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From the Program Chair

Dear Friends and Colleagues,

It is once more my privilege to present to you the Proceedings of the 2015 BAASANA International Conference, hosted by Baruch College, City University of New York, USA. It has once again been my honor and privilege to serve as Program Chair for this year’s conference, our fifth.

The BAASANA organizing committee has outdone itself in 2015, assembling a rich variety of authors and speakers from a diverse array of universities, governments, and private-sector institutions around the world to share ideas and unique and innovative perspectives and insights on a wide range of topics.

This year’s proceedings is an exemplar of our commitment at BAASANA to research as a cooperative enterprise among scholars, practitioners, and increasingly students. We had our broadest array yet of student panels and our strongest student participation in 2015. BAASANA is dedicated to the notion that a collaborative environment fosters the free flow of constructive and innovative ideas among researchers, practitioners, and students. We would like to thank this year’s attendees; we are all richer for their participation and contributions.

I would also like to take this opportunity to thank the organizing committee, who did an excellent job of arranging the numerous details that go into a successful conference event. In addition, allow me to recognize our peer reviewers, who reviewed the manuscripts, often under heavy time pressure, and who selected the best papers for this conference.

I hope you will find the proceedings of the 2015 International BAASANA Conference illuminating and enjoyable. I wish you a pleasant and prosperous 2016, and I look forward to receiving your constructive comments and too seeing you in New York in August 2016.

Best wishes,
John O. Okpara, Ph.D.
Professor and Chair,
Department of Management and Marketing
Bloomsburg University of Pennsylvania
2015 BAASANA International Conference Program Chair
Editor’s Introduction

It is once again our privilege and pleasure to present to you the proceedings of the 2015 International BAASANA Conference, held August 12-14, 2015 at the City University of New York in New York, NY. The collection of scholarly works presented herein comprise a diverse set of contributions to research in business and science from around the world, in areas ranging from use of social media and the flipped classroom to engage students, to international finance, to sports marketing, to entrepreneurship in India and apparel manufacturing in China.

Special thanks and recognition go to BAASANA president Dr. M. Ruhul Amin, 2015 Program Chair Dr. John Okpara, and logistics director Dr. Nick Koumbiadis of Adelphi University, along with the rest of the leadership and membership of BAASANA for their hard work on behalf of the conference and the association. Their dedication is essential to the success of the conference and of the association as a whole.

In this year’s opening work, Serajul Bhuiyan discusses the benefits of the flipped classroom in increasing student classroom engagement in “Flipped Teaching Method: A New Model of Engaging Students in Active Learning Process.”

Continuing in the pedagogical realm, Stephen Burrows discusses the value of simulations in healthcare education in “Simulation Training in the Health Professions Using an Academic Electronic Health Record.”

Kam Chan, Annie Wong, and Hannah Wong in “A Complementary Examination of Author Characteristics of Finance Journals” outline U.S. author affiliation in a sample of journals ranked by the Australian Business Deans’ Council.

Kam Chan, Barbara Farrell, and Annie Wong also tackle the quality of financial reporting and investor legal protection in “Investor Protection and Legal Efficiency.”


Christina Chung and Emi Moriuchi investigate student donation behaviors in the U.S. in “Understanding Young Americans’ Donation Behavior Towards Domestic and International Disasters.”

In “A Crisis Intervention Model for Child Protective Services Workers,” Laurene Clossey and Michelle Tavormina propose a model to guide CPS workers as they seek to intervene effectively in crisis situations and deal with the consequences.

A panel consisting of Donald C. Crooks, Cathyann Tully, Ian Wise, and Edward Strafaci delved into the question of economic differentials among EU countries in “Role of Currency Fluctuation in World Trade: Do The PIIGS Propel the German Export Juggernaut?”
Donald Crooks, Xiodan Dong, Cathyann Tully, and Kristen Koehler tackle the student assessment (particularly at the MBA level), grade inflation, and other issues in ‘The Marketing of P.O.W.E.R.: An Innovative Approach to Student Recruitment and Performance Enhancement.’

George L. DeFeis, Donald Grunewald, and George N. DeFeis discuss innovative international business theory in “International Trade Theory of Hyper-Globalization and Hyper-Information Flow Conceived.”

Experiential learning and its benefits for pedagogy and community engagement are the topics of “Building Community Relationships with a Senior Design Experience,” by Tristan Erickson, Scott Kiefer, Patrick Martin, Kala Meah, and James Moscola.

Michael Hamlet, Ionie Price, and Derrick Samuels offer a pair of contributions to the conference, discussing matters of practice for small-business owners in “The Impact of Participatory Leadership on Small Business” and pedagogy in “Active Teaching and Learning that Fosters and Enhances Learning.”

Continuing the theme of student engagement, Mahmood Al-Hashemi advances an argument for social media in “Use of Social Media: An Effective Method to Engage Students.”

In “Cultural Considerations: A Comparison Between the Arab World and the West,” Yasin al-Ibrahim and Serajul Bhuiyan compare the distinct cultural considerations of the two regions and the impact of culture on teaching strategy.

Nazrul Islam investigates the changes to institutions driven by the rise of nanotechnology, particularly the way states have attempted to incorporate and rationalize nanotechnology research and resource allocation, in “Institutional Emergence: An Analysis of How Nanotechnology Creates New Institutional Entities.”

Research in sports marketing draws on services marketing research as well as other areas. Spectator satisfaction influences behavioral intention of sports fans, as illustrated by Ricard Jensen, Yam Limbi, and Jeonghwan Choi in “The Influence of Sports Stadium Atmosphere on Behavioral Intention: The Mediating Role of Spectator Satisfaction.”

The rise of virtual learning environments, not only massively open online classrooms (MOOCs) and online-only offerings but also the increased interest in distance learning within the traditional higher-education setting, drives the need for effective teaching strategies and tactics. This is the focus of “Creating Effective Online (Virtual) Learning Environments,” by Lawrence Kilgus, Dan Powell, Loreen Powell, and Hayden Wimmer.

In the realm of applied sciences, Raj Kishore, Girish Kumar Sinha, and Sonal Priya illustrate “Synthesis and Biological Activity of Complexes Of Zn(II), Cd(II) and Hg(II) with 6-methoxy-2-mercaptoquinazole-4-one.”

Mass media and public attention to high-profile data breaches highlights the increasing importance of data security in the context of the Internet, making Jude Lamour’s “Use of Virtualization to Teach Cybersecurity” a particularly timely contribution.
Changhee Lee investigates the quality and reliability of information on which investors rely (particularly important as individual investors become more important in this age of defined contribution retirement planning) in “Audit Quality and the Profitability of Financial Analysts’ Stock Recommendations.”

In “Customer Orientation of Indian Tourism Entrepreneurs: An Empirical Analysis,” Kaushik Mandal, the late Dilip Roy, and Kumkum Bagchi investigate tourism entrepreneurship in India. As small entrepreneurs become the engine of job growth, theories and tools that promote the success of small entrepreneurs becomes increasingly vital, the authors contend.

Marilu Marcillo-Gomez, Mary Kate Naatus, and Michael Antoine discuss development of a content-rich business-ethics case study in “Ethical Dilemma: The Case of Illegal Dumping by the Crown Plaza Hotel.”

Small businesses, the rise of local food, and increased interest in culturally diverse cuisines have fueled the rise in interesting and unique restaurant offerings, many of which have turned to third-party delivery providers for delivery service. Delivery service quality may impact overall customer satisfaction, as Mary Kate Naatus, Norbert Kong, and Charaz Gargouri argue in “Delivering Value or Disappointment? Experiences of Small Business Owners and Food Delivery Services.”

Lam D. Nguyen investigates the impact of legal and ethics education on business students in “Would Taking Ethics Course and Having Business Law Training Make a Difference in the Attitudes Towards Business Ethics? An Examination of Business Students in the U.S.”

In “The Dilemma of the Optimal Condition: An Exploration of the Strategic and Social Consequences of the Organizational Change Imperative,” Paul D. Nugent, Richard Montague, and Emilio Collar Jr. advance the proposition that change for the sake of change is not always desirable.

Today’s globalized markets have raised the profile of country of origin with consumers. A. Ben Oumlil, Karen L. Koza, Richard Montague, and Joel Goldstein investigate further in, “Consumers’ Demographic Characteristics and the Country-of-Origin Effect: An International Study.”

Frank Owarish looks to an evolution of the transportation industry away from dependence on internal combustion engines in “Moving to the Smart/Eco-Friendly Car: Strategic Evolution of Automotive Technologies.”

In “The Relationship of Employee Work Engagement to an Organization's Readiness for Change,” M.J. Park considers the benefits to the organization of more engaged employees as a driver of positive institutional evolution.

Also in the human-resources sphere, Sajjad ur-Rehman spotlights employee satisfaction and related issues for firms in Kuwait, in “A Study of Job Satisfaction and Organizational Characteristics in Kuwaiti Organizations.”
M. Michel Sauvignon continues his research into hypovigilance, a major cause of motorway accidents, in “Causes and Cost of Accidents: Forecasting The Risks - What’s Hypovigilance - Brain Physiology with Alpha Rhythms.”

In the 2015 BAASANA Student Panels, Madhav P. Sharma leads no fewer than three culturally and ethnically diverse panels of students from Bloomsburg University of Pennsylvania in wide-ranging discussions of cultural diversity and internationalization, social and economic contributions of international students, perspectives on academic issues, and comparative analyses of several countries including the U.S. and Saudi Arabia.


Continuing in the applied sciences, in “Synthesis And Biological Activity of Some Schiff’s Bases from Phthalimides,” Girish Kumar Sinha, Akanksha Priya, and Sonal Priya demonstrate synthesis and antifungal activity of the aforementioned compounds.

The relative competitiveness and other characteristics of China’s leading commercial banks is the subject of “A Factor-Analytic Study of the Competitive Evaluation of China’s Listed Commercial Banks,” by Wang Di.

Hayden Wimmer, Loreen Powell, Lawrence Kilgus, and Dan Powell demonstrate information technology, particularly data-mining tools, in “Mining The Bureau of Labor Statistics for Job Skills.”

Group projects are an increasing feature of the higher-education (especially in business) landscape, as employers seek students who can work effectively in teams. Kathryn Woodbury Zeno, Christina Chung, and Gladys TorresBaumgarten contribute to more effective group projects and group assessment in “Student Group Project Assessment: Motivation and an Approach to Developing Better Assessment Tools.”

Yang Litian and Hong Chen discuss the need for ongoing enhancement of intellectual property protection regimes in China, in order to assure and enhance the country’s global competitiveness, in “On China’s Intellectual Property Rights in International Trade.”

In a practitioner contribution, Yuan Ling addresses the benefits of mass customization for the Chinese apparel industry in “Analysis of Mass Customization Production Solutions for Domestic Clothing Production Enterprises.”
Yuan Liwei reports on an investigation of ways firms can make more efficient and effective use of human resources, in “Analysis of Approach and Method in Revitalizing Enterprise Assets.” The author proposes human resources as a third general classification of assets, and exhorts managers to put people in situations where they have the best opportunity to succeed, thus driving the success of the firm.

In “Using Simple Data Mining Techniques Within a Course Management System,” Loreen Powell, Hayden Wimmer, Daniel Powell, and Lawrence Kilgus investigate the potential for data mining tools and techniques to aid grading and assessment of discussion board content in online class settings using learning management systems such as Blackboard or Desire2Learn.

Last, but far from least, Daniel Powell, Lawrence Kilgus, Loreen Powell, and Hayden Wimmer close this collection of works with “Online Education: Status and Change,” a look at the challenge budget restrictions impose on adoption of online education by K-12 schools.

I hope you find this diverse collection of studies and presentations as fascinating and illuminating as I did; they represent a strong demonstration of the quality of scholarship in the ranks of BAASANA. Thank you, and enjoy the 2015 proceedings.

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FLIPPED TEACHING METHOD: A NEW MODEL OF ENGAGING STUDENTS IN ACTIVE LEARNING PROCESS

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ABSTRACT
In this study, the author will discuss different teaching methodologies practiced in the classrooms in the higher education at home and abroad and will mainly focus on the Flipped teaching method evolved in USA and adopted by different universities in the North America, Australia and Europe. The main focus of this article to discuss how a flipped class inverts the typical cycle of content acquisition and application in order to help gain knowledge to solve a problem before they come to the class and the role of the faculty member is to guide them through the solution of a problem in the classroom. The study reveal that flipped teaching help students engage students as active participants and learners, help them learn deeply and learn from each other.

Keywords: Flipped classroom, student engagement, active learning, pedagogy
SIMULATION TRAINING IN THE HEALTH PROFESSIONS USING AN ACADEMIC ELECTRONIC HEALTH RECORD

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ABSTRACT
Simulation training is a key component of training healthcare students. An Academic EHR is a simulation tool adapted from clinical systems with modifications for academic curricula. Simulation training provides students a non-threatening approach to technology that students will use once they begin their clinical careers.

Learning Objectives:
1. Describe the importance of using simulation training in healthcare professions education
2. Identify the benefits of using an academic electronic health record in healthcare curricula
3. List the components of an Academic EHR and how they impact education in the healthcare professions
4. Describe how the Academic EHR is being used to prepare students for safe, efficient and effective clinical practice in the 21st century

Hypothesis: Cases that are simulated using an academic electronic health record (AEHR) will improve students’ learning outcomes through an interdisciplinary approach.

Methods: Simulated clinical cases were created in an AEHR in a problem based learning curriculum. These cases consisted of patients with various diagnoses, across health care settings, using clinical documentation from the interdisciplinary team. Students accessed cases by navigating through the AEHR and worked in groups to identify the learning issues found in the simulated patient case. An emphasis was placed on the interdisciplinary team.

Outcomes: Students were able recognize the importance of an inter-disciplinary approach. Students enhanced their learning through the use of simulated cases through an AEHR. The use of the simulated cases in AEHR exposed students to the value of technology and its impact in the health care setting.

Conclusion: The academic EHR exposed and enhanced students’ learning of electronic documentation and inter-disciplinary care. Future plans are underway to integrate students from multiple disciplines and programs across the College of Health Professions in collective learning teams using this same approach. This plan is in direct alignment with the United States federal government’s initiatives for adoption of electronic health records in the clinical setting.

Keywords: Electronic health records, healthcare curriculum, simulations
A COMPLEMENTARY EXAMINATION OF AUTHOR CHARACTERISTICS OF FINANCE JOURNALS

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ABSTRACT
The objective of this paper is to provide a complementary analysis of finance journals that are often neglected in prior studies. Specifically, we examine the Australian Business Dean Council’s C-ranked journals in terms of their authors’ affiliations with U.S. colleges, U.S. colleges with AACSB accreditations, and U.S. colleges with AACSB doctoral program accreditations. These journals are often not included in prior studies on journal characteristics because they are less well-known and less likely to be cited. However, these journals constitute as many as half of all finance journals and can be important publication outlets for finance researchers. This study contributes to the literature by providing valuable insight into the quality of these journals. We examine the author affiliation characteristics of the articles published in the 5-year period from 2009-2013 in these journals. The final sample consists of 28 finance journals with full-text information in library database. We find that these journals have a substantial number and percentage of authors from U.S. colleges. Among the U.S. authors, about 92% of them are from AACSB accredited schools and most of them are from AACSB accredited schools with doctoral programs. This supports the notion that these journals are important publication outlets for U.S. researchers. We also find that journals with longer histories and with U.S.-based editors have a higher percentage of authors from the U.S. In addition, journals with higher Cabell Directory’s journal rankings and higher rejection rates have a higher percentage of U.S. authors from AACSB accredited schools with doctoral programs. These findings show that some C-ranked journals are considered as quality and competitive publications by many U.S. researchers, and the C-ranking does not reduce their academic value.

Keywords: author characteristics, journal rankings, finance journals
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ABSTRACT
In the literature, anti-director right is a measure of minority or outside investor protection. Legal efficiency is a measure of legal enforcement. Since the important work of La Porta, Lopez-de-Silanes, Shleifer, and Vishny (Journal of Political Economy 1998) in providing empirical rankings of anti-director right and legal efficiency of 48 countries, there has been a large volume of empirical work being done in the fields of accounting and finance to use these rankings to explain the international differences of financial reporting quality, corporate governance, and firm value. It is expected that strong investor protection and legal enforcement can lead to strong protection for minority or outside shareholders. However, there have been concerns in the literature with the validity of the measurements used in La Porta et al as well as with the stability of these measures over time. In addition, La Porta et al suggest that while strong legal enforcement can substitute for weak anti-director right, some countries with strong anti-director right can also have an environment of strong legal efficiency. Thus, investor protection and legal efficiency can be two related or independent factors.

This study has three research objectives. The first objective is to examine the consistency of investor protection and legal efficiency measures from different academic, public, and commercial data sources. The second objective is to examine the stability of these measures over time. Finally, we examine the relationship between measures of investor protection and legal efficiency by using correlation and factor analyses. Investor protection and legal efficiency are collected from La Porta et al, Djankov, La Porta, Lopez-de-Silanes, and Shleifer (Journal of Financial Economics 2008), Spamann (Review of Financial Studies 2010), World Bank, Transparency International, and PRS Group. Results show that investor protection and legal efficiency are fairly stable over the years and data from various sources are highly consistent. We also find that investor protection and legal enforcement are two independent factors.

Keywords: Investor protection, financial regulation, corporate governance, regulatory enforcement
USE OF DIGITAL INFORMATION AND SOCIAL MEDIA IN BUSINESS ORGANIZATIONS: A STUDY OF INFORMATION FINDING PRACTICES OF FINANCIAL PROFESSIONALS IN THE ARABIAN GULF REGION

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ABSTRACT

This paper discusses the information behavior of financial professionals focusing on information needs, information finding practices, preferences for information sources, and perceptions about assessment of quality of information. It is based on data collected through an online questionnaire from 61 financial professionals from 19 companies in Bahrain, Kuwait, Qatar, Saudi Arabia, and United Arab Emirates. The participants reported that both financial and non-financial information was required to support their work. They considered company information as the most important among their information needs and included the following as other types required to support financial analysis work: information on countries, investment opportunities, projects, business owners and their priorities. They pointed out that after the economic downturn in the region in 2007, more detailed information became necessary information obtained was required to be evaluated more carefully. Only trusted information sources could be used when companies were under stringent financial conditions. Reliance on competitive intelligence increased and collaboration also became important along with competition. These findings have implications for information collection and management policies for relevant departments in business organizations. Review of information finding practices of financial professionals indicated that use of internal reports and consulting with colleagues was the most preferred approach for finding information. Approaching financial consultants and fund managers also appeared among the preferred strategies. Libraries & information centers and chambers of commerce & industry were listed as the least preferred channels. Wikis, blogs, LinkedIn, Twitter, and Facebook were among the frequently used social media, while use of social networking services such as WhatsApp and Instagram were at the bottom of the list. Implication of these findings is that business organizations need to create more awareness about these valuable resources. Need for subscriptions and the classified nature of information in some sources appeared to be among the main concerns. Lack of adequate information in databases, paucity of good sources for the Middle East region, and non-availability of information related to local financial situation were also listed as difficulties hampering the information finding. Most financial professionals considered that they possessed reasonable informing finding skills but would like to get training in searching online databases and finding information from web-based sources. Bloomberg and Reuters were reported as the most frequently used international business information sources while Zawya was listed as the top source for financial analysis and news with the Arab world perspective. Other high quality specific information sources included Financial Times, Morning Star, Hamming Star and Gulf-based daily newspapers. Websites, company information,
legal colleagues, and stock exchange were mentioned as the first choice; consultants, business information sources, and newspapers as the second choice, and government agencies and libraries were among the third choice. The implication of these findings is that business organizations ought to make sure that these sources are accessible to financial professionals on regular basis. Training for enhanced information literacy at work was considered important for more effective information finding and use.

**Keywords:** Social media, financial information, information literacy
UNDERSTANDING YOUNG AMERICANS’ DONATION BEHAVIOR TOWARDS DOMESTIC AND INTERNATIONAL DISASTERS

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ABSTRACT
Donations may occur in several forms: time, money, food, blood, and many more. Although there is a substantial size and market for philanthropy in the United States, charity organizations are struggling to increase their monetary contributions from the public (www.huffingtonpost.com). In order to understand the determinants behind donor’s motivation to donate, we need to look at several areas such as donor’s demographics and psychographics. Although there are potential determinants of giving, Lee and Chang (2007) argued that there have been contradictory results in the literature regarding which factors affect individual’s giving behavior (p. 1174). In this study, we examine donor’s charitable giving within the natural disaster occurrence context. We examine how the disaster location (domestic and international) and message type (fact and emotion) affect individual’s donation behavior. Based on the theory of planned behavior (TPB), the relative importance of the TPB variables in predicting donation intentions were examined. Using the theory and previous research findings, the following hypotheses are developed.

H1: Attitude towards helping others is related to ethnic identity on donation behavior
H2: Ethnic identity on donation behavior is related to attitude toward ads and ad effectiveness.
H3: Attitude towards ads is related to ad effectiveness.
H4: Location and message types have moderating effects on the relationships between ethnic identity on donation behavior, attitude towards ads, and ad effectiveness.

Using a convenience sampling method, one hundred-seventy undergraduate college students participated in the survey. For experimental treatments, each subject randomly received one of four versions (America disaster screens with factual message, America disaster screens with emotional message, Japan disaster screens with factual message, Japan disaster screens with emotional message). The samples consist of 72% females and 28% males. All respondents were between 19-27 years old. To gauge the success manipulations, two sets of items (country and message types) were used to verify the manipulations of the advertising messages. These results indicate a success of the intended manipulation.
The measurement model was tested using confirmatory factor analysis (CFA). The CFA results indicated an acceptable fit ($\chi^2 = 278.16$, $df = 148$, $p$-value = .000, CFI = .95, RMSEA = .07, and TLI = .95). Further, construct validity was evaluated based on the indices suggested by Hair, et al., (2006). Factor loadings ranged from .75 to .93 ($p < .001$) and the variance extracted estimates (VEs) are .70, .69, .71, .and .84 for attitude towards helping others, ethnic identity on donation behavior, attitude towards ads and ad effectiveness, respectively. In addition, the construct reliability estimates were all adequate, ranging from .90 to .95. Discriminant validity is measured by using the same method. The results indicated that the discriminant validity of the model is supported and good reliability is also established. Structural equation modeling (SEM) was conducted to examine the theoretical model and test hypotheses. The results indicated a satisfactory fit of data ($\chi^2 = 279.16$, $df = 148$, $p$-value = .000, CFI = .95, RMSEA = .07, and TLI = .95). Regarding the hypotheses tests, the path model results revealed that all hypotheses are significant. Thus, there are significant relationships between attitude toward helping others and ethnic identity on donation behavior as well as attitude toward ads and advertising effectiveness in both countries’ ad samples.

Using GLM, the moderating effects were measured. The results indicate that location moderates on all of the direct relationships. The results also show that mean numbers were higher for attitude toward ad and ad effectiveness for American disaster. On the other hand, message types did not differ considerably. These results suggest that when a disaster occurs domestically, people’s attitude toward helping others will have an effect on their ethnic identity on donation behavior. In addition, their ethnic identity on donation behavior will have an effect on their attitude toward the charity ads as well as the effectiveness of advertising. For limitation, first, it is important to note that the sample in this study was a convenience sample (small sample of undergraduate students recruited from universities). Second, the use of Hurricane Sandy to represent the US disaster and Fukushima Tsunami to represent Japan’s disaster might only serve as a snapshot of young consumers’ perception of their felt ethnicity towards their donation behavior. To extend this study, data will be collected from university students in Japan and a comparison will be conducted based on the respondents’ cultural influence (American vs. Japanese).

**Keywords:** Donation behavior, ethnicity and donation, theory of planned behavior
A CRISIS INTERVENTION MODEL FOR CHILD PROTECTIVE SERVICES WORKERS

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ABSTRACT
Crisis in the field of child welfare is ubiquitous. A qualitative inquiry into the work of child protective services (CPS) workers was conducted to explore their perceptions and experiences of crisis and crisis intervention, as well as their impressions of the emotional effects their work has on them. The results of that work were extensive and have been reported by us in other publications. This paper focuses on the study’s findings of how workers in the field perceived crisis. Results showed that crisis is deeply interwoven into the fabric of everyday work. It was found that unless specifically asked what a crisis is like, workers simply take its existence for granted. The worker responses to their perceptions of what constitutes a crisis demonstrated that all aspects of the work confronted them with urgent situations requiring de-escalation. These aspects include elements such as: child abuse allegations and investigation, unstable parents, “parentified” children, substance abuse, lack of parenting skills and unstable homes. Yet, in spite of this ever-present nature of crisis, none of the workers reported an awareness of crisis intervention theory and purposeful use of crisis intervention skills. Rather, they reported responding in the moment and using experiential knowledge. This paper reviews our findings on CPS’s experience of crisis and then presents a model of crisis intervention developed specifically for application in this field. The model should have applicability across various international contexts since the nature of assisting abused children and the psychological sequelae of abuse are universal. The use of an application that addresses the issues CPS workers experience may help to mitigate much of the well-documented stress of the work and improve outcomes for the children served.

Keywords: Child protective services, crisis intervention skills, child welfare, child abuse
ROLE OF CURRENCY FLUCTUATION IN WORLD TRADE: DO THE PIIGS PROPEL THE GERMAN EXPORT JUGGERNAUT?

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ABSTRACT
The panel will seek to provide a format for an energized participation among the audience regarding the role of currency valuation and its place in aiding or hindering balance of payments among trading partners. With a view specifically of the Euro and the division between the stronger economies and weaker ones and how this division affects the overall competitiveness within and outside the Eurozone, will dominate the discussion. We will bring forth argumentative discovery regarding how important it is to have “weaker” economies play a very important role in Eurozone competitiveness. Further on we will consider the ‘weightings’ of each individual country’s currency and do those ‘weightings’ hold true and what would happen if there was no Euro to begin with or if it disbanded now. Concluding remarks will revolve around how currency fluctuations affect hedging by companies and lastly what role these fluctuations play in strategic corporate plans and investments in these companies and countries.

Keywords: PIIGS, balance of payments, currency fluctuations, export performance
THE MARKETING OF P.O.W.E.R.: AN INNOVATIVE APPROACH TO STUDENT RECRUITMENT AND PERFORMANCE ENHANCEMENT

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ABSTRACT
According to historical data, the national GPA (Grade Point Average) has shown a continuous growth since the 1960’s, at a rate of about 10% to 15%, while the base of SAT does not suggest the same pattern. It indicates that the grading system of universities has contributed to such inflation for whatever reasons. The compromised inflated GPA offers no contribution to urge educators to increase education quality. Business education requires stringent and robust training on critical thinking, oral presentation and written expression. However, these skills can hardly be evaluated by just GPA, particularly the inflated GPA, which may even cause students to have the illusion that their performance is better than what it actually is. Our school has developed an evaluation scale – Progressive Oral and Written Evaluation Ranking (P.O.W.E.R.) used to measure these three important skills required in business professions for both undergraduate and graduate students. The longitudinal data showed that this method has proven to be a great evaluation tool complimentary to GPA. More importantly, we believe this measurement can be used to demonstrate our dedication towards business education, and suggests great marketing implications on student recruitment. For marketing events, the scale and results can be used to promote the program, as it shows our effort to perfect the evaluation system, particularly in the three key skills required in the industry. Besides, the historical data suggested the trajectory of students’ improvement on these skills, which indicates a robust training for our MBA students. Further, any other disciplines that require the skills of critical thinking, oral presentation and written expression can adapt this scale for their use as well.

Keywords: P.O.W.E.R. Progressive Oral Written Evaluation Ranking, Rubrics, Tools for Measurement
1. INTRODUCTION

Education in the United States has become an issue of consternation as we continue to fall behind the results of other developed countries and that shortfall has accelerated over the past decade. According to the Organization of Economic Cooperation and Development (OECD), study (Economist April 24, 2010) the United States in 2000 had an average performance score of 500, roughly the average of all countries surveyed, and the United States ranked 10th behind.

- Finland
- Canada
- Australia
- Netherlands
- Japan
- Germany
- Sweden
- Britain
- France (ibid)

At the same time the United States ranked number 1 overall in the earnings benefit from degree level education (ibid). In a world where education clearly leads to financial benefits, it is ironic that this country would not lead by example from the very beginnings of the education cycle. While we see slippage in the lower levels of our education system in math and sciences, there is now evidence of declining SAT scores within the past five years. Through the early 1990’s and 2000’s, average scores were actually rising (vcstar.com, August 26, 2009) before they began drifting lower. First, the test has been changed and there are larger and more diverse groups of students taking these exams. Secondly, the pool of students wanting to attend college has grown steadily and our educational system has become more and more strained. In an attempt to “leave no child behind” (Bush, 2002) many students are pushed through the system and arrive at higher grades unable to grasp any successful levels of comprehension. By far, the skills most mentioned often by employers are the ability to listen, write and speak effectively. Successful communication is critical in business (Hansen and Hansen, Quintcareers.com 2010)

What is the most important skill that we would like to bestow on our students in an effort to prepare them to be successful in an ever more competitive economic environment? We have come to some basic conclusions, all revolving around three specific and all important qualities. We need to strive to extend knowledge and training in the areas of critical thinking and the basic foundations of written and oral skills. In business today and indeed in a recent article in Fortune magazine, many Fortune 500 CEO’s were bemoaning the lack of these imperative skill sets among recent college graduates. This research will delve into the changing academic environment without attempting to reason why some data are trending the way they are other than to say we have become creatures of a quest for mediocrity. No longer are the prepared rewarded as they should be, our society has taken on a “participatory view” which, while idealistic, does not promote healthy discovery or competitiveness. We tend now to reward everyone for “participating” so as to not offend those who are unable to compete or choose not to put forth the effort.

