Bayesian formulation of model comparison is then used to compare the models and their predictive agreement with data from hand-flipped cylinders of several sizes.

Professor Alexandra Aguirre-Rodriguez

Marketing

Title:

Examining the role of motivation in bicultural consumer response to ethnic and non-ethnic marketing stimuli

Abstract:

The importance of culture in consumer theory has been increasingly recognized in recent times with the abundance of research on cross-cultural consumption influences. An area that has received less attention in consumer research, however is the effects of marketing stimuli on bicultural consumers. The literature concerning the social psychological implications of being bicultural is growing, however, work on the consumer behavior implications of this phenomenon is scarce. A person is considered bicultural if he or she has internalized more than one culture. For example, immigrants who have lived in a country for several years internalize the host country's culture through the acculturation process and still maintain a mental representation of his or her original culture. To date research has shown that bicultural consumers cognitively alternate between cultural frames of reference when primed by certain culture-related stimuli. In the marketing context, a cultural prime could be an ethnic brand name or ethnic product category, or even the language of a marketing communication.

The current research being conducted by Rodriguez and Boveda-Lambie extends the bicultural consumer behavior literature by examining the role of motivation and goals in consumer responses to culture-related marketing stimuli. Research in goal systems theory and psychological reactance is integrated with cultural frame switching theory to gain further insights into the processes that affect bicultural consumer behavior.

Professor Lynda St. Clair
Professor Angela Wicks
Management

Title:

Competing Values in Health Care: Balanced the (Un)Balanced Scorecard

Abstract:

Healthcare organizations, facing a complex environment driven by two decades of dramatic change, are adopting new strategic frameworks such as the Balanced Scorecard (Kaplan and Norton, 1992) to evaluate performance. Although an improvement over simple financial measures, the Balanced Scorecard has three conceptual limitations that are especially problematic when evaluating healthcare organizations: it underemphasizes the employee perspective, it is founded on a control-based management philosophy, and it emphasizes making tradeoffs. To address these limitations, we propose using the Competing Values Framework (CVF) (Quinn and Rohrbaugh, 1983; Quinn, 1988), a theoretically grounded and comprehensive approach to understanding and improving organizational and managerial performance by focusing on four action imperatives: Competing, Controlling, Collaborating, and Creating. The CVF pays particular attention to the employee perspective, is consistent with a commitment-based management philosophy, and emphasizes transcending apparent paradoxes to identify win-win solutions. For example, rather than focusing on customer satisfaction or employee satisfaction, the CVF looks for ways to satisfy customers as well as employees, while still attending to financial constraints and opportunities for growth. The CVF can be used to assess both the culture of the organization and the competencies of individual managers, thereby providing a clear link between strategy and implementation.