Curriculum changes and training advances in business communication have provided students and practitioners with the opportunity to develop and improve communication skills. Despite these changes, research continues to demonstrate that communication apprehension can
injurious impede skills attainment. Yet, the measurement properties of instruments used to measure oral and writing apprehension have received limited attention (Maes, Weldy and Icenogle, 2003). There is a belief here that this lack of advocating for controlled competition leads to more apprehension when these individuals are subjected to more stressful conditions, as they most certainly will be within the confines of the business community. While supposedly protecting our children from youthful stresses we impede their normal growth patterns to thrive in the real world.

Not being prepared leads to frustration, failure and even personally imposed social stigma. There has been a ratcheting up of GPA over the past few decades that do not compliment SAT (Scholastics Aptitude Test) scores over the same time period. From 1991-2007 there has been an overall increase in GPA of 9.4%, consistent across all types of schools public or private. All Schools in the study showed average increases from 2.92 to 3.11, public schools 2.85 to 3.01 and private schools from 3.09 to 3.30 (GradeInflation.com). Are these results indicative of an overall increase in the ability of our students as evidenced by SAT scores over the same time period, not exactly? Average SAT scores, for all participants was 500 for verbal and 501 for math in 1992 and 508 for verbal and 520 for math in 2005 an increase of less than 1.5% for verbal and less than 4% for math (Infoplease.com). However, if present trends continue, only limited by perfect 4.0 GPAs, we will continue to see a growing discrepancy between the potential and the fruition. Are our students becoming more astute throughout their college years or are our ranks of academia less inclined to give a student a more realistic if lower grade? Has this come about by professors hoping to please their students or administrations attempting to maintain high retention levels, one does not know? Countless studies and surveys, employers, graduate students, academicians and others continue to list oral and written communication among the most critical skills needed by business students today (Hynes and Bhatia 1996; Maes, Weldy, and Icenogle 1997; Plutsky 1996; Wardrope 2002). AACSB International (The Association to Advance Collegiate Schools of Business) continues to recognize the importance of communication skills in its latest standards (2004). Not surprisingly, Wardrope (2002) found that a communication course was required at 76% of the institutions surveyed. We will not debate the value of communication skills but need to delve into the effectiveness of delivery and ability of the students to acquire better and more dominant skills.

Longer term trends show the following results which add to the credibility and corresponding confusion of the direction of SAT scores and GPA, a true juxtaposition. In the 1930’s, the average GPA at American colleges and Universities was about 2.35, a number that corresponds with data compiled by W. Perry in 1943. By the 1950’s, the average GPA was about 2.52. GPA took off in the 1960’s with grades at private schools rising faster than those in public schools, receded throughout into the 1970’s, and began to rise again in the 1980’s at a rate of about 0.10 to 0.15 in GPA per decade to the present. The grade inflation that began in the 1980’s has yet to end (GradeInflation.com 2010). It is commonly accepted that business students need effective communication skills to be successful professionals. Consequently, many universities have instituted curriculum and pedagogy changes to provide students with the opportunity to develop those skills. Common changes include opportunities for group work, oral presentations, writing assignments, as well as critical thinking and unstructured problem solving (Journal of Business Communication, Volume 40, number 4, October 2003). However, research in communication and psychology demonstrates that apprehension affects skills attainment and performance (Bennett and Rhodes 1988; Bourhis and Allen 1992; Daly 1978; Freimuth 1976; McCroskey 1984). The intent of this study is not to solve this riddle but to propose a way to better prepare our students and establish a metric by which to measure this improvement and aid in remediation where needed. The proposal to be discussed will revolve around two separate rubrics, extensive videotaping of all oral presentations
and critical evaluation by peers and professor. The students will be able to hear the positive and critical responses of their peers and in return learn to accept this criticism as valid improvement incentives. The students will be provided with copies of their own presentations so they may ascertain those areas that need the most improvement.

As we believe that the P.O.W.E.R. scale can facilitate the evaluation system in business education, being equipped with this tool allows the students to be graded based on skills in demand. That being said, we shall be able to present this tool at student recruitment events to show our dedication toward the students’ practical skill improvement. The longitudinal study results over the past 6 years showed that we have achieved steady growth on student performance in both oral and written skills. The assessment results have proved this evaluation scale to be successful. We also encourage any other disciplines which require these skills to try our scale in their educational practice.

Table 1. Recent GPA Trends Nationwide

![Table 1. Recent GPA Trends Nationwide](source: www.Gradeinflation.com)
Table 2. Average SAT Scores, 1980–2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Verbal Score</th>
<th>Mathematical Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>1980</td>
<td>506</td>
<td>498</td>
</tr>
<tr>
<td>1984</td>
<td>511</td>
<td>498</td>
</tr>
<tr>
<td>1988</td>
<td>512</td>
<td>499</td>
</tr>
<tr>
<td>1990</td>
<td>505</td>
<td>496</td>
</tr>
<tr>
<td>1992</td>
<td>504</td>
<td>496</td>
</tr>
<tr>
<td>1994</td>
<td>501</td>
<td>497</td>
</tr>
<tr>
<td>1996</td>
<td>507</td>
<td>503</td>
</tr>
<tr>
<td>1998</td>
<td>509</td>
<td>502</td>
</tr>
<tr>
<td>2000</td>
<td>507</td>
<td>504</td>
</tr>
<tr>
<td>2002</td>
<td>507</td>
<td>502</td>
</tr>
<tr>
<td>2004</td>
<td>512</td>
<td>504</td>
</tr>
<tr>
<td>2005</td>
<td>513</td>
<td>505</td>
</tr>
<tr>
<td>2006</td>
<td>505</td>
<td>502</td>
</tr>
<tr>
<td>2007</td>
<td>503</td>
<td>500</td>
</tr>
<tr>
<td>2008</td>
<td>502</td>
<td>499</td>
</tr>
<tr>
<td>2009</td>
<td>502</td>
<td>497</td>
</tr>
<tr>
<td>2010</td>
<td>502</td>
<td>498</td>
</tr>
<tr>
<td>2011</td>
<td>500</td>
<td>495</td>
</tr>
<tr>
<td>2012</td>
<td>498</td>
<td>493</td>
</tr>
<tr>
<td>2013</td>
<td>499</td>
<td>494</td>
</tr>
</tbody>
</table>


Table 3. SAT Reasoning Test Scores, 2013

<table>
<thead>
<tr>
<th>Self-Identified as</th>
<th>Reading</th>
<th>Math</th>
<th>Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian or Alaskan Native</td>
<td>480</td>
<td>486</td>
<td>461</td>
</tr>
<tr>
<td>Asian, Asian-American, or Pacific Islander</td>
<td>521</td>
<td>597</td>
<td>527</td>
</tr>
<tr>
<td>Black or African-American</td>
<td>431</td>
<td>429</td>
<td>418</td>
</tr>
<tr>
<td>Mexican or Mexican-American</td>
<td>449</td>
<td>464</td>
<td>442</td>
</tr>
<tr>
<td>Puerto Rican</td>
<td>456</td>
<td>453</td>
<td>445</td>
</tr>
<tr>
<td>Other Hispanic, Latino, or Latin American</td>
<td>450</td>
<td>453</td>
<td>445</td>
</tr>
<tr>
<td>White</td>
<td>527</td>
<td>534</td>
<td>515</td>
</tr>
<tr>
<td>Other</td>
<td>492</td>
<td>519</td>
<td>490</td>
</tr>
<tr>
<td>No Response</td>
<td>448</td>
<td>508</td>
<td>453</td>
</tr>
<tr>
<td>Total</td>
<td>496</td>
<td>514</td>
<td>488</td>
</tr>
<tr>
<td>Male</td>
<td>499</td>
<td>531</td>
<td>514</td>
</tr>
<tr>
<td>Female</td>
<td>494</td>
<td>499</td>
<td>493</td>
</tr>
</tbody>
</table>

2. P.O.W.E.R SCALE

We propose to initiate a system wherein professors and institutions can make students aware of how they will be graded and measured. The first attempt to achieve this requires the development and refinement of rubrics in order for results to be tabulated for further evaluation on which points need to be focused and improved upon. Any successful study begins with the ability to listen to many people and absorb input from various sources. The constituents in our study are not the students, but the audience of intended potential future employers. We canvassed numerous business leaders from among Wagner College’s Business Advisory Council and gleaned all results refining and condensing to the most readily replied 10 points to measure. The director of our writing center then refined the topics and categories further to simplify the process keeping it simple and riveting. The result was a 10 point rubric which was presented to the students at the beginning of the semester so they can arm themselves with the knowledge of what is expected of them and the weighting of the scale. This rubric acts as a guide for them as they move forward from research to thought process to the writing of a paper. We follow the APA Style format which is the most readily accepted style in the professional business community. Each paper is then graded by the professor with accompanying remarks to help the student improve. The rubric is returned to the student with his/her paper for further reflection by the student and private counseling if appropriate. These scores, on a scale of 1-10, are then recorded to develop a P.O.W.E.R. ranking that is combined with a similar Oral Rubric to reside with and complement the GPA score. The oral rubric, in like manner, was developed with input from more than 100 business leaders and is distributed to the students at the beginning of each semester. The Oral rubric will contain extensive critical review by the professor and again a private consultation can be ordered to remedy and alter behavioral traits. Once we have compiled the raw data from the Oral rubric we will construct the Oral Evaluation Score (O.E.S) as well. The written work will result in the construction of the Writing Evaluation Score (W.E.S.). By isolating these two scores we will be able to ascertain irregularities between the two. We keep both in isolation and then compare and combine them to arrive at a comprehensive Oral/Written metric in two of the most important aspects of professional development and success. We add videotaping to cement in the students mind what other people are seeing and hearing. This immediate feedback and then ensuing self-study of the rubrics add to the tools the student has at his/her disposal to better hone his/her oral and writing skills. As educators, it allows us to track both the program and students on an individual basis to better assess the success of a program and make alterations on the fly. Trends are very important and the data points will provide assessment metrics for accreditation purposes. It is also the intent to measure success of P.O.W.E.R. against GPA data to determine the complement or
distance between the two in an effort to provide an ongoing implementation of new skill set activities.

In an effort to improve our evaluation tool, we have used the assessment results from the past 6 years from 2009-2014 to support our argument. In the period of 2009-2010, we struggled with consistency throughout all courses and for all faculty members. The results may not be the actual reflection of the students’ performances, but we worked out protocols to standardize the grading. The results did show a pattern of growth in written and oral skills at both undergraduate and graduate levels.

**Undergraduate Writing Rubrics have a scale of 1-5**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>09-‘10</td>
<td>3.85</td>
</tr>
<tr>
<td>10-‘11</td>
<td>3.54</td>
</tr>
<tr>
<td>11-‘12</td>
<td>3.49</td>
</tr>
<tr>
<td>12-‘13</td>
<td>3.71</td>
</tr>
<tr>
<td>13-‘14</td>
<td>3.75</td>
</tr>
</tbody>
</table>
Undergraduate Oral Rubrics have a scale of 1-10

MBA Writing Rubrics have a scale of 1-10
3. SUMMARY
This study was intentionally kept short to reflect an executive summary format as students learn to come to grips with shortcomings and attack them in a straightforward manner. Evaluation and grading of all Oral and Written Presentations will be on a competitive skill basis with the intent of rewarding effort, focus, intensity and adaptability in the form of dominant improvement. When the students embark their chosen careers they will have but one chance to make that favorable first impression—just one. By structuring a challenging, yet supportive environment, we strive and hope to produce a better prepared student with an instilled sense of confidence. With the longitudinal study, we further proved that this method can enhance students’ abilities to directly apply their academic knowledge in the real world. The improvement on speaking and written will definitely make the students more competent in the job market.

Another important contribution of this study resides in the rubrics’ marketing implications on student recruitment. As we argued the function of GPA on evaluating students’ oral and written skills has been weakened, this grading method sufficiently complemented the regular grading system. Students would like to be graded on something they will use in the future. Pragmatically, the utilization of this rubric urges students to particularly develop skills required for business professionals. At recruitment events, we can present our rubric, the assessment data results and skills sought by employers to students and parents. The seamless integration between our educational service and the industry needs signals our dedication to making students successful in the job market. Beyond that, our tool also indicates our compulsion to deliver a quality educational service.
EXHIBIT A: Wagner Oral Presentation and Written Rubrics

**Business Administration Oral Presentation Assessment Rubric**

Student name: __________________________________________

Course: ___________________________ Semester: ____________

Title of Presentation: __________________________________

Please rank the following on a scale of 1-10, 1 being the lowest and 10 the highest.

Knowledge of subject: ___________________________

Correct usage of Grammar & Language: ____________

Avoidance of Repetitive “hums”, “okays”, etc.: _______

Voice/Diction – speed: ___________________________

Voice/Diction – loudness: _________________________

Personalization/Engagement of Presentation: ________

Eye Contact: _________________________________

Posture/Stance: _______________________________

Appropriateness of Attire: ______________________

Appropriateness of Visuals: _____________________

Interaction among Presenters (if applicable): ______

Fielding of Questions: _________________________

Overall Student Presentation Grade: _____________

Comments: ____________________________________

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Name of faculty member: __________________________
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<th>layout</th>
<th>6.1.0 Unacceptable, lack any coherent logical interpretation</th>
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<td>6.1 – 7.0 Borderline satisfactory, meets most requirements</td>
<td>7.1 – 8.0 Satisfactory, holds the reader’s attention, makes sense</td>
<td>8.1 – 9.0 Above satisfactory, borderline excellent</td>
<td>9.1 – 10 Excellent paper, written in paper format as well as all other aspects</td>
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Business Administration - Informal/Informal Writing Scoring Sheet

Student name: _______________________________ Semester: ________________

Course: ________________________________ Title of Paper: ________________________________

Please rank the following on a scale of 1-10, 1 being the lowest and 10 the highest.

- Layout: __________
- Subject Clarity: __________
- Flow and Interest: __________
- Grammar and Spelling: __________
- Format: __________
- Style: __________
- Substance: __________
- Depth: __________
- Organization of Ideas: __________
- Sentence and Paragraph Structure: __________
- Overall Grade: __________

Comments:

Name of faculty member: ________________________________
REFERENCES


Service Academy Forums (2010), Average GPA for Cadets.


INTERNATIONAL TRADE THEORY OF HYPER-GLOBALIZATION AND HYPER-INFORMATION FLOW CONCEIVED

George L. De Feis
Pace University

Donald Grunewald
Pace University

George N. De Feis
Pace University

ABSTRACT
Since the 1990s “Birth of the Internet,” we have lived with the ever-increasing speed at which we must absorb (take in), digest, regurgitate, and promulgate information, which is rarely tested or fully analyzed and considered. Some people do this well, and advance; some do not. At the same time, the world is not only flat (Friedman), it is shrinking due to globalization and significant information flow. For instance, in the aftermath of the 9-11 tragedy, details emerged which when studied were available before the 9-11 event on the Internet, but the Internet was too “crowded” with other “noise” (i.e., over-information flow) the information was never discovered. Sometimes the effects of this information flow and globalization are very positive (e.g., emerging democracies, emerging economies [e.g., BRIC countries]) and sometimes the effects are very negative (e.g., offshoots of the Arab Spring, ISIS).

Throughout the course of modern history, there have been ever changing theories regarding trade. International trade in particular, has been the subject of much controversy regarding the potential benefits and detriments that may come along with certain practices. This paper will analyze the evolution of trade theory beginning with the mid-1500s and mercantilism, progressing through the 20th Century trade theories, and proposing a new trade theory for the 21st century, namely: International Trade Theory of Hyper-Globalization and Hyper-Information Flow.

Many trade theories exist today that were developed many years ago, and newer ones are more relevant in today’s era of globalization. Beginning with the barter system of trade, which was around for thousands of years, this paper begins with the theory of mercantilism. The trade theories covered herein are as follows:

- Mercantilism
- Absolute Advantage
- Comparative Advantage
- Heckscher-Ohlin Theory (with Leontief Paradox)
- Product Life Cycle Theory
- New Trade Theory
- National Advantage (Porter’s Diamond)
Each of these trade theories has pros and cons, rights and wrongs, benefits and costs, which can only be displayed when looked at over the last four to five hundred years. It is now the 21st Century, and hence another trade theory is proposed to help explain the how and why nations trade, or maybe: How and why trading blocs trade? In either case the new trade theory proposed here is called: “International Trade Theory of Hyper-Globalization and Hyper-Information Flow.” However, first this paper will explain the theories which explained international trade up until now.

All of the above theories of international trade have contributed over time to the knowledge of international trade. None were all right and none were (are) all wrong. These theories were all conceived at different points in time when trade was developing and undergoing different attributes. The theories were right for their time, though, obviously, when we look now, may have to be tweaked or replaced by new theories as we learn more about international trade and its standing in the 21st century.

The “International Trade Theory of Hyper-Globalization and Hyper-Information Flow,” which is conceptualized in this paper, is hereby proposed for study and consideration. This new theory, which must be fleshed-out with hypotheses which could be empirically tested, is hopefully a step in looking at globalism, globalization, new technology, information flow, and other external environmental factors that are prominent today. Surely, there will be more theories as time evolves, and countries either integrate (or segregate) the things which are traded, for better or worse.

Keywords: Globalization, information exchange, international trade theory, comparative theory
BUILDING COMMUNITY RELATIONSHIPS WITH A SENIOR DESIGN EXPERIENCE

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York, PA, USA

ABSTRACT
At York College of Pennsylvania we have a mandatory co-op program, so all of our students get three semesters of experience working with companies in engineering positions. In the past, we have used our senior design projects to further develop our students’ design and project development skills in large teams. For example, we have built autonomous robots for the International Ground Vehicle Competition (IGVC) and formula style race cars for the Society of Automotive Engineering Formula Student Design Competition (FSAE). While successful in further developing project and group communication skills, these projects lacked the personal interaction with a customer who was supplying specifications and constraints. To fill this need, and to help build community relationships, this year’s senior design projects included the design and build of an automatic bike rental system to be used to connect the college campus and the downtown business district of York, PA. Two companies from the business district provided representatives to serve as the customers and to interact with our students in developing specifications, participating in planning meetings, and attending design reviews of the bike rental system. It is hoped that the implementation of a bike rental system will increase the number of students frequenting downtown businesses.

Two teams of students were formed for the bike rental system design, each working on their own design. Each team consisted of about ten mechanical, electrical, and computer engineering students, and had faculty advisors from all three disciplines. The project was conducted over two
Most of the design work was completed in the first semester, and the construction of the prototypes was completed in the second semester. The intention was that this year was the first phase of the project. Next year the project will take the knowledge that was gained from the prototypes and complete a final design and construct a system ready for implementation. Next year’s design will include additional input from students in the Department of the Arts with respect to the aesthetics of the design. In addition, students from the Business Department will be included to determine if the bike rack can be further developed into a viable product. They will be asked to develop a business and marketing plan if the product is deemed viable.

**Keywords:** Community engagement, experiential learning, multidisciplinary learning
THE IMPACT OF PARTICIPATORY LEADERSHIP ON
SMALL BUSINESS

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ABSTRACT
Decades of experience have shown, researchers have proven, and scholarly articles have indicated
that small businesses are the driving force in every economy. As a result, it is of vital importance
that its leadership continue to play a significant part for continued economic growth and success. In
this paper, we have survey 45 small business leaders to ascertain the impact of participatory
leadership on small businesses. Study is based on the premise that participatory leadership is the
leader who is involved both in the planning and implementation of strategic goals to ensuring vision
realization without being a micromanager. This a move away from ivory tower leadership towards a
physical stake instead of just articulating the vision. The result of this survey could assist small
business in their vision implementation.

Keywords: participatory leadership, small business, leadership style
ACTIVE TEACHING AND LEARNING THAT FOSTERS AND ENHANCES LEARNING

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ABSTRACT
With advancements in technologies, state-of-the-art facilities and, telepresence in the educational sector, researches have shown that Generation Z, also called the “distracted generation,” have an attention span of about 15 to 18 minutes. Therefore, today’s teaching and learning requires a new method of thinking and instructional strategies that would differ from traditional approaches to what the baby boomers and Generation X had. This paper will look at strategies that can be implemented to foster and enhance learning in three modalities – face to face, blended and, online formats. It would take a comprehensive look at passive learning where evidence from a wide variety of scholarly sources indicates that listening to a classroom lecture is not an effective way of promoting deeper and lasting student learning. The shift from teaching to helping students learn will be investigated and the introduction of Bloom’s taxonomy higher level thinking for critical thinking will be explored.

Keywords: active learning, instructional strategy, online teaching, face-to-face teaching
USE OF SOCIAL MEDIA: AN EFFECTIVE METHOD TO ENGAGE STUDENTS

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Kuwait University

ABSTRACT
This article discusses the impact of social media on teaching, especially how to use social media in engaging students in effective learning. By focusing on the rapid development and proliferation of social media like blogs, Twitter, WhatsApp, Facebook, Snapchat etc. that promote and enhance community development through information sharing and collaboration by creating opportunities for individual interaction and expression with other users in the community and the virtual world by sharing ideas, views, audios, videos and photos etc. enriching knowledge, attitudes, behaviors among the participants. Taking that idea into consideration, the author will discuss how he uses social media in effective teaching.

Keywords: Social media, student engagement, pedagogy
CULTURAL CONSIDERATIONS: A COMPARISON BETWEEN THE ARAB WORLD AND THE WEST

Dr. Yasin Al-Ibrahim  
Kuwait University

Serajul I. Bhuiyan  
Kuwait University

ABSTRACT
In this paper, the author will discuss the comparative approaches of teaching at the university level and will compare teaching approaches in Arab World with that of the West. As we know it, teaching is a complex activities where transmission and imparting of knowledge and skills, and to help students inculcate attitudes, values and behavior take place in the classroom. As a teacher an individual has to have different cluster of roles, duties and responsibilities with the framework of ethical and social responsibility attached with it. By analyzing different teaching strategies and skills set of a faculty member to impact the effective learning, the author will compare effective communicative approach of teaching between the Arab world and the West from his own experience.

Keywords: culture, teaching strategies, instructor-student communication
INSTITUTIONAL EMERGENCE: AN ANALYSIS OF HOW NANOTECHNOLOGY CREATES NEW INSTITUTIONAL ENTITIES

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n.islam@abertay.ac.uk

ABSTRACT
Scientists with different subject backgrounds are getting involved in the nanotechnology domain to generate new knowledge; relocating themselves; and re-labelling their research for funding and collaboration opportunities. This study is concerned whether this relocation of resources (for example, critical mass of expertise) could cause the emergence of new institutional entities. In this paper, a mixed-methods research approach is adopted, analyzing both quantitative and qualitative data, to unpack the complexity of the issues of institutional emergence. Through the use of extensive publication and patent data analyses followed by expert interviews covering a wide range of stakeholders across Europe, Asia and North America, the paper maps the mechanism of institutional entity creation. The results indicate that scientists’ intention of working with re-labeled nano-research and their interdisciplinary collaboration have triggered the development of new institutions. A linear linkage mechanism among actors is found to be an effective model for this. Actors are found to be at the initial stages of mechanizing this process and the funding system was identified as a great tool to facilitate this trend. A case study was also carried out to validate the research findings.

Keywords: Nanotechnology, institutional evolution, institutional emergence

INTRODUCTION
Nanotechnologies are a collective term for a set of technologies, techniques and processes – rather than a specific area of science or engineering. Often referred as ‘convergent’ technology (Roco 2002) or an interdisciplinary (Porter and Youtie 2009; Wry et al 2010; Zucker et al 2007) ensemble of several fields of natural sciences, nanotechnologies comprise one of the fastest growing research and development areas in the world (NSTC 2006). For nanotechnologies, increased funding is available for its rapid development over a wide range of scientific and technological areas. General disciplines across institutions, whether at universities or private institutions, that were not getting much funding earlier, now have prioritized nanotechnology research for taking advantages of the increased funding as well as re-labelled the research theme what they do as nanoscience rather than general disciplines such as chemistry, physics, biology, and material sciences. This drives relabeling the research in a discipline and as such re-locating the critical mass of expertise into new institutional entities. As nanotechnologies offer a field of scientific constellation and practice, scientists with different subject backgrounds are getting involved intensely and relocating themselves to exploit nano-scale knowledge. Due to its interdisciplinary character, nanotechnology requires people of different subject backgrounds and their interaction of research work at the atomic and molecular scales. It can be argued that to analyse how nanotechnology drives the prioritized research in traditional disciplines and to foster the creation of new institutional platforms would be meaningful.
The central purpose of this paper is to provide an empirical analysis on the dynamics of trajectories, whether the shift or relocation of scientists could cause the emergence of new entities such as academic departments and institutions as a platform of exploring and exploiting nanotechnologies. For examining this, the research searches for institutional addresses of scientists in the publication and patent documents retrieved from ISI Web of Science and Thomson Innovation databases respectively – i.e. Are scientists still located in traditional departments or are they relocated into new institutional entities or departments? What proportions of scientists are from old and new institutional entities? How have the trends of relocation changed over the last 20 years? In general, this study seeks for a common question–does nanotechnology create new institutional entities? What the process of institutional emergence is. The development of nanotechnology constitutes an excellent domain of research to find the clues of creating new departments or institutions.

THEORETICAL AND CONCEPTUAL FRAMEWORK
For decades, the birth of new institutional entities and the way they take shape are fascinating topics of research. The institutional theories have been found its roots in the literatures, for example, Meyer and Rowan (1977), Zucker (1977), DiMaggio and Powell (1991), Meyer and Scott (1983), and Greenwood et al. (1996). In the past thirty years, researchers have been focusing on the dynamics of the creation and modifications of institutions (Holm 1995; Lounsbury 2007). In their contemporary research, Lawrence and Suddaby (2006) show that it is only in the past decade that various research efforts, still not aggregated, have started exploring the deeds of actors who leverage resources to create new institutions or to transform existing ones. Their exhaustive analysis of institutional research papers published in Administrative Science Quarterly, Academy of Management Journal, and Organizations Studies leads them to identify the following foci: creating institutions, maintaining institutions, and disrupting institutions. It also shows that there is a clear lead in terms of number of publications of the literature dealing with the creation of institutions. Many researched on theoretical development of institutional emergence (Maguire et al 2004), institutionalisation involving multiple actors (Leblebici et al 1991), and the process of institutionalisation (Anand and Jones 2008). Callon (1986) and Latour (1988) explore the sociological dimension of the process of the institutionalization of science.

The emergence of nanotechnologies epitomizes the important changes which are affecting the economic paradigm, culture and society at large. Today nanotechnologies are recognized as a field of scientific and technological constellation and practice in which diverse scientific disciplines and technology domains (Roco and Bainbridge 2002; Islam and Miyazaki 2010; Meyer and Persson 1998) are involved and new knowledge is produced for the sciences and technologies and for society as a whole. At the empirical level, nanotechnologies are being hailed as one of the most promising sectors of socio and economic development, whether by public institutions (European Commission and Nordmann 2004), by academic researchers (Roco and Bainbridge 2001) or by analysts and investors (Paull et al. 2003). Many specialists draw attention to the challenges it brings, and again these are seen at various levels from the scientific (Drexler and Smalley 2003) to the socio-economic (Mazzola 2003; Huw Arnall 2003; Mnyusiwalla et al. 2003) and to the regulatory levels (Reynolds 2002). The development of nanotechnologies signaled important changes affecting the economic paradigm as well as a deep societal transformation.

The present study stresses on understanding how the development of this emergent field is bringing about a whole new ensemble of structured social practices of new institutional emergence. The future development of nanotechnologies can be seen as both a set of organizations which in the
aggregate constitutes an area of institutional life (DiMaggio, 1983) and a network of social relations, within which struggles take place over resources, stakes, and access to establish legitimacy and survive (Bourdieu 1992; Latour 1988). Based on theoretical foundation, this study develops a conceptual framework by postulating that not only a single stakeholder but also a group of stakeholders or actors are acting collectively and shaping the process of new institutional emergence. In the framework, as illustrated in Figure 1, several stakeholders, for example, scientists across disciplines, technology providers or entrepreneurs across technology domains, policy makers across regulatory and funding bodies, and end users are collectively shaping the process of nanotechnology institutionalizations.

**Figure 1: Conceptual Framework of Nanotechnology Institutional Emergence**

The development of nanotechnologies diffuses very fast and very broadly, and it is likely to bring deep and radical changes to society. It constitutes an ideal empirical field to analyze the emergence of new institutions in real time because it raises questions linked not only to institutional entrepreneurship and innovation, but also to regulatory issues and risk management and to ethics. The core institutions for generating nano-knowledge are universities and public research institutes where scientists across disciplines, such as chemistry, physics, materials sciences and biology are extensively involved in the relevant research to explore nanotechnologies as a scientific curiosity and through government initiatives drive. Similarly technology providers or entrepreneurs are
collectively generating new technologies and products as demand for increased performance through smaller components has paved the way for the nano-scale. In recent times, performance demands on new materials have also come from the biotechnology domain through the development of regenerative medicine and drug delivery. Similarly, actors complement their activities by interacting with each other and help shaping the evolution of a culture of new way of working within or outside the organizations. The shaping pattern is not the same as the other technologies such as biotechnology and information & communication technology, where relevant fields are responsible for the exploration of the technologies. Equally important are actors, for example, policy makers from organizations such as government agencies and departments, patent offices, regulatory bodies, and private-public funding organizations that support the whole process. Consequently the future development of nanotechnologies may incorporate customer or their demand, product completion, as well as raise the societal need.

RESEARCH DESIGN
The fluid stage of nanotechnology developments represents a methodological challenge, conceptually as well as data wise. Methodological options usually reflect a trade-off between the researcher’s resources and the requirements of the set task. However, examining the same phenomenon from multiple perspectives allows for new and deeper dimensions. In this paper, a mixed-methods research approach is adopted, analyzing both quantitative and qualitative data, to unpack the complexity of the issues of institutional emergence. Firstly, we drew upon the SCI-EXPANDED database provided by ISI Web of Science over the period of 1990 to 2010 at 5 years interval for searching institutional addresses of scientists in four traditional disciplinary journal publications (e.g. chemistry, physics, material science, and biology) categorized by ISI using both Essential Science Indicator (ESI) and Journal Citation Reports (JCR). We have selected top ranked twenty-five journals of each discipline (such as chemistry, physics, material science, and biology) categorized by ESI and JCR in terms of publications. In the period of 1990-1994, 1995-1999, 2000-2004, and 2005-2010, we have analyzed institutional addresses of scientists among the set of journals from each discipline. The key question addressed here as follows: are scientists still located in the departments called chemistry; physics etc. or are they in new institutional entities called inter-disciplinary research centers? Analyzing then what proportions are in the old disciplined-based departments and what proportions are in the new named centers.

Second, Thomson Innovation patent databases were accessed for retrieving the patent data and the subsequent analyses were performed by dedicated tech mining software called VantagePoint developed by Georgia Institute of Technology (Porter and Cunningham 2005). Huang et al. (2011) analyzed patents and publication research approaches, and categorized them into two broad strategies: lexical queries and patent classification queries. Authors mention both the advantages and the disadvantages of these two forms of query. Porter et al. (2008) use lexical queries to gather all patents with ‘nano’ terms including those patents that have unrelated terms such as ‘nanosecond’. Given the limitations and drawbacks of the above approaches, our method uses a combination of both the patent classifications code and lexical queries. The reason why both approaches are followed is because - as is mentioned in Scheu’s et al. (2006) study - only using patent codes has a weakness in that unrelated patents appear in the patent data due to their wrong classification. Also, using only lexical queries - as suggested by Porter (2008) - resulted in almost 140,000 patents, among which were found many unrelated patents after reviewing the samples from the collected data. Afterwards, the DWPI (Derwent Patent Index) was used to exclude patents that appeared more than once in the search results. For retrieving patent data, the following search terms were used: (AIOE=(B82*) OR FIC=(B82*) OR UCC=(977*)) AND
As a result, 49,544 individual nanotechnology patents were obtained for the period from 1970 to 2012. The obtained results were imported into VantagePoint software to analyze the data and to validate the results further. The duplicate results were eliminated and variations of company, inventor, institutes and university names were unified where they appeared as separate patent assignees. After the dataset was cleaned and prepared, various functions were utilized using the same tool to generate the required analysis.

The empirical analysis is followed by descriptive statistics based on a series of semi-structured face-to-face and telephone interviews with independent experts covering a wide range of stakeholders, for example, scientists from universities and private companies, entrepreneurs, and policy makers across Europe, Asia and North America. About 30 interviews were conducted across Europe (Germany, France, UK, Italy, Switzerland, and Greece); 25 interviews were conducted in Asia (Japan, China, and Singapore); and another 25 interviews were conducted in North America (Canada and USA). The interview process was open and flexible—the interviewees were given background information as to how the analysis would be conducted. The questionnaire and interview method were tested on a small sample of experts before launch. These pilot interviews helped the process and questions to be refined and any major methodological problem areas to be identified. Interview data collection was mainly in the form of notes and voice recordings. Whenever possible, the research results were validated by interview follow ups.

RESULTS
Relocation of scientists into new institutional entities
The development of nano-instruments pushes researchers and practitioners to become involved in nanotechnology field to enable them to control and manipulate structures and materials’ properties. The intention of re-labeling research is for attracting more public and private funding for continuing nanotechnology research. The empirical construction of nanotechnology knowledge productions across macro disciplines shows the extent and trend of scientists’ relocation in the last 20 year period. Examining snapshots of the prevalent disciplines offer a perspective on the diversity of nano-scientists movement of position across nanotechnology research. The analyses were performed by searching nano-scientific output of top ranked twenty five journals across four traditional disciplines (e.g. chemistry, physics, material science, and biology) categorized by ISI using both ESI and JCR in terms of publications. Table 1 shows that nano-knowledge was almost always created separately through each discipline, early on, rather than through flowing knowledge within new institutional entities or departments. Note that the relative relocation of experts and the trends of their movement from the traditional departments have shifted to new departments or institutions over time.

As illustrated in Table 1, in the case of chemistry, the nano-knowledge productions under the same department was 98.65% in the early 1990s and had dropped to 74.67% by 2005-2010. Similarly in the case of physics, materials science and biology disciplines, the shares dropped from 97.03% to 79.65%, 90.83% to 67.94%, and 97.39% to 68.72% respectively. On the other hand, the shares of nano-knowledge productions affiliated by new departments and new institutions grew over last twenty-year period and made up the gap. The trend of shift or relocation in material sciences (3.83% in 1990-94 to 43.224% in 2005-10) and in biological sciences (1.89% in 1990-94 to 35.75% in 20005-10) are more significant than the movement in chemistry (1.42% in 1990-94 to 27.52% in 2005-10) and in physics (0.26% in 1990-94 to 21.13% in 2005-10). The results indicate that
scientists from material sciences and biological sciences departments were relocated or shifted substantially to new institutional entities. Similarly, scientists from chemistry and physics departments seem to have shifted moderately.

The analyses could be interpreted in such a way that scientists had almost no intention for relocation in the birth period of nanotechnology. With the evolution of nanotechnology-labelled research pushed by increased R&D funding and the prioritized national initiatives, critical mass of expertise in natural science disciplines were shifted over time, i.e., from being based on more separate disciplines to being more interdisciplinary centres or new institutions. In other words, the trend of relocation creates a system of specific fields or topics into something that is mixing fields. This shifting may be the cause for i) new opportunity to work together with expertise of different backgrounds; ii) demand for cross-disciplinary research in nano-scale; iii) rapid development of nano-instruments (e.g. STM, AFM) that enable control, assembly and manipulation of materials and structures at nano scale. The results could be interpreted to signify that nanotechnology knowledge production and diffusion derive from taking advantage of scientific opportunities that allow scientists to undertake or share a multidisciplinary research. In this way, nanotechnology appears to be leading to a breakdown of the boundaries between traditional disciplines and certainly encourage the mobilisation of peoples from traditional disciplines into new institutions for the cultivation of multi-disciplinary knowledge.

Table 1: Trends of scientists’ relocation into new institutional entities over time

<table>
<thead>
<tr>
<th>Search Period</th>
<th>Macro Disciplines</th>
<th>Authors publish under traditional disciplines/Departments (%)</th>
<th>Authors publish under new departments/Institutions (%)</th>
<th>Trends of movement (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-1994</td>
<td>Chemistry</td>
<td>98.65</td>
<td>1.40</td>
<td>1.42</td>
</tr>
<tr>
<td></td>
<td>Physics</td>
<td>97.03</td>
<td>0.25</td>
<td>0.26</td>
</tr>
<tr>
<td></td>
<td>Material Science</td>
<td>90.83</td>
<td>3.48</td>
<td>3.83</td>
</tr>
<tr>
<td></td>
<td>Biology</td>
<td>97.39</td>
<td>1.84</td>
<td>1.89</td>
</tr>
<tr>
<td>1995-1999</td>
<td>Chemistry</td>
<td>95.05</td>
<td>2.90</td>
<td>3.05</td>
</tr>
<tr>
<td></td>
<td>Physics</td>
<td>96.59</td>
<td>3.75</td>
<td>3.88</td>
</tr>
<tr>
<td></td>
<td>Material Science</td>
<td>84.11</td>
<td>9.88</td>
<td>11.75</td>
</tr>
<tr>
<td></td>
<td>Biology</td>
<td>92.46</td>
<td>4.22</td>
<td>4.56</td>
</tr>
<tr>
<td>2000-2004</td>
<td>Chemistry</td>
<td>87.84</td>
<td>11.78</td>
<td>13.41</td>
</tr>
<tr>
<td></td>
<td>Physics</td>
<td>89.30</td>
<td>8.99</td>
<td>10.07</td>
</tr>
<tr>
<td></td>
<td>Material Science</td>
<td>80.44</td>
<td>13.49</td>
<td>16.77</td>
</tr>
<tr>
<td></td>
<td>Biology</td>
<td>80.38</td>
<td>12.68</td>
<td>15.78</td>
</tr>
<tr>
<td>2005-2010</td>
<td>Chemistry</td>
<td>74.67</td>
<td>20.55</td>
<td>27.52</td>
</tr>
<tr>
<td></td>
<td>Physics</td>
<td>79.65</td>
<td>16.83</td>
<td>21.13</td>
</tr>
<tr>
<td></td>
<td>Material Science</td>
<td>67.94</td>
<td>29.38</td>
<td>43.24</td>
</tr>
<tr>
<td></td>
<td>Biology</td>
<td>68.72</td>
<td>24.57</td>
<td>35.75</td>
</tr>
</tbody>
</table>

Basis of Analysis — Selected top ranked journals in each discipline classified by Essential Science Indicators and Journal Citation Report
Search Method — Specific keywords derived from the Nano Science and Technology Institute (NSTI) publication
Case Study on Successful Creation of New Institutional Entities
In early 2000s, the strong collaboration between Foxconn (Honhai Precision, a Taiwan-based large firm) and Tsinghua University for generating new knowledge in product and process technologies accelerates to the formation of Tsinghua-Foxconn Nanotechnology Research Center (TFNRC). Accordingly, Prof. Fan Shoushan\(^1\) is interviewed to gather key determinants for the emergence of a new institute.

Table 2: Profile of Foxconn-Tsinghua patent co-ownership

<table>
<thead>
<tr>
<th>Number of Shared Patents</th>
<th>Collaborative Organizations</th>
<th>Top Inventors</th>
<th>Top Country</th>
<th>Range of Years</th>
<th>Percentage of Records in Last-3 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>417</td>
<td>UNIV QINGHUA AND FOXCONN</td>
<td>Fan Shou Shan [309]; Jiang Kai Li [209]; Liu Liang [173]</td>
<td>CN [412]; US [333]; JP [26]</td>
<td>2002 - 2010</td>
<td>30% of 417</td>
</tr>
</tbody>
</table>

The research collaboration was started in 2000 with Foxconn’s target of participating with a strong academic player such as Tsinghua University which was one of the largest organizations with high number of patents in nanotechnology field in Asia (Table 2). To start with the collaboration, Foxconn offered 50 million USD to Tsinghua University to work together in nanotechnology field via establishing an institute in the university campus. A new department is built as Tsinghua-Foxconn Nanotechnology Research Center (TFNRC) by the direct donation of Foxconn. One of the main targets of Foxconn was to increase their number of IP in this field and to work with a partner who is in strong position in basic fundamental research in this field. Many patents are applied together by Foxconn and Tsinghua University and currently all of their nanotechnology patents are shared by both sides. According to their agreement, both parties can use each other’s’ patents but if there is a third party would like to collaborate then both parties have to agree on it. Most of their collaborations are related to carbon nanotubes (CNTs), such as CNT sensors and field emission displays (FEDs). Since 2000, 50 million USD has been spent until 2011 and another contract of 150

\(^1\) Prof. Fan Shoushan is the Director of the Tsinghua-Foxconn Nanotechnology Research Center and he is the second highest number of patents holder in the nanotechnology field (398 patents).
million USD has begun until 2020 for the continuation of this new institute. This collaboration is an example to show how an academic and industrial actor is linked with the needs of both sides as Foxconn had a requirement of an organization with expertise in the fundamental research and Tsinghua University has a requirement of an industrial player who can invest and has expertise in the industrial field such as commercialization and mass production. This is one of the illustrations how inventions can be linked to innovations. Current structure of internal relocation and external collaboration mechanism can be seen from the Figure 2.

**Figure 2: An illustration of collaboration structure in Tshinghua-Foxconn nanotech institute**

There are various factors that encourage Foxconn to invest in a new institute in Tsinghua University campus. Foxconn has expertise how to apply the technology in the industry and in mass production. Tsinghua University has great capability to invent new ideas as they can work in this highly dispersed field due to availability of various scientists. Considering the availability of the large scale of funds and the critical mass of expertise, it appears that a linear collaboration linkage works very well. Accordingly the following model is drawn to present the relationship between Tsinghua University and Foxconn (Figure 3). Personal relationship and initiative between parties (industry and academia) and their mutual trust is vital for forming such a new institute. Most importantly, there has to be a mutual benefit and both parties have to have a need for each other. From this point of view, nanotechnology center in universities have a great role considering the dispersion of nanotechnology field as many researches in this field require scientists from different fields so the process allows and encourages them to work under a single entity.

As shown in Figure 3, this new type of institute formed by collaboration between an academic organization and corporate organization increase the commercial possibility of technology.
As it is illustrated with an example, by this kind of collaborations through technology transfer process, it is possible to transform academic ideas into commercialized products or potential innovations. Tsinghua University generated many patent documents by using nanotube technology starting from 1995 but these inventions had possibility to turn into commercialized products after the investment of Foxconn and share their expertise in the relevant sector. Moreover, Foxconn is the party that has access to the market where these technologies can be produced by themselves or these new technologies could be offered to the end users by using their large clients such as Apple, Sony and Acer.

Figure 3: How a new Tsinghua-Foxconn nanotech institute works

Stakeholder Movement into New Institutions – An Empirical Analysis
A lot of speculation is going on to predict what nanotechnology offers to the emergence of new institutions in the near future. Results of the interview analyses suggest that nanotechnology R&D is a global activity and globalization is felt in the exchanges or relocation of scientists and researchers. In this sense, an expert in the field needs knowledge of another discipline to work at the nano-scale and make cross-links with other researchers, which helps them to move into what is, in effect, a multi-disciplinary system. The data obtained from the interview show that people from different departments has a tendency to relocate and work for new inter-disciplinary research entities that appear to become an excellent nanotechnology research cluster whether it would be real or virtual. For example, Nanoscience Centre at Cambridge operates in a sense of real and a virtual centre\(^2\), shares knowledge and facilities with a number of university departments and national laboratories across Europe and Asian countries. People can access common equipment, and run facilities where they specially have multi-disciplinary projects. Representatives of the departments are, for example, engineers, physicists, chemists and material scientists who are creating an interdisciplinary new institutional environment around the development of nanotechnology and this trend of institutional environment develops gradually. Scientists and engineers with the expertise and skills mix described

\(^2\) [interview with Professor Sir Mark Welland, Director of Cambridge Nanoscience Centre, UK]
above are currently not produced in the universities. These interdisciplinary centers assure a research-focused education, a close involvement of industry and national, European and Asian research labs, as well as the necessary literacy to work efficiently in a multi-disciplinary research and engineering consortium. This could be a new institution, involving satellites of leading universities and other institutions throughout Europe. Such institutions will attract, train and develop the next generation of leading young scientists who are vitally-important for a growing modern economy.

The big companies (e.g. multinationals) are theoretically supposed to be very knowledgeable, but actually this has been seen to not be the case. Large companies need to find out what is actually feasible in the labs, what can be done using nanotechnology and how it might impact on their businesses. On the other hand, start-ups spinning out from academic institutions do not have sufficient resources to think laterally, although their thinking about technology transfer is often 10 years ahead and sometimes they are closer to the market. There are definitely some markets that need to be pull driven by industry and firms who will act as passive actors. However, industry has come up with the ‘nano’ term to label or to sell their products. Academic research from various scientific fields is also re-labeling to attract and pull funding from both private and public sources.

The role of policy makers, government and funding agencies is very important. Persistence in giving research grants or funding at a constant level is essential for the smooth functioning of the future development of nanotechnologies. However, governments’ role is to support public research and to assess the quality and excellence of research. Scientists from Europe believe that local and federal government should support entrepreneurs and small companies, since it would be very difficult for them to survive without such support. Many small companies spinning out from universities do not survive, although they have something quite new to exploit. New firms, including universities whose engagement with nanotechnologies allowed them to closely follow relevant developments, often act as entrepreneurs in bringing novel developments to the market. Therefore, policy makers and government should look at the ways to make it easier to overcome the gap identified in the analysis. In addition, any government has to continue to support its own country or region, and they should be much more receptive to new opportunities arising out of nanotechnologies. In Japan, the role of government is clear and crucial for the smooth functioning of nanotechnology development. The Japanese government supports public sector research by establishing national nanotechnology infrastructures, for example, ‘Spring 8’ in Kobe, through which scientists and researchers can take advantage of using the facilities. As identified, Japan has established such kind of interdisciplinary research infrastructure, similar to interdisciplinary research centers in Europe, to facilitate the formation of new institutional entities.

Nanotechnology significantly changes the traditional culture of general disciplines or departments. For example, at Oxford University in the department of Physics, which had no Biology department, they now have a program called Biological Physics, which is one of the largest programs within the department of Physics\(^3\). An increasing number of undergraduate and graduate students and post-doctoral researchers were enrolled on courses in Biological Physics (a conduit into bionanotechnology). As a result, a physicist at all educational stage has the opportunity to learn Biology, biological systems, biological structures, and biological functions as a part of this innovative curriculum. It should be noted that a cultural change in institutions has occurred with nanotechnology developments and this drives new educational environment. Similarly, outside of the department, it was very unusual to find strong collaboration between different departments in the years before nanotechnology appeared on the scene. Recently, the situation has changed

\(^3\) [interview with Professor John Ryan, University of Oxford, UK]
dramatically in this respect, there are major interdisciplinary programs, e.g. interdisciplinary
research centres and interdisciplinary graduate schools that were set up and funded by the UK
research councils. Every year, 75-80 graduate students, who have strong expertise in physical
sciences and with no real knowledge and expertise in biological or life sciences, were admitted into
these interdisciplinary programmes. The programmes intended to increase knowledge over one year
in the fundamental biological sciences and then students begun PhD projects within the IRC,
focusing on interdisciplinary research under the umbrella of nanotechnology.

It can be argued from the interview analysis in Japan that nanotechnology constitutes a
combinatorial type of field which enables fusion of scientific disciplines in parallel. A general
discipline’s research group consists of a variety of experts or researchers – it includes chemists,
physicists, engineers, and biologists who are working in parallel. For example, within a scientific
discipline, an electronic physicist group at Tokyo Institute of Technology consists of five sub-
groups: one sub-group focuses on devices; a second one concentrates on quantum dots and their
formation process, integration and assembly; a third sub-group works on photonics for photonic
crystals and LED; a fourth sub-group concentrates on nano-scale thin film oxides; and the fifth sub-
group works on simulation. Therefore, it is clear that through the development of nanotechnology,
research culture at university has been changed and moved towards a combination of multi-
disciplinary expertise and experiences. These examples have created changes in the educational and
institutional setting both within and outside of academic institutions.

The creation of a nano-institution called National Nanotechnology Initiatives (NNI) was
orchestrated by policy makers and scientists firstly in the US as a way to promote the orderly
development of nanotechnology. The vision of this institution was that it would be a global
institute and that it would revolutionize society by acting or manipulating on the structure of
matter. As more research was carried out and the field began to emerge, it became clear that
nanotechnology could not be assimilated to one single technology: the modification of matter at the
atomic scale took so many different forms, rested on so many different approaches, and led to so
many different outcomes that would be considered as general purpose technology (Bresnahan and
Trajtenberg 1995; Helpman 1998). Due to the nature of multi-disciplinarity, a new type of institution
emerges around the development in the field of nanotechnology. In a landmark study of institutions
and organisations, Scott (1995) set up a typology of institutionalization process which he called it
institutional pillars: regulative, normative and cognitive. Nanotechnology is indeed centers of debate
where competing interests negotiate over issue interpretation. Academic scientists, technology
providers or entrepreneurs, policy makers, as well as end users are constituents whose actions
impose competing normative and cognitive influences. They act as institutional entrepreneurs
because they mobilize resources to modify existing institutions or to create new ones to suit their
purposes.

It was the US and UK who produced the bases of pillars of the institutionalisation of
nanotechnology. In 2001, the US created the NNI centralizing the major research and development
efforts, facilitate technology transfer into products; develop educational resources and skilled
workforce, and the supporting infrastructures relating to nanotechnology. Before this,
nanotechnology R&D was a haphazard smattering of various unconnected initiatives in everywhere
else. The creation of the NNI was followed by the publication of an Act ensuring the ethical, legal,
environmental, and other appropriate societal concerns. After the US, the UK government
commissioned in 2003 the Royal Society and the Royal Academy of Engineering to study potential
applications of nanotechnology and their possible environmental, health and safety, social and
ethical implications. In 2005, the European Nanoforum (Nanoforum 2005) released a survey report
detailed the numbers of nanoscience and nanotechnology (N&N) infrastructure centres and networks within the EU and associated states covering most of the disciplines, e.g. materials (28%), electronics (20.3%), fundamental research - mainly physics and chemistry (16.8%), nanobiotechnology (15.4%), engineering and fabrication (4.9%), analytical and diagnostic tools (3.5%), and energy (2.8%).

The future development of nanotechnologies will be dependent upon the consumer’s or public acceptance of nanotechnology-enabled products, the ethical and social, health and safety implications. Several institutions, mainly government, have already got involved in studying extensively the public engagement issues. The others come from civil society, usually local community groups or groups with environmental preoccupations, or partnerships between industry and local community groups or NGOs. For example, the UK government published its ‘Outline Programme for Public Engagement on Nanotechnologies (OPPEN) as a response to the Royal Society and Royal Academy of Engineering report (Dowling, 2004). One of the parts of this program was to fund a study of public engagement initiatives. Nanotechnology Engagement Group (NEG) was established for this purpose. NEG published its report ‘Democratic Technologies?’ in 2007 (Gavelin et al., 2007) and according to the report there had been more than twenty public engagement initiatives on nanotechnologies internationally until 2007. The NEG study focused exclusively on forms of public engagement that involved dialogue between members of the public and scientists, and decision-makers.

Interview data analyses show that communicating research results on the assessment, minimization and prevention of nanotechnologies risks and benefits outside the scientific community is challenging. For the future development of nanotechnology, it is essential to prevent misunderstanding of nanotechnology industry. The interviewee experts believe that public engagement in the debate about nanotechnology application and its regulation may facilitate public acceptance as their concerns and preferences can be identified and discussed. Several suggestions were made for improving the public attitude for the sustainable development of nanotechnology in the future, for example, i) educate the general public on broad spectrum of nanotechnologies either at grade-school or at college including teaching children at the school level for indirectly inform the public; ii) raise awareness about the benefits, risks and probabilities associated with nanotechnologies; iii) participate actors or stakeholders including public interest groups, the scientific community, nanotechnology manufacturers and public authorities who could facilitate the dissemination of information to the public; iv) address all the aspects related to ethics, risk-benefit assessment methodologies and regulatory systems across different social, cultural and demographic groups; v) arrange for a debate by responsible stakeholders on both positive and negative aspects of nanotechnologies. Such a process is very important towards entering into public engagement. It is also a prerequisite to engage end users and educate them about the assessment and management of potential risks associated to the development of nanotechnologies and to accurately disseminate results in an open way so that the general public’s acceptance can be gained.
DISCUSSION AND CONCLUDING REMARKS

The purpose of this study was to investigate what extents of scientist have relocated to new institutional entities from the traditional departments and what the trends of movement are. This study weighs in with evidence regarding the nanotechnology institutional emergence using quantitative and qualitative data. First, we used a quantitative approach to visualize nano-scientists shift or relocation over the last 20 year period. The findings suggest that nano-knowledge productions exhibit a high degree of disciplinary diversity which involves other scientific fields and domains. This means that nanotechnology scientists do not operate within narrow silos. Cross-disciplinarity is the key to nanotechnology and thus requires a multi-skilled workforce. We provide examples of how nanotechnology plays a role in bringing scientists from different disciplines together, and of how their impact contributes to new institutional emergence. With the evolution of nanotechnology-labelled research pushed by increased R&D funding and the prioritized national initiatives, critical mass of expertise in natural science disciplines have shifted over time, i.e., from being based on more separate disciplines to being more interdisciplinary centres or new entities. The existence of nanotechnology-focused interdisciplinary hubs or research centres, both inside and outside of universities in European countries, represent a promising development in the practice of acquiring multi-disciplinary knowledge through nanotechnologies. In this case, everyday nano-
knowledge practice materializes in a hybrid, both physical and virtual, shared space where nano-
knowledge and nano-expertise acquired from traditional disciplines are shared between participants
and locations. Existing institutions put more weight and give space in the shaping of the new
institutional process than ever before, as nanotechnology was the first case in history of a new
technology getting such generalised and financially important institutional support for its
development. This research shows that the development of nanotechnology is giving birth to a new
form of institutional dynamics and the process is still in the making.

The future scientific and technological challenges associated with the development of
nanotechnology require a new generation of scientists with an interdisciplinary research background.
Since the design of nanostructures is the paradigm for an interdisciplinary research effort merging
the traditional fields of physics, chemistry, engineering and biology, the appropriate training and
education of young scientists is a big concern. The establishment of nanoscience & nanotechnology
centers represents one of the efficient replies to organizing the stakeholders, with a critical mass of
inter-disciplinary and inter-sectorial knowledge and research infrastructure to make a substantial
impact in the field. These centers help pulling together the leading experts from all sectors (research
labs, universities, research infrastructure, industry) to work in an optimized environment which leads
to develop in this area an excellence hub as well as a knowledge and service platform in research
and education for academia and industry.

Nanotechnology has great potential for the future, and a correspondingly strong demand for
advanced analytical techniques. In a future new era of open innovation, partnerships across
disciplines and among universities, government laboratories and industry are essential to leverage
resources and strengthen interdisciplinary research and connections to technology. A responsible
partnering between academia and industry will enable cross-disciplinary research and provide
awareness of nanotechnological drivers and potential applications. Industrially relevant science
programs through partnerships with universities will ensure better training of the next generation of
scientists, ensure lasting partnerships, provide technology transfer, and open up additional revenue
streams through new institutions such as spin-offs and science parks. Governments worldwide
should provide incentives for formation of sustainable strategic partnerships between universities,
industrial labs and research centers, and the research infrastructure for the advancement of
nanotechnologies.

The present study expands empirical knowledge of scientists’ relocation into new institutions
and the institutional emergence by synthesizing primary and secondary data through the prism of the
theoretical and conceptual frameworks. Theoretical contribution of this study is the choice of a
global approach with a focus on Europe and Asia and so some extent on the North America which
contributes to fill the research gap identified by Walsh et al. (2006) to better understand
organizations in view of transnational emergence. The research offers new insights and keys to
understand the conditions which lead to cultural change within institutions and the emergence of
new institutions, as well as to understand what may give some actors the ability to have significant
impacts on the evolution of institutions and fields into the emergence of institutions (Latour, 1988).
However, this study offers further research which needs to be pursued, notably in terms of economic
impact, public perceptions and of potential risk analysis. As this work is concerned only highly
developed countries in the West and the East, the very recent development of nanotechnology R&D
in developing countries is something that will change the institutional emergence of the technology
and it needs to be studied in greater depth.
ACKNOWLEDGMENTS
The author wishes to show his grateful acknowledgement by giving thanks to European, Asian and North American stakeholders for sharing their views and for spending their invaluable time.

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THE INFLUENCE OF SPORTS STADIUM ATMOSPHERE ON BEHAVIORAL INTENTION: THE MEDIATING ROLE OF SPECTATOR SATISFACTION

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ABSTRACT
This study investigates the mediating role of spectator satisfaction in the relationship between sports stadium atmosphere and spectator behavior. It also examines the conceptualization and measurement of Chen, Lin, and Chiu’s (2013) sports stadium atmosphere (SSA) measurement in the context of American football. Survey data collected from 211 individuals during a 2014 college football game were analyzed using structural equation modeling procedure. Results suggest that the association between sports stadium atmosphere and spectator behavior is fully mediated by spectator satisfaction. Findings also demonstrate that SSA can be operationalized as a second-order construct composed of electric device, facility, professional staff, spectator passion, team competition, and team performance. We discuss managerial and theoretical implications for sports marketers.

Keywords: Sports stadium atmosphere, spectator satisfaction, spectator behavior, sports marketing, mediating role

INTRODUCTION
Sports stadium atmosphere (SSA) refers to the unique environment in stadiums and arenas during sports events, including the physical traits of the venue as well as the actions of all the people associated with the event including fans and stadium personnel (Uhrich and Koenigstorfer, 2009; Uhrich and Benkenstein, 2010; Chen, Lin, and Chiu, 2013). Sport stadium atmosphere consists of stimuli that are created by organizers, by spectators, and by the game itself (Koenigstorfer, Groeppel-Klein, and Kunkel, 2010). The physical traits of a sports stadium may influence the atmosphere include the scoreboard, the layout of the seating (e.g., are fans close to or far away from the action), the sound system, and the lighting system (Hightower, Brady, and Baker, 2002; Wakefield, Blodgett, and Stone, 1996). The behavior of people can influence the atmosphere in a sports stadium in two ways. First, the organizers and managers of sports events can influence crowd behavior when they put messages on the scoreboard or make announcements over the public address system urging spectators to cheer; at another level, spectators exhibit crowd behavior and create
their own atmosphere when they cheer a great play or boo an opponent (Uhrich and Benkenstein, 2012; Yoshida and James, 2010; Charleston, 2008); fanatical supporters’ groups can urge on other fans to cheer and sing chants (Theysohn, Hinz, Nosworthy, and Kirchner, 2009).

For some time, academics have investigated the various elements that create the atmosphere at a sports stadium. Research first focused on only the physical aspects of the built environment (e.g., scoreboard, lighting system, sound system, and architecture of the stadium) (Ballouli and Bennett, 2014; Wakefield, Blodgett, and Stone, 1996; Hightower, Brady, and Baker, 2002). Kahle et al. (2003) expanded the study of stadium atmosphere to include the actions created by personnel at the stadium (e.g., messages on the scoreboard that tell fans to cheer, exciting announcements by the public address announcer, and the performance of bands and cheerleaders, etc.). Later, the concept of stadium atmosphere was modified to include the spontaneous actions of fans inside the stadium related to what was happening during the game (e.g., fans cheer when a goal is scored, boo the referee, etc.) (Yoshida and James, 2010). Only recently researchers have developed and empirically validated a comprehensive measure of sport stadium atmosphere that encompasses all these elements: the influence of the built environment, the actions by stadium organizers, and the spontaneous reaction of fans during an event (Uhrich and Benkenstein, 2012; Chen, Lin, and Chiu, 2013).

Empirical studies that investigated the impact of sports stadium atmosphere on fan satisfaction and behavior have been carried out outside the United States in the context of such sports as soccer, cricket, Australian Rules football, and rugby, (e.g., Funk, et al., 2009; Yoshida and James, 2010; Uhrich and Benkenstein, 2012; Biscaia et al., 2013; Chen, Lin, and Chiu, 2013; Sarstedt et al. 2014). In marked contrast, very few studies have been conducted in the United States (Yoshida and James, 2009). There is a need of more intense investigations of the atmosphere at football games in the United States because this sport is so popular and widely followed and because events such as The Super Bowl present such a huge legacy in terms of global sports marketing and cultural impact (Rose, 2014). The current study aims to address this issue by examining the relationship between the sports stadium atmosphere and fans behavioral intentions in the context of college football in the United States. In line with field theory (Lewin, 1944) and consumer behavior literature (DeSarbo, 2012), this study examines the extent to which fan satisfaction may play an intervening role to explain the complex relationships between sports stadium atmosphere and fan behavioral intention. This study is a direct response to the call for action given in Chen, Lin, and Chiu’s (2013) in which the authors urged that additional studies be conducted to assess SSA in several different sports settings in several different countries and cultures. The current study examines the conceptualization and validity of the Chen, Lin and Chiu (2013) SSA measurement tool. From a practical perspective, efforts to assess the validity of the SSA scale and to understand the impact of sport stadium atmosphere on fan behavior are of great importance to sports marketing and management professionals. The findings of this study may suggest help stadium marketing and management professionals adjust the presentation of the game and features of the stadium to create the optimal effect that will attract large crowds, ensure that fans enjoy a satisfying game experience, and thus create a desire in fans to return to the venue over and over again, thus maximizing profits.

LITERATURE REVIEW

Over time, a number of studies have attempted to understand the multitude of conditions that form the atmosphere within sports stadiums. Early research was limited to studying how the stadium itself influences the atmosphere at sports events. Wakefield, Blodgett, and Sloan (1996) developed a “sportscape” instrument to assess fan perceptions of the environment at baseball games in the United
States. Results show that respondents believed that updated scoreboards improved the atmosphere but conditions of overcrowding decreased the atmosphere.

Much of the subsequent research focused on specific aspects of SSA and examined their impact on satisfaction and behavior. For example, Yoshida and James (2010) investigated the extent to which the atmosphere at baseball and football games might influence fan satisfaction at sports events, but they did not specifically look into how the actions of event organizers influenced the atmosphere (e.g., the use of mascots and giveaways and promotions, etc.). In an online survey, Sarstedt, Ringle, Raithel, and Gutergan (2014) attempted to assess fan satisfaction with soccer matches using several criteria, among them the atmosphere at the stadium; results suggest that attributes of the stadium, not the atmosphere, influenced fan satisfaction. Biscaia and Correia (2013) investigated customer satisfaction soccer matches and suggest that the atmosphere in a sports stadium may influence customer satisfaction. Uhrich and Benkenstein (2012) investigated how the actions of crowds of spectators at sports events influences future behavior; they suggest that fans are essential co-creators of the experience and the influence of the actions of fans is far stronger on future behavior than any issues related to the venue. Koenigstorfer, Groeppel-Klein, and Kunkel (2010) examined how spectators perceive the attractiveness of professional soccer clubs and found the atmosphere of the stadium as a powerful factor influencing fan perceptions. Yoshida (2010) concluded that the sense of excitement generated by the event positively affected spectator perceptions of the stadium atmosphere as well as future intentions. Karg (2008) suggests that the satisfaction of attendance at sports events is often influenced by the extent to which fans perceive the stadium is safe and welcoming. Bauer, Sauer, and Exler (2005) suggested that the atmosphere in the stadium (as well as the behavior of spectators and the traditions of soccer clubs) has more of an effect on future behavior (e.g., fan loyalty) than the quality of competition, the importance of the game, or the traits of players and coaches. Hightower, Brady, and Baker (2002) looked into fan perceptions of stadium facilities and proposed that the traits of the venue influenced future behavior.

Uhrich and Koenigstorfer (2009) expanded the concept of SSA that includes the environment at the venue, the attitudes and actions of spectators, and the emotions people experienced at sports events. Chen, Lin, and Chiu (2013) built upon this model and other previous research and developed a comprehensive scale to measure sport stadium atmosphere and tested psychometric properties by examining the relationships between sport stadium atmosphere, fan satisfaction, and behavioral intentions. They validated this measurement instrument by surveying spectators at professional basketball league games in Taiwan. As noted previously, Chen, Lin and Chiu (2013) advocated that additional research be carried out to examine the psychometric properties of SSA measure using non-Asian samples and spectator sports other than basketball.

Moreover, previous findings on SSA, to some extent, are contradictory. For example, Wakefield, Blodgett, and Sloan (1996) and Karg (2008) suggested that the size of the crowd could have a negative effect on SSA (e.g., if sections of the stadium were empty or fans were not cheering on the team) while Morely and Thomas (2005) suggested the effect of crowds at most cricket matches is insignificant. Sarstedt (2014) argues that spectators who feel they are being crowded (e.g. too many fans in a confined space) may feel this negatively. In contrast, most researchers point to the presence of a large and vocal crowd as a major positive contributor to SSA (e.g., Biscaia et al 2013; Centeirio 2014; Koenigstorfer, Groeppel-Klein, and Kunkel 2013; Uhrich and Benkenstein 2012; Uhrich and Benkenstein 2010).

The current research contributes to the literature on sports stadium atmosphere in several important ways. First, despite the fact that sports stadium atmosphere includes a wide range of factors and only few studies have investigated SSA using a much broader approach or treated as a
holistic construct and investigated their association with fan satisfaction and behavior (e.g., Chen, Lin, and Chiu 2013; Uhrich and Benkenstein 2010). Because prior studies focused on few dimensions of SSA primarily physical aspects (e.g., building layout, seating) and offered mixed findings (e.g., Hightower, Brady, and Baker 2002; Tombs and McColl-Kennedy 2003; Wakefield, Blodgett, and Stone 1996), this study will operationalize SSA as a second-order construct composed of various dimensions relating to stimuli related the actions of event organizers (e.g., electric device, facility, professional staff), stimuli caused by spectators (e.g., the spontaneous passionate actions of crowds that sing chants, yell out cheers, and celebrate after a spectacular play), and stimuli caused by the game action (e.g., team competition, and team performance). Only recently have researchers have shown an interest in establishing a comprehensive concept of sports stadium atmosphere which includes the physical traits of the stadium, activities organized by stadium managers, and the independent and spontaneous actions of fans and crowds (Chen, Lin, and Chiu 2013; Uhrich and Benkenstein 2012; Uhrich and Benkenstein 2010; Yoshida and James 2010, and Uhrich and Koenigstorfer 2009).

Chen, Lin, and Chiu (2013) suggest that the perceptions of SSA may well differ across cultures and different types of sports simply because of the diverse nature of events, stadiums, fans and cultures (e.g., contrast the serene and well-mannered atmosphere one might expect at a tennis match at Wimbledon versus the noisy, frenzied and highly charged atmosphere we often see in a hotly-contested soccer derby in South America, etc.). Similarly, Groeppel-Klein, and Kunkel (2010) found that stadium atmosphere seems to vary across cultures in a study of European soccer fans (e.g., the atmosphere was more important to English fans than German fans). Thus, the current study attempts to assess the psychometric properties of the SSA scale in the context of American football sporting event. In addition, Chen, Lin, and Chiu examined fan satisfaction using path analysis as a part of nomological validity and called for more rigorous statistical examinations of the second-order factor structure of SSA scale. The present study address this issue by examining satisfaction as a mediating variable to attempt to more fully explain the complex relationship between second-order SSA construct and future behavior using sophisticated structural equation modeling technique.

THEORETICAL FRAMEWORK AND HYPOTHESES

The proposed causal framework in this study (see Figure 1) posits that fan satisfaction plays an essential role in explaining the relationship between SSA and behavioral intentions. The SSA is composed of eight second-order constructs: professional staff (e.g., role of stadium announcer and coaches in encouraging fans in the stadium), facility (i.e., quality of facility, unique architecture, comfortable seating in the stadium), electric device (e.g., lighting, music, screen scoreboard, acoustics in the stadium), entertainment (e.g., half-time show, giveaways, mascots, promotion activities, player-spectator interactions in the stadium), team performance (e.g., overall performance of teams in the stadium), team competition (e.g., rivalry and competitiveness between teams in the stadium), spectator passion (e.g., large number of fans at the game, intense fan passion and support in the stadium), and cheering group (e.g., performance of cheerleaders, cheering and maneuvers performed by fans at the stadium). The behavioral intentions include: word-of-mouth, intent to recommend, and intent to attend. In this study fan satisfaction is defined as a spectator’s pleasurable, fulfillment response to the entertainment of sport competition and/or ancillary services provided during a sporting event (Yoshida and James 2010).
Figure 1. A framework of sports stadium atmosphere

**Sport Stadium Atmosphere – Spectator Future Behavior Relationship**

Literature suggests that sport stadium atmosphere can influence the behavior of spectators in stadiums and arenas at sports events. The guiding principle is that sport stadium atmosphere results from both environmental stimuli such as the architecture and design of the stadium, including the scoreboard, sound system, music played at the event, stadium lighting, how close fans are seated to the field of play, and decisions made by stadium personnel to select music and messages displayed on the scoreboard to motivate fans (Uhrich and Koenigstorfer 2009; Uhrich and Benkenstein 2010; Ballouli and Bennett 2014; Feddersen and Maennig 2009; Lisle 2011; Wakefield and Blodgett 1999; and Ballouli and Bennett 2012). Person-centered stimuli such as the actions of spectators inside a stadium during an event, and include the emotions generated by fans the large volume of noise fans create when cheering for a team can influence fan behavior (Hightower, Brady, and Baker 2002; Tombs and McColl-Kennedy 2003; Charleston 2008). Sports stadium atmosphere can affect the behavior of spectators in the stadium in several beneficial ways (Kim and Walker 2012; Tombs and McColl-Kennedy 2003; Hightower, Brady, and Baker 2002; Charleston 2008; Yoshida and James 2010). For example, spectators at events with an exciting sport stadium atmosphere are likely to cheer (Tombs and McColl-Kennedy, 2003), create noise (Hightower, Brady, and Baker 2002), sing chants (Charleston 2008), and respond to prompting from mascots and cheerleaders (Yoshida and James 2010). Thus, based on the above-mentioned literature, we hypothesize sport stadium atmosphere will be positively related to positive word-of-mouth, intent to recommend, and intent to attend future game.

H1: *Sports stadium atmosphere is positively related to spectator future behavior.*
Sports Stadium Atmosphere – Spectator Satisfaction Relationship

Prior studies suggest that the atmosphere at a sports event can influence fan satisfaction. Uhrich and Koenigstorfer (2009) proposed a conceptual framework which suggests SSA as a primary driver of spectator satisfaction. Yohsida and James (2010) suggested that the extent to which the game was thought to be exciting was an important component of atmosphere that influenced satisfaction. Uhrich and Benkenstein (2012) stated that the actions of spectator in the crowd had a much greater influence in creating a favorable atmosphere than physical elements associated with the stadium architecture. The extent that the atmosphere of the game lived up to fan expectations is an important predictor of spectator satisfaction (Kelley and Turley 2001). Kahle et al. (2003) suggested that the satisfaction of female fans was influenced by such atmospherics as the location of their seats in the stadium, while males placed more emphasis on such atmospherics as the noise generated by bands and fans at the stadium. Centieiro (2013) suggests that fans who experience the excitement of the stadium atmosphere are likely to be more engaged and thus more satisfied. Similarly, Karg, McDonald, and Vocino (2008) found that season ticket holders were more satisfied with sports clubs that provided a safe and welcoming sport stadium atmosphere than at atmosphere at the venue that was hostile and dangerous. Thus, based on above, we predict the following.

H2: Sports stadium atmosphere are positively related to spectator satisfaction.

Spectator Satisfaction – Spectator Future Behavior Relationship

Consumer behavior research indicates that customers who express a high level of satisfaction at sports events are more likely to exhibit such positive fan behaviors as willingness to attend additional games, purchase merchandise, and follow a sports team in the mass media (Kahle et al 2003; Yoshida and James 2010; Chen, Lin, and Chiu 2013). Biscaia et al. (2013) indicate that fan satisfaction plays a role in influencing future behavioral intentions. Empirical studies by Uhrich and Benkenstein (2012) suggest that satisfaction with the sport stadium atmosphere is positively correlated with increased spending at sports events. In a conceptual study, Uhrich and Koenigstorfer (2009) proposed that a sports stadium atmosphere that satisfies fans could result in increases in long-term fandom, positive word-of-mouth, and heightened sales of tickets and merchandise. Thus, we posit the following hypothesis.

H3: Spectator satisfaction is positively related to spectator future behavior.

The Mediating Role of Spectator Satisfaction

A large body of literature on service quality suggests that customer satisfaction is a key intervening variable in the relationship between service quality and customer loyalty and future behavior. In sports contexts, research suggests that customer satisfaction may play a mediating role in shaping perceptions of service quality attributes (e.g., the quality of effort put forth by individuals working at the stadium to meet the needs of fans such as ushers, ticket-takers, food vendors and security personnel, etc.) and behavioral intentions (Biscaia et al 2013; Javadein, Khanlari, and Estiri 2008). This indicates that fan satisfaction can mediate the impact of sports stadium atmosphere on fan behavior.

From a theoretical perspective, field theory (Lewin 1944) can be useful in supporting the concept that fan satisfaction exerts an important mediating effect in the relationship between stadium atmosphere and behavioral intention. The theory holds that human behavior is the function of both
environmental and personal factors. Applying the theory to our framework, sports stadium atmosphere alone may often not explain spectator behavior unless personal factors such as spectator satisfaction are incorporated into the model.

From a methodological perspective, one rationale for why the spectator satisfaction can serve as a mediator is that it is an internal psychological state variable that is affected by external events. In addition, the spectator satisfaction has a strong association with both SSA and spectator behavior. Baron and Kenny (1986) suggest using a mediating variable in the case of a strong relationship between a predictor and a dependent variable. In this study, the association between SSA and spectator behavior is predicted to have a strong positive relationship.

We therefore hypothesize that SSA has a positive relationship with behavioral intention when spectator satisfaction is considered as intervening factor.

\[ H_4: \text{Spectator satisfaction will mediate the relationship between sports stadium atmosphere and spectator future behavior}. \]

**METHODOLOGY**

**Sample**

Data were collected using a mall-intercept technique at MetLife Stadium during a 2014 college football game between Notre Dame University and Syracuse University. Sixteen field researchers randomly approached participants and invited to participate in the survey just after the halftime show was completed. A total of 217 individual participated in the survey. After removing six incomplete cases, a total of 211 usable surveys were obtained. The majority of the participants were neither Notre Dame nor Syracuse fans. Almost one-fifths (21.3%) of the participants indicated they were Notre Dame die-hard fans and only 15.2 percent of them were avid Syracuse fans. More participants were males (57.3%) than females (42.7%). About three out of ten participants (29.4%) attended at least one NFL game and 34.1 percent attended college football game in the past year.

**Measures**

Table 1 shows the summary of measurement items which were measured on a 5-point Likert-type scale ranging from “1 = strongly disagree” to “5 = strongly agree.” Sport stadium atmosphere was measured using the SSA scale adapted from Chen, Lin, and Chiu (2013). As shown in Figure 1, the scale is composed of eight multi-item dimensions: professional staff, facility, electric device, entertainment, team performance, team competitions, spectator passion, and cheering group. Spectator satisfaction was assessed with three items adapted from Yoshida and James (2010). The sample items in this scale were: “I am satisfied with this game at X Stadium” and “I am delighted with this game at X Stadium”. Behavior intention measure included three aspects: intention to attend future games, intention to recommend and word of mouth. Intention to attend was assessed using a three-item scale adapted from Hagger et al. (2001) and Cunningham and Kwon (2003). Intentions to recommend future events at the stadium were measured with two items adapted from (Brown et al 2005; Uhrich and Benkenstein 2012). To assess word-of-mouth, three items were adapted from Zeithaml et al. (1996) which were slightly modified to fit the context of this study.

**DATA ANALYSIS**

Multiple quantitative data analysis techniques were used examine the proposed hypotheses, including confirmatory factor analysis, descriptive data analysis, inferential data analysis, and multilevel data analysis. First, the confirmatory factor analysis (CFA) was conducted for each key
variable in order to examine the construct validity of measured variables. Second, we calculated measures of central tendency (mean), standard deviations, and correlations among key variables to describe the characteristics of respondents. The reliability of the instrument and its scales were measured by calculating Cronbach’s alpha for each scale. Third, structural equations model (SEM) was used to examine the associations and mediation effect of key variables for this study. Particularly, mediation models that hold latent variables are best estimated in SEM contexts because SEM programs give greater flexibility in model specification and estimation options (Preacher and Hayes, 2008). In addition, SEM allows for performing simultaneous testing of complex mediating mechanisms with multiple latent variables. Another benefit of SEM is that it allows for testing a path analysis while developing a large number of modeling frameworks (Bollen, 2002; Jöreskog, 1978). Because this study hypothesizes about the complex relationships among SSA, Spectator Satisfaction, and Spectator Behavior, it is critical to use path analysis and validate the proposed mediation model in a holistic way in order to draw meaningful conclusions and implications (Bollen, 1989).

Validating Measurements and Model Fit

The Cronbach’s coefficient alpha estimates of internal consistency for each scale, and all measurement reliabilities were in acceptable range of internal consistency, 0.69 – 0.76. Assessing the validity of measurements is essential prior to conducting further statistical analyses (Schreiber et al 2006). The CFA was used because key variables of this study were driven by the theoretical relationship among the observed and unobserved variables (Schreiber et al 2006). Particularly, CFA was deemed appropriate statistical technique because the technique is commonly used when there is a theoretical rationale for an a priori factor structure like positive psychological capital (Luthans et al., 2008). We conducted CFA tests in order to assess the validity of the proposed five key measurements of autonomy supporting, psychological safety, leader-member exchange, positive psychological capital, and self-directed behavior. CFA tests estimated the quality of structural reliabilities and designated factor loading by testing the model fit between the proposed measurement models and the collected data.

Initially the factor loading criteria was set as greater than .50 considering the rule of thumb that less than .40 is weak and equal or greater than .60 is strong (Cabrera-Nguyen 2010). CFA results of SSA indicated that the Entertainment (.22) and Cheering group (.38) measurements had poor factor loadings that were significantly less than .50. In addition, the item of ‘importance’ in the Team competition measurement had a poor factor loading (.25) on the measurement. All factor loadings of spectator satisfaction (.79 – .95) and spectator behavior (.74 ~ .95) were over the minimum factor loading criteria.
Table 1: Measurement Model Testing Results

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Latent construct</th>
<th>FL</th>
<th>Observed item</th>
<th>FL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSA</td>
<td>Electric device</td>
<td>.70</td>
<td>The lighting is great in X Stadium.</td>
<td>.71</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The music is exciting in X Stadium.</td>
<td>.70</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The big screen scoreboard is great in X Stadium.</td>
<td>.67</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The acoustics are encouraging in X Stadium.</td>
<td>.58</td>
</tr>
<tr>
<td>Facility</td>
<td></td>
<td>.58</td>
<td>Seating is comfortable in the X Stadium.</td>
<td>.57</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The architecture of X Stadium is unique.</td>
<td>.65</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The quality of the facility is great in X Stadium.</td>
<td>.73</td>
</tr>
<tr>
<td>Team</td>
<td>performance</td>
<td>.89</td>
<td>The morale of these teams was intense in X Stadium.</td>
<td>.70</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The overall performance of my team is great in this game in X Stadium.</td>
<td>.56</td>
</tr>
<tr>
<td>Spectator</td>
<td>passion</td>
<td>.70</td>
<td>There were a large number of fans at this game at X Stadium.</td>
<td>.72</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The support of fans was intense in X Stadium.</td>
<td>.88</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The passion of fans was intense in X Stadium.</td>
<td>.88</td>
</tr>
<tr>
<td>Professional</td>
<td>staff</td>
<td>.50</td>
<td>The stadium announcer encouraged fans in X Stadium.</td>
<td>.75</td>
</tr>
<tr>
<td>Team</td>
<td>competition</td>
<td>.68</td>
<td>The behavior of the coaches encouraged fans in X Stadium.</td>
<td>.38</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The rivalry between these teams was emphasized in X Stadium.</td>
<td>.71</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The competitiveness between these teams was intense in X Stadium.</td>
<td>.91</td>
</tr>
<tr>
<td>Spectator</td>
<td>Satisfaction</td>
<td>.83</td>
<td>I am satisfied with this game at X Stadium.</td>
<td>.84</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I am happy with this game at X Stadium.</td>
<td>.84</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I am delighted with this game at X Stadium.</td>
<td>.82</td>
</tr>
<tr>
<td>Spectator</td>
<td>Behavior</td>
<td>.85</td>
<td>I intent to attend another football game at X Stadium.</td>
<td>.76</td>
</tr>
<tr>
<td></td>
<td>Intent to attend</td>
<td></td>
<td>Attending another football game at X Stadium is something I plan to do.</td>
<td>.92</td>
</tr>
<tr>
<td></td>
<td>Intent to</td>
<td>.90</td>
<td>I try to attend another football game at X Stadium.</td>
<td>.91</td>
</tr>
<tr>
<td></td>
<td>recommend</td>
<td></td>
<td>I am likely to recommend someone to attend a football game at X Stadium.</td>
<td>.91</td>
</tr>
<tr>
<td></td>
<td>Word of mouth</td>
<td>.84</td>
<td>I will probably recommend to others to attend a football game at X Stadium.</td>
<td>.83</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I am likely to encourage friends and family to attend a football game at X Stadium.</td>
<td>.76</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I am likely to say positive things about X Stadium.</td>
<td>.94</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I will probably spread a positive word-of-mouth about X Stadium.</td>
<td>.88</td>
</tr>
</tbody>
</table>

Note. FL: Factor loading criteria >.50); SSA: Sports Stadium Atmosphere. All p < .001

To assess the model fit, several fit indices including chi-square ($\chi^2$), degrees of freedom (df), probability ($p$), root mean square error of approximation (RMSEA), the comparative fit index (CFI), the Tucker-Lewis index (TLI), and standardized root mean squared residual (SRMR) were used. Basing on the generally accepted rules (Hair et al. 2010; Hu and Bentler 1999; Kline 2010), several cutoff criteria were set and used to assess the model fit. The confirmatory factor analysis results of the proposed model fitted the data at an acceptable level ($\chi^2/df = 2.07, p < .001$, RMSEA=.076, CFI = .876, TLI = .861, SRMR = .066).
Table 2: Fit Statistics of Confirmatory Factor Analysis for Model

<table>
<thead>
<tr>
<th>Fit index</th>
<th>$\chi^2$</th>
<th>Df</th>
<th>$p$</th>
<th>RMSEA</th>
<th>CFI</th>
<th>TLI</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>702.45</td>
<td>338</td>
<td>&lt; .001</td>
<td>.076</td>
<td>.876</td>
<td>.861</td>
<td>.066</td>
</tr>
<tr>
<td>Cutoff criteria</td>
<td>$\chi^2$/df &lt; 5</td>
<td>&gt; .05</td>
<td>&lt; .10</td>
<td>&gt; .90</td>
<td>&gt; .90</td>
<td>&lt; .08</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2.
Structural Model.

RESULTS
Means, standard deviations, and correlations among three key study variables in individual level are presented in Table 3. Results provide initial evidence of the positive associations suggested in proposed hypotheses. But these correlations did not appropriately model the structured nature of our data.
Table 3: Means, Standard Deviations, and Correlations among Key Variables

<table>
<thead>
<tr>
<th></th>
<th>N = 211</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SSA</td>
<td>3.74</td>
<td>.44</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Satisfaction</td>
<td>4.06</td>
<td>.74</td>
<td>.59**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Intend to attend</td>
<td>4.10</td>
<td>.88</td>
<td>.40**</td>
<td>.49**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Intend to recommend</td>
<td>4.12</td>
<td>.85</td>
<td>.42**</td>
<td>.49**</td>
<td>.71**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Word of mouth</td>
<td>4.18</td>
<td>.74</td>
<td>.51**</td>
<td>.57**</td>
<td>.69**</td>
<td>.77**</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Note. * p < .05 (two-tailed); ** p < .01 (two-tailed).

Hypothesis Testing

We used the structural equation modeling to examine the relationship between key variables and mediation effect of spectator satisfaction between sport stadium atmospherics and spectator behavior. Results indicated that there were significant positive relationship between sports stadium atmospheric and spectator satisfaction (H2), $\beta = .808, p < .001$, and between spectator satisfaction and spectator behavior (H3), $\beta = .503, p < .001$ as expected. But the direct relationship between SSA and spectator behavior was not statistically significant, $\beta = .236, p = .317$ as presented in the following table.

Table 4: Structural Equation Modeling Results: Standardized and Unstandardized Coefficients and Standard Errors

<table>
<thead>
<tr>
<th>Path</th>
<th>$\beta$</th>
<th>$B$</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1 SSA $\rightarrow$ Spectator behavior</td>
<td>.236**</td>
<td>.317</td>
<td>.212</td>
</tr>
<tr>
<td>H2 SSA $\rightarrow$ Spectator satisfaction</td>
<td>.808**</td>
<td>1.277**</td>
<td>.202</td>
</tr>
<tr>
<td>H3 Spectator satisfaction $\rightarrow$ Spectator behavior</td>
<td>.503**</td>
<td>.428**</td>
<td>.135</td>
</tr>
<tr>
<td>Measurement (latent)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSA $\rightarrow$ Electric device</td>
<td>.697**</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>SSA $\rightarrow$ Facility</td>
<td>.576**</td>
<td>.812**</td>
<td>.191</td>
</tr>
<tr>
<td>SSA $\rightarrow$ Team performance</td>
<td>.888**</td>
<td>1.147**</td>
<td>.201</td>
</tr>
<tr>
<td>SSA $\rightarrow$ Spectator passion</td>
<td>.694**</td>
<td>.994**</td>
<td>.176</td>
</tr>
<tr>
<td>SSA $\rightarrow$ Professional staff</td>
<td>.504**</td>
<td>.837**</td>
<td>.205</td>
</tr>
<tr>
<td>SSA $\rightarrow$ Team competition</td>
<td>.679**</td>
<td>1.134**</td>
<td>.231</td>
</tr>
<tr>
<td>Satisfaction $\rightarrow$ Satis1</td>
<td>.839***</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Satisfaction $\rightarrow$ Satis1</td>
<td>.838***</td>
<td>.020***</td>
<td>.076</td>
</tr>
<tr>
<td>Satisfaction $\rightarrow$ Satis1</td>
<td>.822***</td>
<td>1.015***</td>
<td>.082</td>
</tr>
<tr>
<td>Behavior $\rightarrow$ Attend</td>
<td>.854**</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Behavior $\rightarrow$ Recommend</td>
<td>.899**</td>
<td>1.286**</td>
<td>.132</td>
</tr>
<tr>
<td>Behavior $\rightarrow$ WOM</td>
<td>.837**</td>
<td>.924**</td>
<td>.121</td>
</tr>
</tbody>
</table>

Note. $\beta =$ standardized coefficient. $B =$ unstandardized coefficient. $SE =$ standard error. * p < .05 (two-tailed); ** p < .01 (two-tailed). WOM: word of mouth

Mediation effect analysis of spectator satisfaction confirmed that the spectator satisfaction significantly mediated the relationship between SSA and spectator behavior, $\beta = .407, p = .003$. 

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Table 5: Mediation Effect of Spectator Satisfaction between SSA and Spectator Behavior

<table>
<thead>
<tr>
<th>Path</th>
<th>Total effect</th>
<th>Direct effect</th>
<th>Indirect effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSA → Spectator behavior</td>
<td>.643** (.864)</td>
<td>.236 (.317)</td>
<td>.407** (0.547)</td>
</tr>
<tr>
<td>SSA → Spectator satisfaction</td>
<td>.808** (1.277)</td>
<td>.808** (1.277)</td>
<td>-</td>
</tr>
<tr>
<td>Spectator satisfaction → Spectator behavior</td>
<td>.503** (.428)</td>
<td>.503** (.428)</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. SSA: Sports stadium atmosphere. * p < .05, ** p < .01. The coefficients are standardized values. Values in parenthesis are unstandardized coefficient. Dashes indicate data are not applicable.

Figure 3: Direct and indirect effects of sports stadium atmosphere to spectator behavior

Results of proposed four hypotheses are summarized as follows in Table 6.
Table 6: Summary of Hypothesis Test Results

<table>
<thead>
<tr>
<th>Hypothesis testing results</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 (SSA → Spectator Satisfaction)</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H2 (Spectator Satisfaction → Spectator Behavior)</td>
<td>Supported</td>
</tr>
<tr>
<td>H3 (Spectator Satisfaction → Spectator Behavior)</td>
<td>Supported</td>
</tr>
<tr>
<td>H4 (Spectator Satisfaction’s Mediation between SSA and Spectator Behavior)</td>
<td>Supported</td>
</tr>
</tbody>
</table>

DISCUSSION AND IMPLICATIONS
The current study suggests that stadium atmosphere at sports events is positively related to fan satisfaction. The practical implication is that sports marketers should focus on improving factors that shape the following constructs: the stadium facility, electric devices, professional staff, team competition and performance, and spectator passion. However, sports marketing professionals should be mindful that improving sports stadium atmospherics involves improving physical environments created by the organizers and managers of the venue (e.g., electric device, facility, professional staff, scoreboard, sound system and architecture), stimuli caused by spectators (e.g., spectator passion), and stimuli caused by the game action (e.g., team competition and team performance). A recent example of a superb stadium atmosphere was prevailed during the 2010 FIFA World Cup in South Africa; positive atmospherics were created as a result of the importance of the event, the design of the stadiums that were set against the exotic South African landscape, the proximity of fans to the field of play, and the widespread use of vuvuzelas that empowered fans to create loud music. The combination of those exciting atmospheric conditions led spectators to cheer, stand on their feet, chant, and applaud (Gibson 2010). In the United States, the home stadium of the National Football League’s Seattle Seahawks has a unique architecture that features steep cantilevers designed to keeps crowd noise inside the facility; spectators who come to home games know that the loudness of the stadium will be a home field advantage that helps the team win so they respond to these stadium atmospherics by screaming and cheering non-stop to support the team (Saraf 2014). In contrast, there are prominent examples in which the sport stadium atmospherics were deficient and thus did not excite or inspire the fans. For example, after a recent UEFA Champions League home match, Chelsea FC coach Jose Mourinho complained about the poor lighting and the sparse attendance that created a sport stadium atmosphere he compared to a library; fan behavior reflected this lack of atmosphere and the stadium was quiet throughout the match (Nagle 2014).

It is also worth noting that customer satisfaction is positively related to future fan behavior. The focus must be on satisfying spectators so they will want to return for future matches. Fisher (2013) reported the results of a recent poll of college football fans in the United States; results showed that many fans felt relatively unsatisfied with the game experience and athletics officials said they were concerned that a lack of satisfaction might result in decreased ticket sales and attendance. A 2014 Forbes magazine article sought to compare the extent to which fans of the National Football League were satisfied with the experience of watching matches at the stadium and how this might influence future behavior; results suggest that satisfied fans are most likely to attend home games, follow a team in the mass media, talk about the team in social media and buy merchandise (Settimi 2014). Academic research has proven that customers who express a high level
of satisfaction at sports events are more likely to attend additional games, purchase more merchandise, and follow a sports team in the mass media more often (Kahle, Aiken, Dalaskas, and Duncan 2003; Yoshida and James 2010; Chen, Lin, and Chiu 2013; Bauer, Sauer, and Exler 2005). Sports marketers must focus first and foremost on creating conditions that satisfy fans in order to cultivate the future behaviors that are desired from potential fans (e.g., attending more games, buying more tickets, being engaged with the club).

The key finding of this study is that the sports stadium atmosphere does not directly influence spectator future behaviors but spectator satisfaction mediates the impact of SSA on fan behavior. Improving stadium atmosphere can improve spectator satisfaction which should ultimately influence such positive spectator behavior as future attendance, the intent to recommend the stadium to others, and the intent to spread positive word of mouth. From a managerial point of view, investing only in developing the sport stadium atmosphere will likely be insufficient unless the fans are satisfied with the experience at the stadium; in other words, failure to satisfy fans will likely not result in positive behavioral intentions. It is essential to note that the sports stadium atmosphere by itself, regardless of how exciting or engaging it might be, may be enough to satisfy fans; sports stadium managers must be committed to providing excellent service quality, meeting fans expectations, and developing solid relationships with supporters clubs (among many other things) to make fans feel like truly valued customers. That being said, the best solution is to work simultaneously on creating a great atmosphere and working to make fans feel truly pleased and satisfied with the experience at sports events.

From a theoretical perspective, this study extended generalizability of Chen, Lin, and Chiu’s (2013) sports stadium atmosphere (SSA) measure by examining its psychometric properties in the context of American football sporting event. It is important as it a multidimensional and comprehensive measurement that captures a wide range of constructs associated with sports stadium atmosphere. Unlike previous studies (e.g., Chen, Lin, and Chiu 2013; Yoshida and James 2010), direct association between SSA and fan behavior was not significant in the current study, rather spectator satisfaction mediate such relationship.

LIMITATIONS AND FUTURE RESEARCH
This study suffers from a number of limitations. One limitation is its cross-sectional design in which data were collected at a single sporting event; thus future research should employ longitudinal designs to examine the proposed relationships by collecting data over a period of time. Additional research needs to be conducted to examine the psychometric properties of Chen et al.’s (2013) SSA measure in different sport settings, especially because the individual items that contribute to atmosphere vary among settings (e.g., there are no cheerleaders in baseball, there are no marching bands in baseball, there is no stadium clock in soccer, etc.). Another promising research area would be to gather data from the same sport played in different nations and cultures; one could investigate the SSA at soccer matches played in the USA and Europe and/or Asia, etc.
REFERENCES


CREATING EFFECTIVE ONLINE (VIRTUAL) LEARNING ENVIRONMENTS

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ABSTRACT

Online learning has become ubiquitous in education. At the secondary level, online charter schools are gaining ground on traditional brick and mortar institutions. A similar evolution is occurring in higher education where online programs reduce the geographic constraint of attending degree programs. The online format has a clear financial advantage as the institution can reduce its need of physical facilities while attracting students and faculty outside of a specific geographic region. Simply posting content online does not differentiate an educational institution from a service such as Lynda.com; therefore, competition on quality of courses is expected. In order to be successful when teaching an online course, instructors need to change from traditional teaching methods to online teaching methods. Appana (2008) recognizes that limitations to online learning may be tied to the limited experiences and skills of instructors. Support mechanisms need to be in place to assist instructors in creating and teaching an online course. This may help to improve the online learning experience of students because of a resulting higher quality course. Further, Appana explains that online training with technology is vital. This includes not only how to use the technology, but to also solve technological problems. Administrative support, available technical personnel, and mentoring are also vital aspects to course success. Instructors are often thrust into online delivery formats with little to no training. Professors are seldom trained in teaching methodology let alone teaching online (Alley, 1996). Further, instructors who do not have adequate computer literacy skills will struggle with online teaching (Thurmond, 2003). One study conducted by Kosak, Manning, Dobson, Rogerson, Cotnam, Colaric, and McFadden (2004) found that the majority of faculty believed the online course training they received and participated in was adequate in terms of pedagogical and technical training. At the same time, faculty may remain reluctant to teach online courses. This research proposal seeks to measure instructor’s attitudes of preparedness to teach an online class based on training received and administrative support.

Keywords: Online learning, instructor training, secondary education, charter schools
REFERENCES


SYNTHESIS AND BIOLOGICAL ACTIVITY OF COMPLEXES OF ZN (II), CD(II) AND HG (II) WITH 6-METHOXY-2-MERCAPTOQUINAZOLE-4-ONE

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ABSTRACT

In the solid state, 6-methoxy-2-mercaptoquinazole-4-one indicates that the compound mainly exists as 6-methoxy-quinazoline-2-thione-4-one. We have prepared and investigated the complexes of Zn(II), Cd(II) and Hg(II) using this ligand. Zn(II) and Cd(II) form diamagnetic complexes having general formula \([M(C_9H_7N_2SO_2)_2]\) in which the ligand is coordinated to the central metal ions through oxygen of carbonyl group and through nitrogen but not through sulfur atom. A binuclear chlorine bridged complex is also formed by Hg(II) having the formula \([(C_9H_7N_2SO_2)HgCl_2Hg(C_9H_7N_2SO_2)]\) and it is found that the ligand is linked to the metal ions through nitrogen as well as sulfur atoms. Positions of \(v\)\(\text{Zn–N}\), \(v\)\(\text{Zn–O}\), \(v\)\(\text{Cd–N}\), \(v\)\(\text{Cd–O}\), \(v\)\(\text{Hg–N}\), \(v\)\(\text{Hg–S}\) and \(v\)\(\text{Hg–Cl–Hg}\) bands have also been suggested. Furthermore, red shifts of \(\nu\)\(\text{N–H}\), thioamide band I, thioamide band II and reduction in intensity of thioamide bands III and IV have been found. It indicates that there is simultaneous coordination through nitrogen as well as sulphur atoms. Our interest in this category of ligands is justified by their already reported biological implications. The new compounds were screened against gram-negative bacteria \textit{Escherichia coli} and gram-positive bacteria \textit{staphylococcus aureus}.

Keywords: ligands, 6-methoxy-2-mercaptoquinazole-4-one, diamagnetic complexes
USE OF VIRTUALIZATION TO TEACH CYBERSECURITY

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ABSTRACT
Reliance on Information Technology (IT), coupled with the explosion in mobile computing, has led to anytime, anyplace access to data resources. At the same time, many organizations struggle to protect their data. In response, colleges and universities have implemented computer security programs to meet the needs of those organizations. Yet these computer security programs struggle to keep pace with new techniques and tools required to effectively protect organizational assets. The upfront cost in Information Security (IS) devices is often too exorbitant for most colleges. As a result, many IS programs are unable to provide students the level of practical knowledge required to effectively protect organizational data assets.

Keywords: Information technology, data security, university instruction
AUDIT QUALITY AND THE PROFITABILITY OF FINANCIAL ANALYSTS’ STOCK RECOMMENDATIONS

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ABSTRACT
This study examines the relationship between audit quality and the profitability of financial analysts’ stock recommendations. By employing high quality auditors, a company’s earnings quality can be more reliable and intentional or unintentional errors can be reduced. Ultimately, it would benefit financial information users. However, it is not clear if information users take into account accounting numbers when they make their investment decisions (Holthausen and Watts, 2001). This project directly investigates whether high quality auditors improve the reliability of company’s earnings and assist financial information users’ investment decision by focusing on the profitability of financial analysts’ stock recommendations.

Keywords: Audit quality, financial information, investment decision-making

Research Objectives
Financial statements are crucial to information users. It is important for a company to maintain high quality financial reporting reliability by getting assurance from a high quality auditor. The objective of this project examines whether auditing quality is related to the profitability of analysts’ stock recommendations.

Research Contribution
In terms of classroom effectiveness, this study will broaden the students’ view on how to analyze companies’ financial statement under firms’ diverse information environment. In addition, this study would offer a unique opportunity for student to integrate different interdisciplinary fields of accounting, auditing, and finance.

From a research perspective, this study will contribute to the existing literature in that it makes extensive connections between firms’ dynamic information environment and analysts' recommendations. Also, the study documents the unexplored link between auditing and the profitability of analysts’ stock recommendations.

From a practical standpoint, this research would provide an insight into the new factor that determines the value of recommendations and delineate the situation in which investors can profit from the findings.

Research Methodology
This archival study is based on the US stock market and will collect analysts’ stock recommendations data from IBES. Stock returns and financial variables will be from CSRP and COMPUSTAT databases. Audit quality can be measured by audit fees and auditor size (Big 4 vs. non-Big 4). The profitability of recommendation is measured using trading strategy in Jegadeesh, Kim, Krische, and Lee (2004) – that is, buy (sell) stocks in the following month after an upgrade (downgrade) of analysts’ recommendation.
Expected Results
We expect to find a significant relationship between the value of analysts’ recommendations and audit quality. However, there are potential unobservable confounding (endogenous) variables that might affect the relationship. Previous research finds that firms’ earnings quality and firms’ R&D expense affect firms the value of analysts’ recommendation. Therefore, we expect to document the corroborate result by addressing the endogeniety issues: whether the association between the value of analyst’s recommendation and audit quality is the result of biased estimation induced by using endogenous variables in single-equation models.
CUSTOMER ORIENTATION OF INDIAN TOURISM ENTREPRENEURS: AN EMPIRICAL ANALYSIS

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ABSTRACT
Economic liberalization has squeezed the scopes of employment in India. Thus identifying alternative sources of employment generation is the call of the hour. In the field of tourism, entrepreneurial activities can be worked as a panacea if it is possible to minimize failure in ventures. This is again possible if marketing activities can be executed with perfection as marketing is one of the major reasons for failure and strategically it is the most important function. Thus a simple executable construct has been proposed that indirectly check the customer (market) orientation and empirical examination has been done with the help of customer and entrepreneurs (executives). Finally implication of this work for Indian tourism industry has been highlighted.

Keywords: Market orientation, customer orientation, tourism, entrepreneurship, India

INTRODUCTION
After the 1980s the economic policy of the governments of developing nations induced sea changes in the structures of their respective economies (Desai 2005). Public sector prone economy has started to spread its wings in the arena of privatization. As a result, withdrawal of state investment in public sectors vis-à-vis decreasing scope of employment in state owned sectors have taken place (Roy et.al, 2008). Thus, scope of private investments, either in the large-scale sector related investment or in the form of small-scale sector related investment, has emerged as a panacea for the developing economy in respect of employment problem (Roy et al 2008). In this context, the roles of small-scale entrepreneurial ventures, which are more employment elastic, need to be further analyzed. Future gains in employment rest with the small private sector units which are more labor intensive. Normally, service sectors (compared to manufacturing sectors) are more labor intensive. Here lies the role of service entrepreneurial activities to uphold the dictum “small is beautiful” from the point of view of employment generation (Zeithaml and Bitner 2003).

Researchers have identified a number of causes behind failures of small-scale entrepreneurial ventures. Among all these causes, one of the most prominent causes is failure in functional performance of the venture (Pelham, 2000). Functional performance of small scale players may have many facets like financial performance and marketing performance. Those researchers have identified poor financial performance as the causes of failure also relate it with marketing failure
(Karan 2008; Zimmerer and Scarborough 2005; Berryman 1984). On the other hand Aaker (2005) has related under-utilization of resources with entrepreneurial failure where it is mainly due to poor customer knowledge. Thus need for customer (market) orientation is desirable highly for the success of entrepreneurial ventures.

**Need for Customer (Market) Orientation**

The marketing function is strategic, so it needs to be the central focus for any organization (Roy 1997; Ansoff 1979; David 2005). Therefore, for the purpose of present research, we are concentrating on small scale enterprises, which has obviously significant impact on financial efficiency of the organization. Further definition of marketing (Kotler et al 2003) identifies four important features. Those are as follows:

i) Knowing the need-set of the targeted customer(s),

ii) Setting the offer as per the requirement of the targeted customer(s),

iii) Communicating with the objective to promote the offer and/or to trigger the latent need of the targeted customer(s)

iv) Ensuring organizational profit through satisfaction of stakeholders including customer(s)

Hollensen (2006) has also emphasized on understanding ‘need’ in relation to market orientation. Hence, it may be termed as customer orientation of an enterprise (Kotler 1977). Serving need of the customer appropriately turns into customer satisfaction (Best 2009). Kohli and Jaworski (1990) opined that internal factors like senior manager’s orientation of an organization are the antecedents to develop market orientation of the organization. Further, market orientation, associated with some external moderating variables, generates consequences like employee responses, customer responses and finally, performances of the business. Deshpande et al (1993) have related organization culture with customer orientation and business performance in customer perception. Similarly, Diamantopoulos and Hart (1993) have tested empirically the framework provided by Kohli and Jaworski (1990). Narver and Slater (1990) have also measured the same by redefining market orientation with other behavioral components like customer orientation and competitor orientation by opinion of the executives. Thus, all of these approaches may fail to compare views of the executives of the organization with those of its customers. Ling and Greenley (2005) and Saad et al (2002) have also found a significant association among internal market orientation, employee motivation and external marketing success. In another study, Charles and Cheng (2005) have examined the applicability of market orientation concept for the small scale sector. Findings of that research ensure that even for small venture customer orientation is necessary. Bhujan and Habib (2005) have made us understand of importance of carrying out the related type of research in the country varied with its level of development and value system.

Discussion of existing literature has helped us to learn that though efforts have been made to measure customer orientation, gaps remain. Extant research ignores the comparative assessment of executive and customer in a single frame, which will be investigated in this study. Moreover, our work has simplified the measurement and thus it is executable even by small entrepreneurs who do possess small number of manpower. Moreover, there is a need to refine the customer orientation instrument for the specific needs of the tourism industry. In India the tourism industry is dominated by small scale entrepreneurs. The industry is labor intensive and thus employment generating (Tribe 1995). We wish to propose an instrument which is based on fundamental concepts of marketing and examining market orientation via customers’ set of understandings both in respect of need set and communication.
PROPOSED CONSTRUCT
Since we propose to examine an experiential service (Zeithaml 1981) like tourism the aspect i.e. ‘understanding/ knowing the need-set of the targeted customer/s’ comes out as the one of the important parameters for our study. Many entrepreneurs may prepare right product for right customer group, but despite they may fail to let customer know about it. Woodruffe (1995) has commented that success of the marketing program depends on the selection of right combination of media mix vis-à-vis coverage and cost. Hence, based on third requisite, mechanism of communication i.e. selection of media-mix is another important aspect included in our study. Considering the gap identified in the existing literature, we have planned to apply the developed construct/instrument on both the groups i.e. customer/s and executives. Moreover, this comparative assessment is desirable from the point of view of criticality of resource utilization, especially for small-scale entrepreneurial venture. It is important because, executives are not supposed to deploy resources significantly more than or significantly less than the requirements of customer/s (Aaker, 2005). We have also extended our study to the aspects related to the response of the customer/s i.e. ‘satisfaction of the customer’.

Further, to know whether executives/entrepreneurs are really aware of the need set of the customer/s, we have considered the importance assigned to various reasons customers deciding upon a tourist destination. More specifically, following five, literature-supported (Huimin and Kavanaugh 2006) reasons are considered for developing the construct/instrument and applied the said construct on executives and customers:

1) Natural Beauty (Lee and Tideswell, 2005; Kibicho, 2006)
2) Historical importance (Kibicho, 2006; Frochot, 2004)
3) Pilgrimage (Mishra, 2003)
4) Scope of adventure tourism (Gupta, 2003)
5) Scope of village and rural tourism (Kibicho, 2006)

On the other hand considering whether communications made by practicing entrepreneurs have really established connection with targeted customers, we have proposed to use ‘importance assigned to media mix’ for both executives/entrepreneurs and customers. Since focus has been given on tourism entrepreneurs, some tourism specific media vehicles have been selected (Baloglu, 2000; Dore and Crouch, 2003). This is as follows:

1) Print Media
2) Television Media
3) Tourism Directory
4) Travelogues/ Novel.

Hence, it is required that perceived importance assigned by entrepreneur in relation to need set and media vehicles, stated above, should match with similar benchmarks assigned by customer on same variables.

Actually, we like to compare overall views of entrepreneurs and customer groups for the purpose of reducing individual biases. By carrying out the comparative study based on aggregation principle, we propose to reduce the extent of error and ensure normality under large sample approximation (Anderson, 2005). Finally, for measuring the satisfaction of the customer, we propose to ask customers about their overall satisfaction.

SELECTION OF THE SAMPLE
It has been stated that the basic objective of the present research is to examine the market orientation...
of Indian tourism entrepreneurs with the help of three constructs, out of which two are reason mix and media mix as desired by entrepreneurs/executives, to be compared with the same measures provided by a sample drawn from the present and potential customer group. The third construct is overall satisfaction of customers.

For this purpose a pre-tested, nomologically valid questionnaire, having high reliability under test-retest, has been employed for both entrepreneur and customer groups (Malhotra 2005). The procedure for selection of the respondents from both the group is based on probabilistic design (Cochran 1977) as follows. For selecting the entrepreneurs, the sampling frame was developed by merging lists available from multiple sources including the West Bengal Tourism Development Corporation, two small scale business association for tourism in an around Kolkata, the West Bengal Forest Development Corporation, district telephone directories, and similar sources. Geographical coverage includes Kolkata, a metro city and all the districts of Burdwan Division such as Burdwan, Birbhum, Howrah, Hooghly, Bankura, East Midnapore, and West Midnapore. From this list approximately 25%, or 59 entrepreneurs/organizations were selected randomly. Standard questionnaires were sent to these 59 selected entrepreneurs or their selected representatives. In some cases, when they so desired, mail questionnaire method has been replaced by personal interview. Continuous persuasion helped us to generate high rate of response (83.05%).

For the purpose of selecting respondents from customer group, multi-stage sampling frame (Cochran 1977) has been deployed. In the first stage, Kolkata and each of the districts of the Burdwan division have been considered as separate cluster to understand and accommodate inter cluster heterogeneity in respect of culture and economy. In the next stage, only urban areas of the districts and entire Kolkata have been listed for the purpose of selecting ultimate units. Rural areas have not been considered because in rural areas, the ratio of tourist households in relation to all types of household is very low but the cost of survey in the rural area is much higher. Further, each of the clusters has been divided into a number of blocks and one of the blocks has been selected by simple random sampling technique. Then the selected block has been divided into localities and one locality has been selected by simple random sampling technique. Chosen localities have been placed for complete enumerative survey of the tourist households. In this context, it is very much prudent to define tourist and tourist household, which is an important task for this present research. For the purpose of present research the term “Tourist” has been defined by modifying the definition provided by tourist statistics (1999) of the government of India. Finally, 240 tourist households have been selected, and all heads of families or their representatives have been requested for participation in the survey. In this process we record 210 responses, generating the basic data for subsequent analysis.

SCHEME OF ANALYSIS

We have decided to carry out data analysis based on a tree type structure using two sets of observations received from entrepreneurs and customer groups respectively. In the two observed sets of data, respondent have given their perceived opinion on each of the constructs in isolation. Therefore, we have calculated aggregate mean perceived preferences of both entrepreneurs and customers in relation to the constructs, already stated, to identify the gap, if any, between entrepreneurs and customers. It is intuitively understandable and also suggested by Moutinho (2000) that their mental framework is a multi-dimensional one. Therefore, it is necessary to know the dependence pattern in the dataset. This means, we like to check whether there is structural dependency or not. The corresponding statistical hypothesis may be framed as follows:

$H_1$: Observed variables are structurally dependent
If the null hypothesis is accepted we would employ univariate test procedure. Otherwise, we would deploy multivariate analysis.

In case of a two-population testing under multivariate set up, it is desirable to check whether the two populations are comparable in respect of variance and covariance matrices. Interpretation of test results is supposed to be more meaningful when variability is equal for both the populations. For that reason, we have planned to go for standardization of the data set and then test for the following hypothesis:

**H₂: There is a difference in terms of covariances of the two populations.**

It is important to mention that if null hypothesis is rejected in favor of the alternative it becomes a special type of problem referred in the literature as the Behrens-Fisher problem (Anderson 2005). Alternatively, when null hypothesis is accepted the standard test, available under multivariate structure, may be carried out. For more specific understanding of the problem, our next task is to compare mean vectors of the “media mix” and “reason mix” of the two populations, entrepreneurs and customer groups. Related hypothesis in this regard may be described as follows:

**H₃: There is a difference in terms of mean vector of the perceived importance assigned to various media mix and reason mix by the entrepreneurs and the customer group.**

If the null hypothesis is accepted it may be simply stated that there is no statistically significant gap between entrepreneurs and customer groups in respect of “media mix” and “reason mix”. On the other hand if the third null hypothesis is rejected it may be reasonably inferred that there is a statistically significant gap between entrepreneurs and customer groups in respect of their viewing “media mix” and “reason mix”. Then, it may be followed up with further studies like testing of satisfaction of customers to check whether on an average entrepreneurs have less than required market orientation or not. This procedure starts from identifying proportion of customers who are satisfied. This proportion can be obtained from a survey on customer satisfaction. For sustainability of business we need a high proportion of satisfied customers. If the observed proportion of satisfied customer is greater than corresponding desired proportion no problem may arise in near future. In the reverse case, we need to check for difference between observed and expected proportion. If it is found to be significant, we may have reasons to infer that on an average entrepreneur have less than required market orientations. Thus we need to carry out the following test:

**H₄: Population proportion of satisfied customer is less than the desired value.**

However, this desired value will be industry specific. In the next section, we propose to present the databased analysis following the research scheme specified in the present section. This analysis includes determination of descriptive measures and test results with the above framed hypotheses.

**EMPIRICAL STUDY**

To analyze the collected data under a multivariate framework, it is desirable to have a unit free setup, especially for examining distances between characters. It is also important to assign equal importance to each character under study for each of the two cases under consideration. To meet these dual objectives, we have standardized all the variables in respect of scale by pre-multiplying observation matrix with inverse of a diagonal matrix, the diagonal elements being respective standard deviations. This non-singular transformation, operating on the chosen vector measure, results in correlation matrix as the dispersion matrix and hence dispersion matrix estimated from the correlated data, can play the role of a proximity matrix for all pairs of variables. However, to start, we need to first examine whether the entire analysis can be carried out marginally in case the variables under study are independently distributed.
A test for independence of the component of a multivariate normal vector can be developed based on the likelihood ratio principle. Bartlett suggested that a non-monotonic transformation of the likelihood ratio statistic follows χ² distribution under large sample approximation (Johnson and Wichern 2008). In view of the standardization of the variables under consideration, the test for independence can be equivalently presented as a test for equality of correlation matrix and identity matrix. This test procedure to be adopted in our analysis, addresses hypothesis 1.

The basic assumption to be made for testing for equality of two or more multivariate normal mean vectors is that the dispersion matrices of the potentially different population are the same. It is therefore necessary to first check the tenability of equality of dispersion matrices suggested under hypothesis 2. Box’s M test, based on likelihood ratio statistics is useful for the purpose. Box’s test is based on χ² approximation to the sampling distribution of the monotonic transformation of the likelihood ratio statistics and decision rule is to accept the null hypothesis of equality of dispersion matrices if the value of M statistics is small (Johnson and Wichern 2008).

The test for equality of multivariate normal mean vectors, needed for examining hypothesis 3, can then be carried out using the principle of one way Multivariate Analysis of Variance. Wilk’s lambda (λ) test statistics is the ratio of the determinant of the residual sum of square and product matrix and determinant of the total sum of squares and product matrix. Alternatively one may use Hotelling’s trace statistics, Roy’s largest root or Pillai’s test statistics (Field 2005). Strength of analysis will get increase if all the test results converge to a set of decision (Field 2005).

First we have to define two sets of variables: \((X_1, X_2, X_3, X_4, X_5)\) and \((Y_1, Y_2, Y_3, Y_4)\), which are as follows:

- \(X_1=\) Standardized perceived importance of ‘natural beauty’ as one of the reasons for selecting a tourism product.
- \(X_2=\) Standardized perceived importance of ‘historical importance’ as one of the reasons for selecting a tourism product.
- \(X_3=\) Standardized perceived importance of ‘pilgrimage’ as one of the reason for selecting a tourism product.
- \(X_4=\) Standardized perceived importance of ‘adventure tourism’ as one of the reasons for selecting a tourism product.
- \(X_5=\) Standardized perceived importance of ‘village and rural tourism’ as one of the reasons for selecting a tourism product.
- \(Y_1=\) Standardized perceived importance of ‘print media’ as one of the vehicles of promotion vis-à-vis tourism.
- \(Y_2=\) Standardized perceived importance of ‘television media’ as one of the vehicles of promotion vis-à-vis tourism.
- \(Y_3=\) Standardized perceived importance of ‘tourism directory’ as one of the vehicles of promotion vis-à-vis tourism.
- \(Y_4=\) Standardized perceived importance of ‘travelogue/novel’ as one of the vehicles of promotion vis-à-vis tourism.

Here, \(X\) set of variables stands for “reason mix” and \(Y\) set of variables stands for “media mix”. Moreover, each of these variables can be measured both for executives and customer groups. As it is mentioned in the scheme of analysis, table 1a and table 1b describe the basic measures like ‘Mean Vector’ and ‘Dispersion Matrix’ for customers and entrepreneurs/executives respectively.
Table 1A: Mean Vector and dispersion matrix for customer vis-à-vis reason mix.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean Vector</th>
<th>Dispersion Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X1</td>
<td>X2</td>
</tr>
<tr>
<td>X1</td>
<td>4.8523</td>
<td>1.000</td>
</tr>
<tr>
<td>X2</td>
<td>2.2812</td>
<td>-.097</td>
</tr>
<tr>
<td>X3</td>
<td>1.4710</td>
<td>-.068</td>
</tr>
<tr>
<td>X4</td>
<td>1.1908</td>
<td>.075</td>
</tr>
<tr>
<td>X5</td>
<td>.8782</td>
<td>-.007</td>
</tr>
</tbody>
</table>

Table 1B
Mean Vector and dispersion matrix for entrepreneur vis-à-vis reason mix

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean Vector</th>
<th>Dispersion Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X1</td>
<td>X2</td>
</tr>
<tr>
<td>X1</td>
<td>7.3774</td>
<td>1.000</td>
</tr>
<tr>
<td>X2</td>
<td>3.0914</td>
<td>.128</td>
</tr>
<tr>
<td>X3</td>
<td>2.4080</td>
<td>.151</td>
</tr>
<tr>
<td>X4</td>
<td>1.0070</td>
<td>-.421</td>
</tr>
<tr>
<td>X5</td>
<td>.9505</td>
<td>.038</td>
</tr>
</tbody>
</table>

First we test for independence among $X_1, X_2, X_3, X_4$ and $X_5$ for each source separately. By Bartlett’s test of sphericity, it may be seen from Table 2 that, these variables are interdependent for both the groups i.e. customer and entrepreneur groups. To have a common approach for subsequent study we have pooled the two groups of data and carried out the same test of sphericity (see Table 3). The pooled data upholds the fact that the subsequent analysis should be carried out in the multivariate domain because the variables under study are interdependent.

Table 2: Bartlett's Test of Sphericity vis-à-vis reason mix

<table>
<thead>
<tr>
<th></th>
<th>Tourism Customer</th>
<th>Tourism Entrepreneur</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likelihood Ratio</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Approximate Chi-Square</td>
<td>34.288</td>
<td>25.643</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>14.000</td>
<td>14.000</td>
</tr>
<tr>
<td>Significant Probability Value</td>
<td>.002</td>
<td>.029</td>
</tr>
<tr>
<td>Concluding Remark</td>
<td>Variables are interdependent</td>
<td>Variables are interdependent</td>
</tr>
</tbody>
</table>
Table 3: Bartlett's Test of Sphericity-pooled vis-à-vis reason mix

<table>
<thead>
<tr>
<th></th>
<th>Tourism customer and Tourism Entrepreneur-Pooled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likelihood Ratio</td>
<td>.000</td>
</tr>
<tr>
<td>Approximate Chi-Square</td>
<td>38.721</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>14.000</td>
</tr>
<tr>
<td>Significant Probability Value</td>
<td>.000</td>
</tr>
<tr>
<td>Concluding Remark</td>
<td>Variables are inter-dependent</td>
</tr>
</tbody>
</table>

Our next task is to check for equality of two dispersion matrices. Table 4 provides the Box’s test result. Since the probability value is as high as .124 we accept the null hypothesis that dispersion matrices are identical.

Table 4: Box's Test of Equality of Covariance Matrices vis-à-vis reason mix

<table>
<thead>
<tr>
<th>Box's M Statistic</th>
<th>22.294</th>
</tr>
</thead>
<tbody>
<tr>
<td>F statistic</td>
<td>1.428</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>15.000</td>
</tr>
<tr>
<td>2</td>
<td>29935.247</td>
</tr>
<tr>
<td>Significant Probability Value</td>
<td>.124</td>
</tr>
<tr>
<td>Concluding Remark</td>
<td>Co variances are equal</td>
</tr>
</tbody>
</table>

Thereafter we have carried out the test for equality of two mean vectors (see in table 5) arising out of two groups. All the test statistics, i.e. Wilks' lambda, Hotelling trace, Roy’s largest root and Pillai’s trace indicate that there is a significant difference between the two mean vectors. Thus we may conclude that there is a marked difference between the customers and entrepreneurs in respect of perceived importance assigned to different reasons for selection of tourism product.
Table 5: Multivariate Tests vis-à-vis reason mix

<table>
<thead>
<tr>
<th>Measure for Testing</th>
<th>Value</th>
<th>F statistic</th>
<th>Hypothesis Degrees of freedom</th>
<th>Error Degrees of freedom</th>
<th>Significant Probability Value.</th>
<th>Concluding Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilks' lambda</td>
<td>.557</td>
<td>62.868a</td>
<td>5.000</td>
<td>250.000</td>
<td>.000</td>
<td>Difference is Significant</td>
</tr>
<tr>
<td>Hotelling’s Trace</td>
<td>.443</td>
<td>62.868a</td>
<td>5.000</td>
<td>250.000</td>
<td>.000</td>
<td>Difference is Significant</td>
</tr>
<tr>
<td>Roy’s largest root</td>
<td>1.257</td>
<td>62.868a</td>
<td>5.000</td>
<td>250.000</td>
<td>.000</td>
<td>Difference is Significant</td>
</tr>
<tr>
<td>Pillai’s Trace</td>
<td>1.257</td>
<td>62.868a</td>
<td>5.000</td>
<td>250.000</td>
<td>.000</td>
<td>Difference is Significant</td>
</tr>
</tbody>
</table>

In a similar way, table 6a and table 6b describe the basic measures such as mean vector and dispersion matrix for customers and entrepreneurs/executives respectively.

Table 6A: Mean Vector and dispersion matrix for customer vis-à-vis media mix

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean Vector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y1</td>
<td>1.7569</td>
</tr>
<tr>
<td>Y2</td>
<td>1.6099</td>
</tr>
<tr>
<td>Y3</td>
<td>1.4539</td>
</tr>
<tr>
<td>Y4</td>
<td>.8926</td>
</tr>
</tbody>
</table>

<p>| Dispersion Matrix |</p>
<table>
<thead>
<tr>
<th>Y1</th>
<th>Y2</th>
<th>Y3</th>
<th>Y4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.470</td>
<td>0.106</td>
<td>0.152</td>
</tr>
<tr>
<td>0.470</td>
<td>1</td>
<td>0.025</td>
<td>0.153</td>
</tr>
<tr>
<td>0.106</td>
<td>0.025</td>
<td>1</td>
<td>0.075</td>
</tr>
<tr>
<td>0.152</td>
<td>0.025</td>
<td>0.075</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 6B: Mean Vector and dispersion matrix for entrepreneur vis-à-vis media mix

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean Vector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y1</td>
<td>3.1806</td>
</tr>
<tr>
<td>Y2</td>
<td>2.4687</td>
</tr>
<tr>
<td>Y3</td>
<td>2.5843</td>
</tr>
<tr>
<td>Y4</td>
<td>.9428</td>
</tr>
</tbody>
</table>

<p>| Dispersion Matrix |</p>
<table>
<thead>
<tr>
<th>Y1</th>
<th>Y2</th>
<th>Y3</th>
<th>Y4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.223</td>
<td>0.000</td>
<td>0.098</td>
</tr>
<tr>
<td>0.223</td>
<td>1</td>
<td>0.265</td>
<td>0.098</td>
</tr>
<tr>
<td>0.000</td>
<td>0.265</td>
<td>1</td>
<td>0.113</td>
</tr>
<tr>
<td>0.098</td>
<td>0.098</td>
<td>0.113</td>
<td>1</td>
</tr>
</tbody>
</table>

As mentioned earlier first we like to test for independence among Y1, Y2, Y3 and Y4 for each source separately by Barlett’s statistics. It may be seen from Table 7 that, these variables are interdependent for the customer sample but are nearly independent for the entrepreneur sample. To have a common approach for subsequent study we have pooled the two groups of data and carried out the same test of sphericity (see table 8). The pooled data confirms the fact that the subsequent analysis should be executed in the multivariate domain because the variables under study are interdependent.
Our next task is to check for equality of two dispersion matrices. Table 9 provides the Box’s test result. Since the probability value is as high as 0.356 we accept the null hypothesis that dispersion matrices are equal.

Table 9: Box's Test of Equality of Covariance Matrices vis-à-vis media mix

<table>
<thead>
<tr>
<th></th>
<th>Tourism Customer and Tourism Entrepreneur-Pooled</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Value for Box's M Statistic</strong></td>
<td>11.382</td>
</tr>
<tr>
<td><strong>Value for F statistic</strong></td>
<td>1.102</td>
</tr>
<tr>
<td><strong>Degrees of Freedom 1</strong></td>
<td>10.000</td>
</tr>
<tr>
<td><strong>Degrees of Freedom 2</strong></td>
<td>33866.233</td>
</tr>
<tr>
<td><strong>Significant Probability Value</strong></td>
<td>.356</td>
</tr>
<tr>
<td><strong>Concluding Remark</strong></td>
<td>Co variances are equal</td>
</tr>
</tbody>
</table>

Table 7: Bartlett's Test of Sphericity vis-à-vis media mix

<table>
<thead>
<tr>
<th></th>
<th>Tourism Customer</th>
<th>Tourism Entrepreneur</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Likelihood Ratio</strong></td>
<td>.000</td>
<td>.014</td>
</tr>
<tr>
<td><strong>Approximate Chi-Square</strong></td>
<td>60.934</td>
<td>8.143</td>
</tr>
<tr>
<td><strong>Degrees of Freedom</strong></td>
<td>9.000</td>
<td>9.000</td>
</tr>
<tr>
<td><strong>Significant Probability Value</strong></td>
<td>.000</td>
<td>.520</td>
</tr>
<tr>
<td><strong>Concluding Remark</strong></td>
<td>Variables are interdependent</td>
<td>Variables are independent</td>
</tr>
</tbody>
</table>

Table 8: Bartlett's Test of Sphericity-pooled vis-à-vis media mix

<table>
<thead>
<tr>
<th></th>
<th>Tourism Customer and Tourism Entrepreneur-Pooled</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Likelihood Ratio</strong></td>
<td>.000</td>
</tr>
<tr>
<td><strong>Approximate Chi-Square</strong></td>
<td>63.418</td>
</tr>
<tr>
<td><strong>Degrees of Freedom</strong></td>
<td>9.000</td>
</tr>
<tr>
<td><strong>Significant Probability Value</strong></td>
<td>.000</td>
</tr>
<tr>
<td><strong>Concluding Remark</strong></td>
<td>Variables are inter-dependent</td>
</tr>
</tbody>
</table>
Lastly, we have applied the test for equality of two mean vectors (see table 10) arising out of two groups. Again, all the test indicate that there is a significant difference between the two mean vectors. Thus we may conclude that there is a marked difference between the customers and entrepreneurs in respect of perceived importance assigned to different media mix for selection of promotion of tourism product.

Table 10: Multivariate Tests vis-à-vis media mix

<table>
<thead>
<tr>
<th>Measure for Testing</th>
<th>Value</th>
<th>F statistic</th>
<th>Hypothesis Degrees of freedom</th>
<th>Error Degrees of freedom</th>
<th>Significant Probability Value.</th>
<th>Concluding Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilks' lambda</td>
<td>.678</td>
<td>29.788</td>
<td>4.000</td>
<td>251.000</td>
<td>.000</td>
<td>Difference is Significant</td>
</tr>
<tr>
<td>Hotelling's Trace</td>
<td>.475</td>
<td>29.788</td>
<td>4.000</td>
<td>251.000</td>
<td>.000</td>
<td>Difference is Significant</td>
</tr>
<tr>
<td>Roy's largest root</td>
<td>.475</td>
<td>29.788</td>
<td>4.000</td>
<td>251.000</td>
<td>.000</td>
<td>Difference is Significant</td>
</tr>
<tr>
<td>Pillai's Trace</td>
<td>.322</td>
<td>29.788</td>
<td>4.000</td>
<td>251.000</td>
<td>.000</td>
<td>Difference is Significant</td>
</tr>
</tbody>
</table>

For testing the third aspect of market orientation (i.e. customer satisfaction) we have constructed a trinomial distribution of satisfied, indifferent and dissatisfied customers. Customers responded on several five-point Likert-like items in the measurement scale. Using response score of the customer, we have grouped them as (5, 4), 3 and (2, 1) and labeled them as satisfied, indifferent and dissatisfied customers respectively. Next to that, we calculated the proportion of satisfied customers to total customers. We have also carried out the same computation using income of the customers. The desired value for satisfaction proportion is 0.80 as it is desired to have at least 80% of satisfied customers in the tourism industry. Based on the selected target value we have calculated standard Z statistics and compared with tabulated Z value at $\alpha=0.05$. It is found that in all the cases (see Table 11) $H_0$ is rejected in favor of $H_A$. Therefore, we can conclude that tourism industry is dominated by entrepreneurs who have failed to ensure customer satisfaction. Combining all three inferences we claim that tourism entrepreneurs are not in line with market orientation in the accepted sense of the term.
Table 11: Customer Satisfaction

<table>
<thead>
<tr>
<th>Respons</th>
<th>Income</th>
<th>Overall satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>e score</td>
<td>Less than Rs3 Lakh /annum</td>
<td>Rs3-5 Lakh/ annum</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Indifferent</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>Satisfied</td>
<td>4</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td>83</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ratio of satisfied to total respondents of the category</th>
</tr>
</thead>
<tbody>
<tr>
<td>43/58=74.137</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Z value for the hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₀: P=.80</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tabulated Z value for α=.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1.6449</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concluding remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₀ is rejected in favor of H₁</td>
</tr>
</tbody>
</table>

**MANAGERIAL IMPLICATIONS**

It is very clear from the descriptive statistics cited in the previous section that entrepreneurs have over emphasized in most of the reasons and each of the media vehicles. Further, not ignoring interdependence among the media vehicles essential for communicating with tourism consumers, it is also observed that there is a significant gap between entrepreneur and customer groups. Thus, considering both these aspects it may be logically concluded that chance of resource wastage is very high. Most interestingly, in spite of excess usage of resource it has failed to secure satisfied customers. Therefore, entrepreneurs are maneuvered by both ways. On the one hand they lose resources and on the other hand they fail to earn profit. Hence, it is essential to know the root cause/s behind these one sided deviations. It may be intuitively understood that there might be difference between views of entrepreneurs and customer groups in terms of their preferences for media vehicles. Consequently, the perceived views of the each group have been studied separately to highlight on the viewing process of each group through proximities among the reason mix and media mix. Naturally, cluster analysis is the ideal technique for this purpose so that one can carry out unsupervised grouping of reason mix and media mix. There are different techniques for clustering and we have opted for agglomerative hierarchical cluster analysis (Hair et al 2006) for our study.

From the resultant dendogram (see Figure 1), we can observe that entrepreneur group has an equal order of proximity with customers in relation to reason mix. But for a given preference order, degree of closeness varies vis-à-vis reason mix on each pair of reasons between entrepreneurs and
customers. These show the basic difference in the perceived orientation between the studied groups.

**Figure 1: Dendogram exhibiting unsupervised grouping of perceived importance of customer group**

![Dendogram exhibiting unsupervised grouping of perceived importance of customer group](image)

**Dendogram exhibiting unsupervised grouping of perceived importance of entrepreneur group**

![Dendogram exhibiting unsupervised grouping of perceived importance of entrepreneur group](image)

**Figure 2: Dendogram exhibiting unsupervised grouping of perceived importance of customer group**

![Dendogram exhibiting unsupervised grouping of perceived importance of customer group](image)

**Dendogram exhibiting unsupervised grouping of perceived importance of entrepreneur group**

![Dendogram exhibiting unsupervised grouping of perceived importance of entrepreneur group](image)

From the next dendogram (see diagram 2), we can observe that entrepreneur group has a close proximity between importance of television as a vehicle for communication and importance of tourism directory as a vehicle for communication. On the other hand, after analyzing aggregate
views of customers from the corresponding dendogram, we have observed close proximity between
importance of television and importance of print media as a vehicle for communication. The only
similarity of views lies in assigning of least importance on travelogue. These show the basic
differences in the perceived orientation between the studied groups.
It may be noted from the above analysis that in the tourism sector entrepreneurs have adopted a
market orientation that exhibits some mismatch with the expectations of the customer of this sector.
This mismatch, as revealed from our study, has resulted in improper resource utilization because the
operating level is not the ideal one. It has further been observed that the way of looking at media
vehicles and assignment of priorities to those media vehicles differs from the customers’ way of
looking except for the case of travelogues. Thus, the entire analyses converge to a point that
highlights the need for strategic planning even for small entrepreneurs. In addition, this planning
should start from customer orientation. Though service quality has not been touched upon in our
survey work, it can be safely concluded that a mismatch in customer orientation in respect of
communication will definitely have its resultant effects on service quality. Just as over-designing a
product is not desirable as it utilizes more resources but offers very little additional satisfaction,
over-utilization of resources for communication and provision of services may have little
additional impact on the minds of the consumer. Since entrepreneurial activities induce change in
the economy in a more pronounced way, it should be nurtured with utmost care and efficiency based
on research findings. We therefore suggest a few specific courses of action as listed below for
ensuring small to remain beautiful:
1) Undertaking of marketing research activities
2) Consortium formation to be initiated by Government for minimization of cost for carrying
out research and for information sharing
3) Installation of internal marketing drives for employees who deal with customers.

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socio-psychological motivation and destination images,” in A.G. Woodside, G.I. Crouch, J.A.
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profitability, New Delhi: PHI Learning Pvt Ltd.

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ETHICAL DILEMMA: THE CASE OF ILLEGAL DUMPING
BY THE CROWN PLAZA HOTEL

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Mary Kate Naatus
Saint Peter’s University

Nelchael Antoine
Saint Peter’s University

ABSTRACT
This case study explores a real-life corporate environmental scandal involving an upscale international hotel polluting the Hackensack River in NJ, a whistleblower, and an environmental activist and advocacy group, with the backdrop of cutthroat political and business interests influencing the outcomes. In 2009, an employee of the Crown Plaza Hotel, located along the Hackensack River in Secaucus, NJ, secretly approached the head of the Hackensack Riverkeepers, an environmental advocacy group, to alert him of raw sewage being dumped in the river. The employee was very fearful and demanded anonymity for fear of losing his job and other repercussions. The Hackensack Riverkeepers led the Attorney General’s Division of Criminal Justice to launch an investigation under the New Jersey Water Pollution Control Act. In addition to the ethical dilemma and legal situation, the case will explore the impact these types of environmental crimes have had on tourists’ and residents’ perception of New Jersey being a “dirty” place.

SCOPE
The case will focus not only on the environmental impact this scandal has had on New Jersey’s measures (which are minimal) to improve the polluted waters, but also on the impact and impression it has left on residents and potential tourists. For example, the media makes many references to “Dirty Jersey,” which can have an adverse impact on tourism and perception of the Garden State. While this hotel is not solely responsible for the pollution New Jersey has accumulated, it could have an impact on the hotel and tourism markets in that region. Very few people are willing to stay somewhere with a beautiful view overlooking a polluted river and a very distinct and pungent smell in the air that is coming from the river.

METHODOLOGY
The principal investigators have researched the news articles and other coverage written about the scandal and the ensuing legal battles and outcomes. They will also include insights gained from a personal interview of the head of the environmental advocacy group, who broke the scandal and alerted the authorities. The case also incorporates best practices for writing business ethics case studies, in order for the case study to be incorporated into business classes and allow students to explore the components of ethical decision-making and also motivations and fears about “blowing the whistle.”

Keywords: Business ethics, case study, case writing best practices
DELIVERING VALUE OR DISAPPOINTMENT?
EXPERIENCES OF SMALL BUSINESS OWNERS AND FOOD DELIVERY SERVICES

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Norbert Kong  
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ABSTRACT
The purpose of this article is to describe the impact that delivery services have on local restaurants and other small businesses in an urban area with a high population density and a lot of competition. Delivery service startups, such as Delivery.com, Grubhub, and Seamless can provide benefits to small businesses by connecting them to a larger pool of customers via websites and mobile apps, allowing convenient ordering. However, these companies charge fees ranging from 10% to 15% per order, which can have a negative impact on profit margins and revenues for their business customers. This study analyzed quantitative and qualitative survey responses of over 50 small business owners and found that the majority that have used delivery service companies are satisfied and believe that they are providing new customer leads. Several owners mentioned that they would prefer that loyal customers avoid ordering through the services over time in order to maintain the full sale price and avoid the fee, but these owners do not ask customers to do so. In one particular neighborhood with a high density of ethnic restaurants and businesses, a local entrepreneur founded a competing web-based delivery service company catering to the hyper-local market and by-passing the outside service fees.

SUMMARY
This paper will examine findings from previous academic studies that have attempted to quantify the value that delivery startups bring to local restaurants and evaluate whether small businesses can afford to give up a percentage of their revenue to reap the benefits of these services. Additionally, this paper will explain the role of these delivery startups from a microeconomic standpoint and distinguish whether delivery services are a convenience or an inconvenience to the local economy. The initial assumption behind online delivery startups is that they provide local restaurants with additional advertising and market reach through online and mobile-app exposure, which ultimately leads to a larger target audience. Yet many restaurants may in fact being doing themselves a disservice by relying greatly on these services. It is difficult to find exact data, but the researchers believe that many small businesses may be losing a lot of revenue due to commission fees. Thus, the purpose of this paper is to shed some light on a concern and challenge that small businesses face. In some cases, local businesses that partner with delivery services may experience more transactions and sales as a result, but it is important to quantify the impact on profit margins in order to assess the true value of the relationship with the delivery service company.
Keywords: Small business, third-party delivery services, e-commerce
WOULD TAKING ETHICS COURSE AND HAVING BUSINESS LAW TRAINING MAKE A DIFFERENCE IN THE ATTITUDES TOWARDS BUSINESS ETHICS? AN EXAMINATION OF BUSINESS STUDENTS IN THE U.S.

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ABSTRACT

Ethics in business organizations and the effectiveness of business ethics education in business schools have drawn attention in the past. However, recent collapse of the financial industry that led to the economic recession in the U.S. and the increased number of lawsuits in unethical cases have brought back the attention to this matter. There is an increasing demand of business schools to prepare future business managers for complex ethical challenges which they may face while attending schools. Ethical behavior of future business students can be anticipated based on their ethical perspectives (Albaum and Peterson 2006). The purpose of this study is to examine whether taking business ethics courses and having business law training make a difference in the attitudes towards business ethics of the U.S business students at a college in Florida. In particular, it surveyed 267 undergraduate business students using the 30-item Attitudes towards Business Ethics Questionnaire (ATBEQ) constructed by Neumann and Reichel (1987). It appeared that there is a significant difference in the respondent’s mean ATBEQ scores based on the two factors. In addition, there is a positive correlation between each factor and the respondent’s ATBEQ scores. In this study, literature on business ethics, the Corruption Perception Index of the U.S. and its bribery and corruption issues, are presented along with implications and recommendations for academic scholars, leaders, practitioners and the like.

Keywords: Attitudes; business ethics, business law training, business students, ethics courses, the U.S.

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ABSTRACT  
This paper is a theoretical exploration of what we argue is becoming an increasingly common dilemma for organizations. Consider that an organizational condition (e.g., strategy, structure, technology, product, culture) is objectively optimal. This means that it would be irrational for the organization to change from this optimal state to a suboptimal state. But, we argue, today the internal and external pressures to change are now so strong and now so ubiquitous that organizations are often forced to change away from the optimal condition. This paper does not draw upon systemic empirical data to assess the extent to which organizations reach optimal conditions nor how often they are forced to change in this manner. Rather, we frame, from an Organization Theory (OT) perspective, the real potential for this condition and its strategic and social impacts – both positive and negative. The political and sociological problems pertaining to the assumption of an objectively optimal condition are also discussed.  

Keywords: Change management; decision-making; institutionalism; labor studies  

INTRODUCTION  
The conference theme of “Applied/international/interdisciplinary perspectives leading to improvement of practices and/or understanding of human conditions” creates many spaces within which to think about the role of the decision maker in organizations and the internal and external pressures they experience when contemplating change. This paper explores the theoretical, yet plausible, idea that some decisions to change organizational conditions (structures, products, services, processes, etc.) can alter what was objectively an optimal condition to one that is sub-optimal. We introduce the concept of organizational change in general to identify some of the key factors that influence change decisions. This serves as a context within which to more cleanly define the problem of optimal conditions and decision-making under conditions of uncertainty and ambiguity. We then explore the subjective influences on decision-makers that, we argue, lead to a
strong bias toward change for change’s sake. The strategic and social consequences of this bias (both positive and negative) are then addressed. The paper concludes with a sociological/philosophical examination of the assumption of an objective optimal condition and the implications that this has on the paper’s main themes. Ultimately, the purpose of this paper is to theorize about what could be considered the zeitgeist of change in organizational studies and its positive and negative effects on organization-level open governance as well as the social dynamics within the organization.

Organizational Change
If there is any single theme that captures the essence of management ideology over the last five decades or so it is that organizations need to change in order to survive or thrive. Whether it is simply to be innovative to gain market share or to adopt new processes for internal efficiency, the logic and wisdom of change permeates organizational thought.

In organization theory scholars offer frameworks that explain why change is necessary. For example in population ecology, Hannan & Freeman (1989) identify three basic theories of change that each have their unique logic and explanatory power. First, selection theories focus on the changing environment and how the pace of organizational change must keep up with the pace of environmental change. Here organizational change is seen as more random and prone to inertia if the organization is large. Second, adaptation theories grant the organization more ability to consciously design new internal systems and processes to match environmental demands. These theories include contingency theories that strive to achieve a match between the change and the environment, resources dependency theories in which the organization attempts to influence the environment to reduce uncertainty, and Marxist theories in which management strives to achieve higher levels of control over the worker and production processes (Hannan & Freeman, 1989). Thirdly, there are transformation theories that stress that some organizational changes are purely random, as in biological mutations, and that the organization has little prescience or intelligence over what changes will be selected by the environment.

More recently organizational theorists have identified more fine grained and overlapping sources of change within organizations (e.g., Graetz & Smith, 2010). Based on their analysis they state:

Our argument is that understanding change as part of a continuing work in progress calls for a much broader canvas that seeks out competing voices, and works with the resulting ambiguities, contradictions and tensions of messy reality. We advocate a multi-philosophy approach because continuity depends on change as much as change depends on continuity. [p. 136]

Their philosophies of change largely overlap the mechanisms in the selection, adaptation, and transformation theories from population ecology, but they stress the importance of considering other change sources. These include institutional sources in which organizations experience pressures to maintain legitimacy in organizational fields and worker psychology which emphasizes Organizational Development (OD) kinds of variables such as emotional experience and motivation. In addition they identify political aspects of conflict and power, cultural factors such as values and resistance to change, system thinking, and postmodern sources of organizational change (Graetz and Smith 2010).
From these perspectives it is clear that there is no monolithic or simple theory that explains or prescribes organizational change. Environments are highly dynamic and impose both market and institutional pressures on organizations. In addition the internal dynamics of the organization which include individual experience/needs, conflict over resources and ideologies, and broader cultural belief systems all contribute to understanding how and why organizations change (Tsoukas 2002). It is within this context that we will now turn our attention to the theoretical case in which, given all of the change contexts mentioned above, there is an organizational condition or state that is optimum and the objective problems this introduces to the organization.

The Objective Problem of the Optimal Condition
Herbert Simon introduced the notion that in most cases human beings make decisions under conditions of bounded rationality (Simon 1956). This means that the information needed to assess all alternatives and their true probabilities characterizing optimal decision-making is not available or is too costly. This leads to strategies in which the decision-maker will settle upon the first alternative that satisfies a certain threshold need. He named this strategy satisficing. Furthermore, ambiguity, uncertainty, and satisficing have been found to be central features of decision-making in organizational life (March and Simon 1958; March and Olsen 1976; Stinchcombe 1990).

Assuming that this captures the way in which organizational decisions about whether or not a current state of affairs is optimal or not, it is useful to consider models of statistical inference such as Type I and Type II error. If a shift has actually occurred away from an optimal state, there is still a non-zero probability that available data will fail to indicate the shift resulting in inaction (Type 2 error). However if no shift has actually occurred and you are still in the optimal state, some data may fit the narrative that you are no longer in the optimal state compelling action toward a suboptimal state (Type 1 error).

In this objective case, there is no systemic driver that tilts the scales toward either one of these errors. That is, this objective case assumes that the decision-maker has no particular bias toward believing that a shift has or has not occurred. However the main argument in this paper is that organizations are moving in a direction in which they experience internal and external pressures that introduce this bias and dramatically increase Type I error making a shift away from the optimal relatively more likely. In the remainder of this paper we will assume that an optimal condition exists, that this bias toward change exists, explore possible sources of this bias, and consider both the positive and negative consequences of this bias.

The Subjective Problem of the Optimal Condition
Most of us have experienced our computer operating systems, Email applications, products, services, or processes within our organizations changing in a manner that feels like a step backwards. Why did they do that? One answer could be that they have done their due diligence and performed studies that show, objectively, that the change is a shift from some suboptimal state of affairs to a more optimal state. Yet, while these kinds of assessments do take place, more likely than not the driving force behind the change is simply that change, as a norm, is expected by those within or those outside the organization.

Legitimacy
As mentioned previously, organizations are embedded in organizational fields in which customers or other organizations expect them to demonstrate what are considered to be legitimate processes or structures. This means that there are cultural norms that develop within these organizational fields

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about what is expected and failure to meet these expectations signals to stakeholders that the organization may be weak or simply not keeping up with industry/sector trends (DiMaggio and Powell 1991).

Pressures for legitimacy will drive the organizations to change in order to be in line with these expectations. This will be, in most cases, a rational move from a perceived sub-optimal state to an optimal state. Yet, in more recent modernity, some institutional pressures involve the very expectation that the organization must be perceived as in a perpetual state of change. That is, even if an objective optimal state has been achieved relative to all other institutional pressures, there remains residual institutional pressures to change because change itself, independent of form, is expected. One could speculate that this particular institutional pressure evolved from the differentiation marketing strategy identified and promoted by strategy scholars such as Michael Porter (2008). In the differentiation strategy organizations attempt to gain market share by putting forth products or services that are different (not necessarily objectively better) than their competitors’.

In summary, to the extent that these institutional pressures compel organizational actions that succeed in expanding market share through differentiation strategies, these are rational actions that move from the suboptimal state toward the optimal state. However, we argue, this will also often lead, when it is change for change’s sake, to an organization’s products or services shifting from an optimal state to a suboptimal state leading to loss of market share. While this is a theoretical claim, one need only draw upon one’s own experience as a consumer to identify empirical examples where this problem has likely occurred. This also lays a theoretical framework within which to perform future empirical studies in which customers or other environmental stakeholders are queried as to whether a focal organization’s change was perceived as a shift away or toward a more optimal state.

**Framing Non-Change as Failure**

Internal to organizations processes and many job roles define success as the ability to enact change. Change is the requirement and the expectation. Therefore, if the existing condition is objectively optimal, these processes and roles will fail their charter and this is another theoretical reason for shifts from the optimal to the sub-optimal.

Organizational Development (OD) programs and quality control paradigms have been implemented by organizations for many decades now and there is a clear common thread that change is vital and that the status quo is to be feared or framed as a frictional drag or inertia (Piderit 2000). Organizational processes such as Six Sigma, Statistical Process Control (SPC), Capability Maturity Model Integration (CMMI) and Reengineering all share a fundamental philosophy of continuous improvement and the assumption that the optimal state is never achieved.

Reengineering and Six Sigma, in particular, offer procedures for managers and workers to formally identify “as-is” process flows in a manner that will help to find areas for process improvements – the “should-be” or “could-be” cases. Therefore these process paradigms approach the existing organizational case as already sub-optimal and, like a sick patient, in need of diagnosis and treatment (Recker 2005). What happens, then, when a team specifically dedicated to diagnosing a particular process finds no obvious way to improve the process? While some teams may be bold enough to report upward that the process is perfect as far as they can tell, it is more likely that they would equate this outcome to a failure and this would motivate them to recommend ways to change the process simply to meet the expectations of their superiors.

More profoundly, this line of reasoning can easily be extended from ad-hoc teams to many formal roles within the organization. Some worker and managerial roles have written into their job
descriptions the expectation that they will identify organizational processes that are in need of improvement and enact change. This means that in many cases individuals in these roles will need to evaluate processes that are more familiar to others (those workers who have developed and/or are executing the process) than they are to them. Therefore they will often lack the detailed and context-based knowledge about the process and yet, to be seen as performing their job well by superiors, will nonetheless need to find areas for improvement. To the extent that these roles lead to real change it is reasonable to assume that because they are based on an inferior level of process knowledge, that they will, in many cases, shift away from the optimal condition.

Positive Consequences of the Bias Toward Change
Change, even if it is a move away from the optimal condition, may still be beneficial to the organization in the long run. As we have seen, organizations must establish and maintain legitimacy within organizational fields (DiMaggio and Powell 1989, 1991). Even if this means that a product or service is perceived by an environmental stakeholder as shifting from optimal to sub-optimal, the focal organization, at a minimum, retains its legitimacy simply because it upholds the façade of change. This “changing for change’s sake” behavior upholds the environment’s overall expectation that the organization is not stagnating and is actively adapting even if, at times, it may be a mistake. Furthermore, others have argued that even if the purpose of change is not altogether clear, there is a reinvigorating benefit in breaking up routines, breaking down silos, and generally “shaking things up” (Phanish and Gulati 2010).

Also, with change, whether for better or worse, comes organizational learning. Weick’s (1977) concept of enactment is a general theoretical framework in which acting itself makes things visible to the organization that otherwise would have been hidden. Organizations learn new things about their internal processes and external relationships when actions are taken and responses are observed. Many organizations embrace this philosophy at the managerial level and tell their workers to go for and enact change even if it leads to failure because of the opportunity for learning that will take place. It is reasonable to assume that for many organizations and for many potential changes, this is a rational strategy.

Negative Consequences of the Bias Toward Change
The pressure for legitimacy compels organizations to modify their products or services in a manner that displeases and loses customers (e.g., Mochizuki 2015). Chat rooms and blogs often reflect customer confusion and hostility when services such as computer operating systems or Email formats change. While on the one hand some of this can be attributed to a general discomfort with learning new systems/schemes that are objectively superior, on the other hand it often reflects a more deep-seated belief that the product or service truly did take an undesirable step backward. Organizations often “beta test” these kinds of changes to avoid these kinds of failures, however it is clear that these failures can and do occur.

According to population ecology, large-scale reorganization introduces vulnerabilities similar to newness where failure is associated with the re-building of trusting relationships and the re-defining of roles and tasks. For example, Hannan and Freeman (1989) state:

The processes of dismantling one structure and building another make organizational action unstable. Consequently, the variance of quality and timeliness of collective action decline during reorganization. That is, the process of reorganization lowers reliability of performance. [p. 83]
Therefore, while we saw enactment to be beneficial to the organization from a learning point of view, enactments that involve larger scale changes to organizational processes and roles place the organization in a state of flux that will diminish performance for a period of time. This means, in the context of our analysis, that the change creates a temporary, although potentially fatal, shift from an optimal state to a sub-optimal state.

Finally, the requirement for organizational processes and roles to frame non-change as a failure can have negative social effects. As mentioned earlier, the process or role occupant that is tasked with evaluating a process is usually not as familiar with the history and details of that process as those who have been involved with it intimately for months, years, or decades. This leads to resentment on the part of those closest to the process. While some quality control paradigms recommend that the “inputs” from the workers be factored in to the change decisions, the inevitable disparity in what these paradigms refer to as “profound knowledge” maintains a level of resentment.

From a labor studies tradition this dynamic has even deeper implications. Beyond mere resentment that one’s turf is being encroached upon, there is a general matter of culture, community, and alienation. According to theories of alienation, workers experience actualization and meaningfulness when they are able to produce a good or service that is valued and found to be useful by others (e.g., Marx 1956; Beamish 1992; Blauner 1964). Social spaces are “looking glasses” in which human beings see one another and are keenly aware that they are being seen and evaluated (Marx 1844; Mead 1934; Cooley 1994). In this vein, to the extent that a group of workers has worked together to develop, evolve, and maintain a particular production process and become actualized through these activities, the arrival of groups or individuals that are less familiar with these processes and who assume that it must require change, is a failure to offer them their due respect. This dynamic extends to “the old guard” that has built an organization from its foundation only to encounter a new crop of workers who are given the charge by management to find nothing sacred about what has been done in the past and to succeed primarily by forcing change. We see, then, a double negative in which not only are processes changed somewhat arbitrarily to a less optimal state, but those who are core members of the organization who have, in essence, “owned” these processes become alienated from their work and from their involvement in what was previously experienced as a community.

Revisiting Assumptions
The analysis so far has been based on the very important assumption that objective optimal conditions exist. This assumption is problematic and seen as dangerous to modern philosophers, Marxists, and postmodernists who deny universals, see reality as a social construction, and view change as the outcome of conflict (Wittgenstein 1958; Berger and Luckmann 1966; Perrow 1986; Clegg 1990; Giddens 1991; Goulimari 2007). From this perspective any structural, process, product, or cultural change represents a shift in power from one group to another. That is, they would assume instead that if an objective or universally valid optimal condition is possible, it would mean that an equitable or ethical balance of power between groups in conflict has been achieved. This paper has taken the point of view of organizational leadership and what is rational for the success and survival of the whole organization as a purposeful goal-oriented collective, but this is only one of many valid perspectives on change and its social implications.

This introduces new points of inquiry in which researchers can frame the power inherent in organizational management-backed change programs (i.e., Six Sigma, Reengineering, SPC, etc.) or inherent in various formal roles within the bureaucratic structure and the role these powers play in
conflict situations (Kunda 1992; Nugent and Collar 2014). As we have already seen, there are times when a group that is more intimate with process details is forced to change processes because a group or an individual who knows less about the process has to the power to force the change. Therefore questions about conflict and power in the context of change could augment the existing labor studies literature that is has been more concerned with questions of the deskilling and alienating effects of new technologies.

Conclusion
Through pressures for legitimacy, organizational-level quality programs, and change oriented organizational roles, the possibility that an existing process, product, or service might already be optimal and not in need of change presents a unique dilemma to organizations. This paper explores the implications of this dilemma and while change, even when it is not necessary, can still be beneficial to an organization, there are negative consequences that should compel managers to think more deeply about how to govern change within their organizations or within their organizational field. In addition, theories about reality and objectivity inspired by the linguistic turn in philosophy remind us that framing “optimal conditions” from the point of view of management marginalizes other valid points of view and that politics, power, conflict, and ambiguity must be factored in to the context of our analysis.

As a theoretical paper, we hope that these conclusions will encourage other researchers to establish a more empirically based understanding of the causes and consequences of shifts from optimal to sub-optimal conditions and also an understanding of how evaluations of optimality may differ from group to group within the organization. Ultimately, however, we hope this theoretical exploration serves as a caution, in the age of what is truly the zeitgeist of change, that at times change is not rational and that to change for change’s sake can have negative consequences.

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CONSUMERS’ DEMOGRAPHIC CHARACTERISTICS AND THE COUNTRY-OF-ORIGIN EFFECT: AN INTERNATIONAL STUDY

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ABSTRACT

The aim of this study is to fill in a gap in Country-of-Origin (COO) studies by assessing the relationship between COO and consumer decision-making processes in Morocco, an emerging market and non-Western Mediterranean country and culture. Specifically, this research study will demonstrate the consumer demographic characteristic of age does make a difference in the COO influence for product categories within Morocco.

Keywords: Country of Origin, International, International Consumer Behavior, Cross-Cultural, Morocco

INTRODUCTION

Product category is an important element of country-of-origin effect, hereafter COO (de Mooij 2004). Consumer behavior regarding COO knowledge varies by product category (see for example, Manrai et al 1998; Balabanis and Diamantopoulos 2004) and attributes (Eroglu and Machleit 1989). For example, as previous research has revealed, consumers may relate fashionable clothing with France and quality automobiles with Germany, but not relate well-crafted cameras with either nation.

Bandyopadhyay and Bnerjee’s (2002) study analyzed Indian consumer perception of two product categories: electronic and electrical products made domestically, and similar products made in the U.S., Japan, South Korea, Germany and Britain. He revealed that domestic-made products were rated lower than those from foreign nations. Manrai et al.’s (1997) research examined the COO effect on product categories in 21 nations. The research demonstrated that product-category
evaluations were highest for developed and industrialized nations, followed by newly industrialized nations, and finally, developing nations.

Klenosky et al. (1996) analyzed the COO effect on Czech Republic consumers for two product categories, color television sets and automobiles made by Western firms. Just as in other researched nations, Czech consumers showed COO sensitivity for different product categories. Elliott and Cameron (1996) conducted shopping mall intercept surveys of Australian consumer attitudes toward domestic product categories compared to similar products made in Japan, South Korea, Germany, the Philippines, the U.K., and the U.S. Results suggested that Australian consumers preferred domestically made products.

Though these studies are diverse both in focus and interest, they indicate a connection between COO perception and product quality. This perception is affected by several factors including the demographic and geographic characteristics of the consumers, perceived technical expertise of the COO, the economic state of the consumer’s nation, and the general perception of the item.

**COUNTRY-OF-ORIGIN AND CONSUMER CHARACTERISTICS**

Scholars, such as Wall et al. (1988) and Schooler (1971), reported that age factor does effect consumers’ evaluations of a product. Specifically, younger shopping consumers have more favorable evaluations of imports/foreign products in comparison to older consumers. Wall and Heslop (1986) reported that consumers with higher income prefer imports / foreign products. Additionally, McLain and Sternquist (1991) study findings show that there is a relationship between age and ethnocentrism (i.e., xenophobia). Older consumers are more ethnocentric / xenophobia than younger consumers. However, Han (1988) and McLain and Sternquist (1991) found no relationship between consumer income level and ethnocentrism. On the other hand, Han (1988) study results demonstrate that there is a connection between gender of the consumers and country of origin. Specifically, female consumers have a more tendency not to purchase foreign products/imports. McLain and Sternquist (1991) did report a relationship between consumers’ education level and unfavorable attitudes toward imported products (i.e., ethnocentrism). Particularly, consumers with lower education level tend to be more ethnocentric than other shopping consumers with higher education level.

Many researchers have investigated the antecedents of COO evaluations (e.g., Apil and Kaynak 2010; Roth and Diamantopoulos 2009; Sohail 2005; Insch and McBride 2004; Balabanis and Diamantopoulos 2004; Laroche et al. 2005; Chinen et al. 2000; Verlegh and Steenkamp 1999; Klein et al. 1998; Hussein 1997). However, the majority of consumer behavior frameworks and models were developed from the perspective of Western nations, predominantly United States consumers. While there has been some interest among scholars concerning the cross-cultural aspects of COO, efforts mainly have been confined to Asian nations. Few studies have focused on Latin American and Mediterranean nations, and fewer still focus on North African nations. This leaves an incomplete understanding of the effects of COO.

This study works to address the gap by assessing the interactions between COO and consumer decision-making processes in Morocco, an emerging market and non-Western Mediterranean country and culture. By relating product categories to nations, this study offers insight into Moroccan-consumer-spending-preferences that may be used as a research benchmark for other non-Western countries, and provide product marketers with valuable information about consumer behavior.
RESEARCH DESIGN AND STUDY
The research goal was to examine if demographic characteristics such as age and gender make a difference in the COO influence for product categories within Morocco. Data for this research were collected mainly through a consumer survey. The Back Translation Method was used to translate the research instrument from English to French for the Moroccan sample. The Back Translation Method is considered highly effective in international marketing and business research (Kumar 2000). Prior to administering the survey, a pre-test of the questionnaire was conducted for a small group of respondents. The results were satisfactory. The structure of the questionnaire allowed the respondents to rate all stimuli: 17 countries and nine categories, one at a time. This format has proven to be stable over time (Jaffe and Nebenzahl 1984), and is consistent with the format used in previous country image studies (Roth and Romeo 1992).

In our research study, data were gathered via the mall intercept approach in Rabat and Casablanca, Morocco. The two cities were selected because they are major metropolitan and urban centers. The cities of Rabat and Casablanca are also significant commercial and economic trade centers in the country of Morocco. Furthermore, Rabat and Casablanca are generally considered representative of Morocco regarding consumers’ purchases situation of both domestic and imported/foreign goods and services. The surveys were distributed to consumers at shopping centers in a similar manner used by previous researchers (e.g., Hornik and Ellis 1989).

RESULTS
Univariate analysis of variance (ANOVA) was conducted on the data. Age was shown to interact with the impact of COO with regard to purchasing decisions regarding products from more industrialized / economically advanced nations, compared to products from less economically advanced / industrialized nations. As these findings demonstrated, COO does influence product category evaluation.

DISCUSSION AND IMPLICATIONS
These results have managerial implications in assisting multinational organizations in their market segmentations and positioning strategies. Specifically, they can segment the market of Morocco and other African and Mediterranean nations, on the basis of the sourcing countries. This presents an exciting challenge to businesses to coordinate business and marketing-mix tactics, such as product policy, pricing, distribution, and communication strategies. These initiatives toward market openness and trade liberalization make Morocco an attractive destination for direct foreign investments by international firms. However, it is imperative for these businesses to understand how demographic factors such as gender, age, and education affect Moroccan / Mediterranean / North African (i.e., emerging market[s]) consumer evaluations of product categories.

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MOVING TO THE SMART/ECO-FRIENDLY CAR: STRATEGIC EVOLUTION OF AUTOMOTIVE TECHNOLOGIES

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ABSTRACT
Human beings have forever been creative in inventing ways for travelling around transcending distance. The internal combustion engine is perhaps one of the most important human inventions. This technology to this day plays a dominant role in human transportation systems. The development of propeller and jet technologies are also quite significant. Regarding automobile, from the model Ford T1 on, changes have been about improving the engine and shape of the design. It is not until the 1970s when other significant breakthroughs emerged led by the Japanese companies (Toyota and Honda) that first improved the fuel efficiency of cars along with the shape and design making the optimal use of internal space and external aero dynamics. With concern about the environment, the next development was about improving the emission system. Honda and Toyota from Japan went further to develop the so-called hybrid automobile combining an electrical component to the internal combustion engine. The next technological breakthrough was about car which is completely electrical. In addition, ways were found to make the cars, buses and trucks run on natural gas and the so-called clean diesel. There is still growing concern about CO₂ emissions and the need for so-called carbon reduction. WAFUNIF organized a world conference in cooperation with ASUA (Japan) in October 2014 to address the issue and to promote eco-friendly transportation systems. Toyota is now onto another major breakthrough with the soon to be available cars running on fuel cells. There are thus clear alternative to the use of fossil fuels or reducing their use. IISRT is currently investigating the development of the smart/eco-friendly car with the caveat that the technology would be usable for trucks and busses as well. With major IT companies joining the foray it is expected that we shall soon have the smart/eco-friendly car.

Keywords: hybrid automobile, human transportation, eco-friendly
THE RELATIONSHIP OF EMPLOYEE WORK ENGAGEMENT TO AN ORGANIZATION’S READINESS FOR CHANGE

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ABSTRACT
Successful change efforts are critical to an organization’s strategy and growth and, therefore, an understanding of how to best manage these change efforts is of interest to innovative and forward-looking organizations. Research demonstrates that the factors critical to a successful organizational change effort include an organization’s employees – those directly involved in the intervention and those impacted by it.

Specifically, this study examined how an employee’s level of work engagement (EWE) is not only important to an organization’s performance results, but also its ability to successfully manage change. It is important to consider the literature discussing the interaction of EWE and readiness for change (RFC); yet, significant research is not available related to the questions posed in this study. Without this information, an organization is unable to gain an understanding of, or benefit from, the valuable nature of work engagement on its preparedness for change and, consequently, improve the likelihood that its change efforts will be successful.

For this study, the operational definition of EWE was that of Schaufeli, Salanova, González-Romá, and Bakker (2002), who define employee engagement as “a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption….a more persistent and pervasive affective cognitive state that is not focused on any particular object, event, individual, or behavior” (p. 74). The functional definition of RFC was based on that of Elgamal (2012). Elgamal states that “Organizational readiness refers to organizational members [sic] change commitment and change efficacy to implement organizational change…[where] readiness…connotes a state of being both psychologically and behaviorally prepared to take action” (p.46).

The study examined four research questions including the hypothesis that a relationship exists between EWE and RFC and their subscales respectively. A cross-sectional study was conducted in several small manufacturing organizations in south-central Pennsylvania with 293 persons receiving a 28 item survey. The number of completed surveys was 172 which provided a 58.7% response rate.

In the survey, the EWE was measured by vigor, dedication, and absorption using the Schaufeli et al. (2002) Utrecht Work Engagement Survey (UWES-9). Schaufeli et al. define each of these characteristics in the following way: “Vigor is characterized by high levels of energy and mental resilience while working, the willingness to invest effort in one’s work, and persistence even in the face of difficulties. Dedication is characterized by a sense of significance, enthusiasm, inspiration, pride, and challenge….[and] absorption, is characterized by being fully concentrated and deeply engrossed in one’s work, whereby time passes quickly and one has difficulties…detaching oneself from work.” (pp. 74-75)

Further, the organization’s readiness for change (RFC) was measured by the subscales of (a) reflexivity and (b) innovation and flexibility using the Patterson et al. (2005) Organizational Climate
Measure (OCM). The OCM dimensions are defined in the following way: “flexibility - an orientation toward change…; innovation - the extent of encouragement and support for new ideas and innovative approaches…; [and] reflexivity - a concern with reviewing and reflecting upon objectives, strategies, and work processes, in order to adapt to the wider environment” (Patterson et al. 2005, p. 386).

Data analyses were completed using descriptive statistics, bivariate correlations, and stepwise regression. The results demonstrate moderate correlation, significant at $p = 0.01$, between EWE and RFC and the five subscales studied thereby demonstrating the importance of an organization’s employees – in terms of work engagement – on an organization’s readiness for change. Organizations with this knowledge can take practical steps to improve their employees’ level of work engagement in order to enhance the opportunity for change effort success.

**Keywords:** Employee engagement, change management, organizational climate
A STUDY OF JOB SATISFACTION AND ORGANIZATIONAL CHARACTERISTICS IN KUWAITI ORGANIZATIONS

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ABSTRACT
Job satisfaction has been studied for its value and association with organizational performance, productivity, and profitability. A number of organizational characteristics have been examined for their central position in organizational behavior and human resource development in organizations. For this study, following organizational variables were selected for examining their association with job satisfaction: supervision, teamwork, working conditions, autonomy, and opportunities for career advancement. Data were collected from seventy professionals working in eleven special library and information centers in Kuwaiti information-related companies. A questionnaire was administered through managers of these companies. A typical respondent was a young graduate, Kuwaiti national, with an experience of about 8-10 years. Pearson correlation coefficient was computed and it was found that all the five organizational variables were significantly correlated with job satisfaction.

Keywords: Job satisfaction, teamwork, working conditions, job autonomy, career advancement, staff development

INTRODUCTION
Job satisfaction is a significant measure that has been a subject of extensive study and research. A large number of studies have been conducted on job satisfaction and its relationship with organizational profiles and characteristics. Job satisfaction’s relationship with performance and commitment has been widely examined (Christen, Iyer, and Soberman 2006; Cohrs, Abele, and Dette 2006; Rayton 2006). On the administrative level, job satisfaction may provide valuable information for decision makers that will help in creating better working conditions for employees (Edwards and Walton 2000; Farley, Broady-Preston and Hayward 1998). And most importantly, job satisfaction is essential for employees because they spend most of their time in the workplace, which in turn affects their personal lives and success in organizations (Judge and Watanabe 1994; Granny, Smith, and Stone 1992; Judge and Watanabe 1994).

Problem
Information professionals working in these companies have a key role in the performance of their organizations. A need was felt to examine job satisfaction of these professionals in Kuwaiti information centers in relation to selected organizational variables that directly influence their performance. Five organizational variables were selected for this purpose: supervision, working conditions, teamwork, autonomy, and career advancement.

Hypothesis
The following hypothesis was formulated for this study:
H1: Job satisfaction of Kuwaiti information professionals is significantly related to selected organizational characteristics.

Five sub-hypotheses were derived from the main hypothesis:
H1a: Job satisfaction of Kuwaiti information professionals is significantly related to supervision they receive.
H1b: Job satisfaction of Kuwaiti information professionals is significantly related to an organization’s working conditions.
H1c: Job satisfaction of Kuwaiti special librarians is significantly related to the situation of teamwork in organizations.
H1d: Job satisfaction of Kuwaiti information professionals is significantly related to amount of autonomy allowed to employees in organizations.
H1e: Job satisfaction of Kuwaiti information professionals is significantly related to career advancement opportunities provided in organizations.

LITERATURE REVIEW
Job satisfaction has been defined as “how people feel about their jobs and different aspects of their jobs. It is the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs” (Spector 1997). It is also a state of mind that results from an individual’s needs or values being met by the job and its environment (Hopkins 1983).

Several theories described job satisfaction. According to Herzberg (1966), there are lower-level needs such as having a good salary, good working conditions, and good relationship with co-workers. These lower-level needs are called the "Hygiene" factors. There are also higher-level needs which include nature of work, responsibility, and recognition of superiors. These higher-level needs are called the "motivation" factors. Herzberg suggests that employees do not achieve satisfaction by fulfilling the hygiene needs that merely function as a way to decrease dissatisfaction, but by fulfilling the motivation needs one can achieve satisfaction.

The Hygiene and motivators or the two-factor theory has received some criticism regarding the separation of satisfaction and dissatisfaction and placing them on different planes. Another reason for criticizing the theory is that workers usually tend to blame outside factors for the cause of dissatisfaction and give themselves the credit regarding satisfaction (King, 1970).

Another theory related to job satisfaction is McClelland’s (1961) acquired needs theory. The theory suggests that each individual acquires three types of needs. Individuals with the need for achievement feel the desire to success and accomplish things. The need for affiliation makes individuals desire acceptance and friendship of others. And finally, those who have the need for power feel that they must control their environment and influence others.

Maslow's hierarchy of needs classifies the needs of individuals into five levels. In order to reach the highest level of the hierarchy, one needs to fulfill the lower levels of needs first. The physiological needs like air, water and food are the most basic needs for human beings and are at the bottom of Maslow's hierarchy of needs. They are essential not only for sustaining individuals lives, but also for motivating people to seek the higher needs. There is also the safety needs (job security, health insurance, etc.), Social needs (friendship, giving and receiving love, etc.), esteem needs (self-respect, recognition, accomplishment, etc.), and
finally, self-actualization (wisdom, development of abilities, etc.), which is at the top of the hierarchy. Managers need to be aware that in order to motivate their employees to advance in their jobs, their lower needs must be fulfilled first.

Van Ham et al (2006) examined why employees felt overworked and burnt out. Based on their extensive review they noted that one of the factors that caused burnout was the job satisfaction that employees experienced. They found that factors increasing job satisfaction were mentioned more than twice including diversity of work, relations and contact with colleagues, and being involved in teaching. Factors decreasing job satisfaction were: low income, too many working hours, administrative burden, heavy workload, lack of time, and lack of recognition. Aspects of job satisfaction concerning the content of the profession seemed to increase job satisfaction, and aspects concerning employment conditions seemed to decrease job satisfaction.

Ballard and Blessing (2006) studied a large university and examined how employee orientation program, based on the belief that early socialization contributes to the success of new employees, was a significant factor in employee satisfaction. They found that if an orientation model included a focused orientation session, a checklist, and individual meetings with key faculty and staff, that enhanced employee adjustment, and eventual satisfaction in an organization. Pertinent aspects of the orientation focused heavily on socialization factors such as understanding the mission and values, meeting key people within the organization, and becoming acquainted with other new colleagues.

Cardina and Wicks (2004) noted that the concept of change had become a thoroughly familiar theme in information organizations. This may cause a buildup of stress that could produce eventual dissatisfaction at work. This could lead to negative physical and emotional health, tardiness, absenteeism, and turnover, and may eventually result in complete burnout.

Leysen and Boydston (2009) examined job satisfaction among knowledge organizers at ARL member units in the United States. Eighty-eight percent of the participants studied were satisfied with their current job and the majority would make the same career choice again. Job facets they found most important were the benefits package, relationships with coworkers, and opportunities to learn new skills. These professionals wanted to be treated fairly, be consulted about issues directly related to their work, be informed about current activities in their organizations.

Lim (2008) examined job satisfaction of information technology (IT) workers in relation to demographic, socioeconomic, and work-related variables, such as a sense of belonging, faith in wanting to belong, a feeling of acceptance, paying dues, job autonomy, the broker's role, and promotion opportunities. A total of 443 mail surveys were sent to a sample of IT workers at 30 university member libraries of Association of Research Libraries in the United States. A total of 202 surveys were returned, resulting in a 45.6% response rate. This study found that salary, a sense of belonging, faith in wanting to belong, a feeling of acceptance, job autonomy, and promotion opportunities were related to job satisfaction of the IT workers. This study also explained as to why some IT workers were more satisfied with their jobs than others, thereby contributing to improving the quality of their work lives.

Poole and Denny (2001) information professionals working in 2-year colleges with regard to their satisfaction for dealing with techno-stress and other changes in the environment. They noted that the professionals by and large were satisfied in their transition, yet greater attention needs to be directed toward improving their inclusion in decision-making, revising job descriptions, and experimenting with alternative reward systems.
Togia, Koustelios, and Tsigilis (2004) investigated job satisfaction using the Employee Satisfaction Inventory (ESI). The instrument assessed six dimensions of job satisfaction: working conditions, pay, promotion, job itself, supervision, and organization as a whole. Greek professionals were most satisfied with job itself, supervision, and working conditions and less satisfied with pay and promotion. Prior working experience contributed negatively to the prediction of satisfaction with working conditions, supervision, and organization as a whole, whereas participation in decision-making positively influenced job and organization as a whole.

Cullen (2001) examined the perspectives of job satisfaction. Cullen found that information professionals faced major threats of global digital environment and increasing competition. They must improve the quality of their services in order to survive. They found a relationship between service quality and job satisfaction. The respective model demonstrated that satisfaction could be seen at both a micro-level and macro-level as an outcome of service quality. Suggestions were offered about ways in which information service providers could make better use of performance and satisfaction evidence.

Tella, Ayeni, and Popoola (2007) noted that organizational effectiveness was related to the performance and satisfaction of human resource. In order to make employees satisfied and committed to their jobs, they found a distinct need for strong and effective motivation at various organizational levels.

Imran et al. (2014) investigated the impact of job satisfaction and job performance toward organizational commitment. A sample of 200 employees was selected from different public and private educational institutions. Regression analysis was used to test whether a positive relationship existed between job satisfaction and performance and organizational commitment with positive performance. It was found that organizational commitment had a significant effect on job satisfaction.

Kossek, Ellen, and Ozeki (1998) examined the relationship among work-family conflict, policies, and job and life satisfaction. The meta-analytic results showed that regardless of the type of measure used, a consistent negative relationship existed among all forms of work-family conflict and job-life satisfaction. This relationship was slightly less strong for family to work conflict. Although confidence intervals overlap, the relationship between job-life satisfaction and work-family conflict was stronger for women than men.

Finn (2001) conducted a quantitative study (n=178) in a teaching hospital in Australia and found that autonomy was the most important job component for registered nurses’ job satisfaction. The actual level of satisfaction with autonomy was 4.6, on a scale of 1-7. The mean for job satisfaction was 4.3, with the job components professional status and interaction adding most substantially to the result. There was discontentment with the other two job components, which were task requirements and organizational policies.

Demographic comparisons showed that nurses who were preceptors had significantly less job satisfaction than the other nurses at the hospital.

Arches (1991) studied two hundred and seventy five randomly selected social workers to better understand burnout and job satisfaction. The findings from hierarchical multiple regressions revealed that perceived lack of autonomy and the influence of the funding sources were major contributors to burnout, and perceived autonomy and bureaucratization are major contributors to job satisfaction. The findings challenged the assumption that bureaucracy is the most efficient form of organization and questioned the ideological and social control functions of organizations.
Landry (2000) found that job satisfaction at the information work was an important consideration. It not only affected quality of life and the overall level of life satisfaction experienced by them; it also affected information work. Satisfied employees engaged in activities conducive to reference service effectiveness. Life satisfaction and job satisfaction were related in a reciprocal manner, with life satisfaction having the stronger effect. A moderate positive relationship was found between life satisfaction and job satisfaction. A moderate negative relationship was found between life satisfaction and the desire to find a comparable job in another organization.

Trying to discover what satisfies or dissatisfies people about their jobs could be a difficult task. People have different priorities. Therefore, there could be many factors that affect job satisfaction. Those factors would either make people feel happy or unhappy about their jobs.

**Supervision**
Maintaining a good relationship between employees and superiors is crucial to the survival of the work because both sides depend on each other. The quality of management can affect satisfaction either positively or negatively. Leysen and Boydston (2009) indicated that 88% of knowledge organizers felt that trust and maintaining a good relationship with management is very important.

**Working Conditions**
Saari and Judge (2004) emphasized the importance of working conditions such as nature of work and compensation programs. They mentioned that the managers needed to pay attention to other attributes of the job that the employees would find desirable such as the job being interesting and challenging. This indicates that the employees are not just interested in the salaries. Managers need to fulfill the employees desire for self-actualization which is as important as the rest of the job attributes.

**Staff Development**
The chance for professional development plays an important role in affecting satisfaction among employees. Professional development includes many activities, such as reading journal articles, attending conferences, joining professional training classes and so on. In his study about job satisfaction among South African companies in transition, Hart (2010) reported that chances for personal development were rare. Therefore, the staff of these organizations felt dissatisfied.

**Autonomy**
Autonomy is another important variable of job satisfaction. Bauer (2004) pointed out that many organizations are changing into High Performance Workplace Organizations (HPWO), which is a switch from the Tayloristic to the holistic organization model.

**Teamwork**
People spend much time working alongside their co-workers. Nature of their relationship greatly effects their satisfaction. Leysen and Boydston’s (2009) noted that it was important to have a good relationship with co-workers. They noted that 64% of the participants indicated a high level of satisfaction with their co-workers.
Job Satisfaction among Information Professionals

Information professionals work in different units and perform different tasks. These differences in tasks and nature of job have created different reactions towards job satisfaction. According to Lynch and Verdin (1987), information professionals who have experienced highest levels of satisfaction are professionals, heads of departments, first-level supervisors, and reference librarians. Chwe (1978) reported that those professionals who work in monotonous jobs are less satisfied with the nature of their job compared to those who experience more creativity, variety, and social interaction in their jobs.

PROCEDURES

Survey method was used for this study. An instrument was administered to information professionals working in Kuwaiti information organizations. Table 1 gives names of participant information organizations, number of professionals to whom the instrument was administered and the number of filled-in responses.

Table 1: Participants in the Study

<table>
<thead>
<tr>
<th>Names of special libraries</th>
<th>Total librarians</th>
<th>Total received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arab Institute of Planning (AIP)</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Kuwait Fund for Arab Economic Development</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Kuwait Institute for Medical Specialization (KIMS)</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Kuwait University S&amp;T information professionals</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>Public Authority for Applied Education and Training</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Kuwait Institute for Scientific Research (KISR)</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>State Audit Bureau of Kuwait (SAB)</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Arab Open University (AOU)</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Gulf University for Science &amp; Technology (GUST)</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Al-Babtain Centre for Arabic Poetry</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Ministry of Education Information Center</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
<td>70</td>
</tr>
</tbody>
</table>

Response rate was found to be 82.4%. The high response rate was due to the fact that the researcher contacted the managers of these organizations in person and requested managers' personal intervention in collecting responses from information professionals. Also the managers were requested to administer follow-up after first administration of the questionnaire. The researcher personally collected responses from managers. This strategy for data collection was effective keeping in view the close proximity of these organizations and small distances in the city-state of Kuwait.

A structured, self-administered questionnaire was used for data collection. For each organizational variable, five statements were used. For job satisfaction, a cumulative measure was obtained from the instrument. The instrument had been pretested and the statements were comparable with similar studies. Five statements for each organizational measure were converted into cumulative score for the purpose.

All those individuals who had a minimum of bachelor degree and they served in professional positions in eleven information centers were considered eligible to participate in the study.
FINDINGS AND DISCUSSION
First, we provide a profile of the participants of the study. Both genders were close to half; male 45.7% and females 54.3%. Seventy percent of them were Kuwaitis and 30% were foreign nationals. With regard to the highest degree, 77.1% had a bachelor and 22.9% had a Master’s degree. It was found that more than half of the respondents were in the range of 20-40 years. About one-third of them (34.3%) were in the age group of 41-50 years. Only 11.4% were older than 50. 61.4% had an experience of 1-10 years. Eleven of those had worked for 20 years or longer. The remaining 22.8 percent reported their experience was in the range of 11-20 years. It appears that an average respondent was a Kuwaiti national around 30-35 year old with an experience of about 8-12 years, having a bachelor's degree, and belonging to either of the two genders.

Hypothesis Testing
The primary purpose of this study was testing the hypotheses that employees’ job satisfaction was significantly correlated with five organizational variables. For this purpose, we conducted a Pearson Correlation Coefficient test. Results of the test are given in Table 2. For each test of organizational variables, value of the coefficient and its 2-tailed significance are given.

Table 2: Results of Pearson Correlation Coefficient

<table>
<thead>
<tr>
<th>Overall Satisfaction</th>
<th>Supervision</th>
<th>Working Conditions</th>
<th>Teamwork</th>
<th>Autonomy</th>
<th>Career Advancement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.771**</td>
<td>.865**</td>
<td>.670**</td>
<td>.838**</td>
<td>.583**</td>
</tr>
<tr>
<td>Sig. 2-tailed</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>67</td>
<td>67</td>
<td>67</td>
<td>67</td>
<td>67</td>
</tr>
</tbody>
</table>

It was found that overall job satisfaction was correlated with the five variables at .000 level of significance, which is statistically significant relationship at the criterion of .01. Hence primary hypothesis of this study was supported, proving strong association between the five variables and overall satisfaction.

The first sub-hypothesis was related to supervision (coefficient: .771, significance: .000). It means that those organization where the information professionals are satisfied with the supervisory role, they are having higher level of satisfaction. This sub-hypothesis was supported.

The second sub-hypothesis was that positive and favorable working conditions are positively correlated with the satisfaction of employees. This was found to be statistically significant with the coefficient value of .865, which is significant at .000. Working conditions have their vitality. These are related to space, physical conditions, ergonomic sensitivities, provisions for socio-cultural interactions, and a comfortable work atmosphere. These conditions are essential for having a satisfied workforce.
The third sub-hypothesis provided that a significant relationship existed between teamwork and employees' job satisfaction. The coefficient value was found to be .670 with the level of significance of .000, indicating that it is statistically significant. The sub-hypothesis was thus supported. Teamwork is vital in the success of every organization. Work in sections, divisions and projects is always organized and conducted through teams. Cohesive and effective teams are favorably regarded for creating sentiments of contentment and accomplishment.

The fourth sub-hypothesis, related to policies and practices of autonomy, provided to employees was significantly related to job satisfaction of librarians. The coefficient value was found to be .838, statistically significant at .000. In autonomous conditions, employees are given the opportunity to create their own space, set their own priorities, and perform in accordance with their operational and tactical preferences. Autonomy is positively related with job satisfaction in organizational setting in this study.

Career advancement opportunities are considered an important factor in motivating employees for better and efficient performance, resulting in a higher degree of satisfaction. In this study we confirmed that opportunities for career advancement were statistically significant in their association with job satisfaction. The correlation coefficient found was .583 that was significant at .000. This subhypothesis was hence supported.

CONCLUSIONS
This study has brought forth significant findings for organizations. Information organizations create tall and firm structures where employees are given defined and specific roles for performance. Roles of these professionals are compartmentalized across functional and professional domains. Job satisfaction becomes more important in these organizations.

This study has signified the contribution of supervision, teamwork, working conditions, autonomy, and career advancement in information organizations. Each of these factors requires development and enforcement of such policies that make these elements core values in organizational culture. These results are consistent with the findings of similar studies in this area (Cardina and Wicks 2004; Van Ham et al. 2006)

Almost all professionals included in this study are employed in public sector. This is typical for most corporate organizations in the country. In Kuwait, civil service regulations prevail in all the matters of human resources management for these library organizations. Salary structure, promotions, monetary rewards, and career opportunities are administered in strict accordance with civil service provisions. Most information organizations are denied the opportunity to employ Master degree holders as the entry-level requirement is a bachelor’s degree. There is little incentive provided for higher qualifications and better performance in the existing civil service system. In this scenario, these organizational characteristics can provide much-needed incentives for these professionals as they are otherwise governed by the civil service system.

If management improves supervisory conditions and creates congenial working conditions where these professionals can create physical and socio-cultural conditions for themselves, it would serve as an important facilitator toward better performance and productivity. Lysen and Boydston (2009) had reached the same conclusion when they studied satisfaction of catalogers.

Management can also provide opportunities for job autonomy for these professionals. They should have freedom in the design and conduct of their jobs. Lim (2008) urged the need for creating work conditions where the professionals have the freedom the design their work. We also found that these professionals should have the opportunity for creating connections with other professional colleagues inside and outside these organizations.
One of the strongest incentives is encouraging professionals to explore and exploit career advancement opportunities they may find inside and outside Kuwait. The employers should provide continuing development of professional competencies by conducing formal and informal staff development programs and other outlets for continued growth and advancement of information professionals.

REFERENCES


CAUSES AND COST OF ACCIDENTS: FORECASTING THE RISKS - WHAT’S HYPOVIGILANCE - BRAIN PHYSIOLOGY WITH ALPHA RHYTHMS

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ABSTRACT
An investigation of the National Institute of the Sleep and the Vigilance (NISV) and National Institute of Prevention and Educational for the Health (NIPEH) 2010 reveals that the time of sleep of the French People is on average of 7 hours. But, in 50 years, the French people lost one hour and a half of sleep a night. How many hours of sleep do you need? Adults (18+): 7.5-9 hours. A recent Gallup report, based on a survey question about how much time people “usually” sleep, says the average American gets 6.8 hours of slumber a night. Fifty-nine percent of Americans get seven or more hours of sleep at night, while 40% get less than seven hours. Those figures are largely unchanged from Gallup polls in the 1990s and 2000s, but Americans, on average, slept much more in the 1940s. Americans currently average 6.8 hours of sleep at night, down more than an hour from 1942. Studies show that sleep loss and poor-quality sleep also lead to accidents and injuries on the job. But this phenomenon is not without consequence. Recent work suggests that beyond the deleterious neurocognitive effects of sleep restriction. Falling asleep while driving accounts exists for a considerable proportion of vehicle accidents under monotonous driving conditions. In Europe, 50,000 persons die and 150,000 are hurt very year. Real stake in road safety, the slumber is at the origin of 15% in 20%des accidents on the road network and of 43% of the accidents on the highway.

In the past five years, driver fatigue has accounted for more than 1.35 million automobile accidents in the United States alone, according to the National Highway Traffic Safety Administration. The National Highway Traffic Safety Administration (NHTSA) estimates conservatively that each year drowsy driving is responsible for at least 100,000 automobile crashes, 71,000 injuries, and 1,550 fatalities.

Several French organisations conducted, for more than ten years, research to conceive such a system. Sleep architecture refers to the basic structural organization of normal sleep. However, the amount of sleep necessary for good health is unclear. Sleepiness and inattention caused by sleep and circadian rhythm disorders or inadequate sleep habits adversely affect workers in many industries as well as the general public, and these disorders are likely to lead to public health and safety problems and adversely affect civilian life.

The relationship between good health and sleep duration has been clearly established in epidemiological studies, although exactly which factors are involved in altering sleep patterns remains to be fully determined. This, at least in part, reflects the complex and multifactorial mechanisms involved in sleep. For example, short sleep duration is linked with increased, risk of drowsy driving, in body mass index – a greater likelihood of obesity due to an increased appetite caused by sleep deprivation, risk of diabetes and heart problems, risk for psychiatric conditions including depression and substance abuse. Other deleterious effects include decreased ability to pay attention, react to signals, or remember new information.
We are all confronted at these short moments of absence called micro-sleeps or slumbers flashes of lightning and the cause of the accidents for reasons indefinite. This paper summarizes some mathematical/computer models for predicting alertness/performance.

**What is hypovigilance?** An intermediate state between waking and sleeping, or a state under narcotics in which the brain has very reduced faculties of observation and analysis? A scoring method analyzing the correlation between vigilance parameters and driver behavior is also an other way of investigation. For this reason, such a system offers new perspectives for detection of worsening hypovigilance with an objective approach for determining driver drowsiness threshold in many means of transport including cars, buses, trucks, ships and airplanes. The model includes an identification of levels of hypovigilance at which the risk of performance/alertness impairment starts, as well as prediction of sleep latency and time of awakening of sleep episodes. A novel instantaneous frequency definition based semi-automatic hypovigilance detection algorithm is proposed in this paper. The experimental results show that the proposed method achieved good performance.

It is suggested that the model may be used to evaluate work/rest schedules in terms of sleep-related safety risks. But, which is the best approach: Anticipation or a mathematical model for predicting drivers’ hypovigilance?

Finally, the fragmentation of research and clinical care currently present in most academic institutions requires the creation of accredited interdisciplinary sleep programs in academic institutions. The hypovigilance is of a sneaky kind. Over the moment, the runner is rarely conscious that he is tired. It is thus necessary to concentrate the efforts on the causes of these accidents and insist over the prediction, avoid by developing active security systems. Therefore, the current situation necessitates a larger and more interdisciplinary workforce.

**Keywords:** Hypovigilance, sleep architecture, alertness, automobile driving performance
INTERNATIONALIZATION OF US CAMPUSES: STUDENTS’ PERSPECTIVE

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ABSTRACT
International Education is a big business in the USA. According to NAFSA (2015), international students and their families created or supported 340,000 jobs and contributed $26.8 billion to the US economy during 2013-2014 academic year. In addition to economic contribution, the international students build bridges between US and other nationalities; bring global perspective into classroom and research labs and support innovation through science and engineering courses. International students know the language here and at home, as such, they are able to assist with increasing trade, foreign investment and sharing knowledge. The focus of this session is to find best practices based on the input of domestic and international students to provide cultural, academic and social exchange between US and international students. It is believed that collaboration with faculty and campus resource centers could facilitate student engagement and foster a more inclusive community. Furthermore, the cross-cultural activities not only assist international students in their transition to a new culture but also stimulate domestic student in study away and study abroad.

Panel 1  Internationalization of the campus and community: Perspective from five countries

<table>
<thead>
<tr>
<th>Student Presenters</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abouelfotouh, Mohammed</td>
<td>Egypt</td>
</tr>
<tr>
<td>Figaro, Andrew</td>
<td>Haiti</td>
</tr>
<tr>
<td>Ibrahim, Fareed</td>
<td>Ghana</td>
</tr>
<tr>
<td>Ikejiri, Denis</td>
<td>Brazil</td>
</tr>
<tr>
<td>Tuhin, A.S.M.</td>
<td>Bangladesh</td>
</tr>
<tr>
<td>Baranowski, Theadora</td>
<td>USA</td>
</tr>
</tbody>
</table>

Panel 2  USA and the World: Perceptions of US Academic Issues

<table>
<thead>
<tr>
<th>Student Presenters</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mondalib, Sadman</td>
<td>Bangladesh</td>
</tr>
<tr>
<td>Machado, Gilbert</td>
<td>Spain</td>
</tr>
<tr>
<td>Shen, Zhenhang</td>
<td>China</td>
</tr>
<tr>
<td>Stitou, Mortada</td>
<td>Morocco</td>
</tr>
<tr>
<td>Javier, Navas</td>
<td>Honduras</td>
</tr>
</tbody>
</table>
Panel 3  Comparative Education: Perceptions of five countries

Student Presenters
Yu, Tian Hao       China
Haque, Salman      Bangladesh
Jones, Jean Paul   Ecuador
Shyer, Amir        Bangladesh
Alexandra Amada   USA
Firdauz, Hasby    Indonesia
INTERNATIONAL EDUCATION: PERSPECTIVE OF STUDENTS FROM SAUDI ARABIA

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ABSTRACT
According to Arab News (March 9, 2015) the number of Saudi Students reached 111,000 this year in USA. This gives tremendous opportunity to take Advantage of what is essentially a strategic opportunity for dialogue and cultural exchange between USA and Saudi Arabia. The focus of this presentation is to present students’ perception of USA, Education, cultural difference, and miscommunication. Nine of the largest higher education systems in the world will convene at the Going Global conference in London this year to debate the impact of the greatest global Impact of higher education. India, China, Brazil, Nigeria, Russia, Pakistan, Indonesia, the United States and the United Kingdom together enroll more than half of the world’s higher education students. They are facing unprecedented challenges – how they evolve in the coming decade will have enormous implications for all of us. If we genuinely want the scholarship program to facilitate U.S.-Saudi understanding and friendships, which can also help to prevent the spread of violent, extremist ideology, we should not pass up this opportunity to reach out to these students to ensure that they get a full and largely positive view of their host country.

Session 1: Perception of USA and Saudi Arabia: A Comparative Analysis
Student Presenters
Alsharari, Abdulaziz  
Bawazir, Abdulaziz  
Alanazi, Abdullah  
Alromayyan, Abdullah Sales R.  
Alsharari, Abdulmajeed  
Albahussain, Ahmed  

Session 2: Comparison of Educational Differences: USA and Saudi Arabia  
A Comparative Analysis
Student Presenters
Alzahrani, Ahmed  
Krudi, Ahmed  
Ajurayyad, Ammash  
Allagani, Emad Mohammed  
Alshammari, Fahad  
Alamri, Faisal
Session 3  Comparison of Cultural Differences: USA and Saudi Arabia  
**Student Presenters**  
Alkhaldi, Khalid  
Alsheri, Khalid  
Alqahtani, Mazen  
Alshammari, Meteb  
Alhubail, Mihmas  
Abujabal, Mohammed  
Alsharari, Saquer  

Session 4  Value of US Education: An Analysis  
**Student Presenters**  
Barood, Sami  
Akiry, Mohammed  
Modan, Muaz  
Aldawsari, Nasser  
Alalkami, Raneem  
Alorabi, Safwan  
Alsidran Saleh
SOCIAL AND ECONOMIC IMPACT ALONG WITH DIVERSITY CONTRIBUTIONS OF INTERNATIONAL STUDENTS

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ABSTRACT
According to Open Door (13/2014), the international students contributed over $26.8 billion to the U.S. economy through their expenditures on tuition and living expenses according to the U.S. Department of Commerce. Higher education is among the United States’ top service sector exports, as international students provide revenue to the U.S. economy and individual host states for living expenses, including room and board, books and supplies, transportation, health insurance, support for accompanying family members, and other miscellaneous items. Therefore, the social and economic impact of higher education purchased by international students in the US campuses is highly appreciable and sizable. College and university administrators who support the enrollment of international students on their campuses would probably prefer to stress the cultural and intellectual enrichment of international students’ contribution to their campus life. However, many would undoubtedly like to call attention to the economic and diversity benefits they bring to the institution and to the community. This paper focuses the financial and diversity contributions made by international students in Pennsylvania with a special reference to the Pennsylvania State System of Higher Education (PASSHE).

Keywords: International students, ethnic diversity, cultural diversity, benefits of diversity
SETTLED-MARRIAGE VERSUS LOVE-MARRIAGE: A STUDY OF MARITAL ENDURANCE USING GAME THEORETIC ANALYSIS

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ABSTRACT
We model the interaction for marriage as a sorting game of informational transaction between intending spouses under various degrees of self-knowledge under available options of direct contact or family mediated contact. We show that when idiosyncratic preferences are private knowledge, and where communication is fraught with asymmetric friction, love-marriage is superior to settled-marriage (also known as arranged marriage). Under all other circumstances, settled marriage is at least as good as love-marriage.

Keywords: game theory, information asymmetry, information exchange
ANALYTICAL STUDY OF SOLAR DISTILLATION OF WATER USING SOLAR STILL WITH A HEAT EXCHANGER

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ABSTRACT
A solar still is a device used for converting saline/brackish water into fresh and drinking water using solar radiation. It essentially has three parts: a basin, a basin liner, and a glass cover inclined at 10 to 15 to the horizontal. Saline/brackish water is fed into the basin, and solar radiation is used to heat the water mass. Evaporated water condenses at the relatively cooler glass cover and rolls down to be collected in a vessel. A coil type heat exchanger is used to further heat the water mass which enhances the distillate output. Based upon transient analysis, mathematical modeling of a single basin solar still is presented. Expression for temperature of the water mass and the glass cover are derived separately. Amount of the useful heat gained through the heat exchanger is found. Effect of water mass, water temperature inside the heat exchanger and length of the heat exchanger are studied on performance of the still. A typical climatic parameter of Patna, India is used, but which can be applied to other places also. Water inside the heat exchanger can be heated using solar collectors/concentrators. Industrial hot water waste can also be used for this purpose. For better performance of the still, following measures can be taken. Black dye of large heat-absorbing capacity can be mixed with water in the basin. The amount of heat absorbed by water in the basin will be higher due to more absorption of solar radiation coming through the glass cover. This will increase the temperature difference between glass cover and the water mass giving thereby more output. A multi-basin solar still can be used each having small depth of water. This will ensure enhanced distillate output. A thin film of water can be flowed on the glass cover of the topmost basin of the multi-basin still. This will cool the glass cover and increase the temperature difference between the glass cover and the water mass in the basin, ensuring greater output. This method of solar distillation is based upon renewable energy. It is environmentally clean, less labor intensive and does not require much skilled labor.

Keywords: Heat transfer coefficients, solar collectors/concentrators, heat exchanger, multi-basin still.
SYNTHESIS AND BIOLOGICAL ACTIVITY OF SOME SCHIFF’S BASES FROM PHTHALIMIDES

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ABSTRACT
Schiff bases have a wide variety of applications in various fields, e.g., biological, inorganic and analytical chemistry. They are used, e.g., in optical and electrochemical sensors, as well as in various chromatographic methods, to enable detection of enhance selectivity and sensitivity. They possess excellent characteristics, structural similarities with natural biological substances, relatively easy preparation procedures and the synthetic flexibility that enables design of suitable structural properties. Schiff bases have been reported in their biological properties, such as, antibacterial, antifungal activities. Their metal complexes have been widely studied because they have anticancer and herbicidal applications. Schiff bases are active against a wide range of organisms for example; Candida Albicans, Escherichia coli, Staphylococcus aureus, Bacillus polymxa, Trychophyton gypseum, Mycobacteria, Erysiphe graminis, and Plasmopora viticola A. All these facts prompted us to extend such works, and we focused to synthesise Schiff’s bases with heterocyclic moieties such as phthalimides. We also planned to screen such newly synthesized Schiff’s bases against microbial activities.

KEYWORDS
Schiff base, azomethine group, antimicrobial activity, antibacterial, antifungal

A number of Schiff’s bases have been prepared by reaction of amino and bromo substituted -N-aminophthalimides and aromatic aldehydes. Moreover N-aminophthalimides (50-70% yield) were synthesized by reactions of phthalimides and hydrazine hydrate. Following is the schematic diagram for preparation of Schiff’s bases:
The structures of products 4 were confirmed on the basis of elemental analysis, IR and PMR spectral data and they were screened for their biological activities.
BIOLOGICAL ACTIVITY

Antibacterial Activity Data of Compounds (in vitro):
The bacterial cultures for *B. subtilis*, *S. aureus*, and *E. coli* were obtained from the Department of Microbiology. The bacterial cultures were incubated at 30 ± 0.1°C for 24 hours by inoculation into nutrient agar. Schiff bases were stored dry at room temperature and dissolved 20mg/mL in dimethylsulfoxide (DMSO). Antibacterial activities of each compound were evaluated by standard Petri disc method. All plates were prepared with an equal thickness of nutrient agar. At the end period, inhibition zones formed on media were measured with a zone reader in millimetres. Similar results were also recorded for 10 mg/mL and 5 mg/mL respectively for each compound. A filter paper disc (5 mm diameter) was impregnated with the different Schiff’s bases (at specific concentrations) & the disc was then placed on the nutrient agar in a Petri disc and left for 24 hrs at 30 ± 0.1°C.

Antifungal Activity of Compounds (in vitro), 4a-4p:
Antifungal activities of compounds 4 were carried out at different concentrations using Spores of *Aspergillus flavus* and *Chalara corda* by petridisc method.

Conclusion
We found that the Schiff’s bases having bromo group (electron withdrawing group) was more effective than the compounds having methoxy, amino, and hydroxyl groups (electron donating groups). The activity decreases with decrease in concentration in each case.
A FACTOR-ANALYTIC STUDY OF THE COMPETITIVE EVALUATION OF CHINA’S LISTED COMMERCIAL BANKS

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ABSTRACT
This paper evaluates the competitiveness of 16 listed commercial banks in China using data collected on 2012. The results show that the Industrial and Commercial Bank of China (ICBC), China Construction Bank (CCB), Agricultural Bank of China (ABC), Bank of China (BOC) and Bank of Ningbo are ranked as top 5 in competitiveness, while China CITIC Bank, Huaxia Bank, China Minsheng Bank, Bank of Beijing and Shenzhen Development Bank are ranked in the bottom five. This paper uses factor analysis to analyze and evaluate the competitiveness of China’s domestic commercial banks, and the empirical results objectively reflect the competitive situation of China’s listed commercial banks.

Keywords: Factor analysis; commercial banking; competitive evaluation

The underdeveloped direct financing market, such as stocks and bonds, became the main financial barrier in the process of economic transition in China. Banks are main sources for social credit. The businesses rely on bank loans for investment funding. In recent years, the direct financing channels, such as financial markets, have been greatly developed, even so, in the financing structure of the non-financial sector, bank loans still account for 70% or more in its total financing volume. All of the above show that the self-competitiveness improvement of banks plays a very important role in the healthy development of the physical economy. In 2007, the direct impact of the US subprime mortgage crisis on China's commercial banks is relatively small. However, this does not mean that our banking sector has a strong competitiveness. On the contrary, it is precisely an embodiment of weak competitiveness of the domestic banking sector under such protective conditions as not high degree of openness and segregation with the capital market. So we need to take this opportunity to measure and evaluate banks' competitiveness in an overall manner (Xinhong and Tao 2006).

Considering the comprehensiveness, the systematic nature of structures, data availability and the difference between listed commercial banks and non-listed commercial banks, this paper has chosen 16 listed banks (ICBC, CCB, BOC, ABC, Bank of Communications, Bank of Nanjing, Bank of Beijing, Bank of Ningbo, Shanghai Pudong Development Bank, Shenzhen Development Bank, Industrial Bank, China Merchants Bank, Huaxia Bank, China Minsheng Bank, China CITIC Bank and China Everbright Bank) as samples to construct a competitiveness evaluation index system for listed commercial banks in China, with size (total assets X1 and revenue X2), profitability (return on average assets X3, return on average equity X4, cost to income ratio X5 and EPS X6), security (capital adequacy ratio X7, core capital adequacy ratio X8, NPL ratio X9 and equity capital ratio X10), liquidity (loan-to-deposit ratio of X11 and asset-liability ratio X12), market power (share of deposits X13, loan share X14 and net income share of fees and commission X15) and development capacity (deposit growth rate X16, loan growth rate X17, revenue growth rate X18, net profit growth rate X19 and EPS growth rate X20) as metrics. Data is derived from the 2012 annual reports of listed banks (Huanxin 2003).
Benchmarking and Standardization of Metrics

We can categorize metrics as positive, reverse, and moderate ones and need to benchmark them at the first stage. The positive metrics remain unchanged, the reverse metrics are tuned using $y=1-x$ ($y$ is the metric value after tuning while $x$ is that before the tuning). Reverse metrics in the article include cost-to-income ratio and NPL ratio. The moderate metrics are tuned using the following equation (Yarong 2007):

$$y = \frac{1}{x + |x - \bar{x}|}$$

(1)

(the definition of $y$ and $x$ is the same as that mentioned above, $\bar{x}$ is the mean value of $x$). Moderate metrics in the article include loan-to-deposit ratio and asset-liability ratio. Due to the difference in economic meanings and forms of manifestation, it’s not applicable to compare these quantitative metrics. We need to standardize them to get a scientific and comprehensive analysis. In the article, we apply Z-score method to reach this goal (Huanfeng and Zhe 2009).

Factor analysis

1. Analyzing correlation coefficient matrices and communalities

In order to perform empirical analysis on standardized data, a table of correlation coefficient matrices and communalities of variables of 20 metrics are calculated. Most correlation coefficients in the correlation coefficient matrices are greater than 0.3, which shows a relatively strong correlation among variables. The communality of the variable indicates the percentage of original variable information reflected by all common factors, and describes the distribution of all the common factors to the total variance of variables. Values of communalities chosen in the article are relatively high, and therefore shall be reserved.

2. Extracting eigenvectors and eigenvalues

According to the principle that the eigenvalues of variables should be greater than 1, as shown in Table 1, the correlation coefficient matrix of variables has five valid eigenvalues: 9.125, 5.132, 3.087, 2.321 and 1.986. According to the principle that the accumulative contribution rate should be greater than 85%, the first five factors, which account for 90.239% of the total variance can be considered to substantially cover all contents to be reflected by all evaluative metrics and sufficient to present the competitiveness of China’s listed commercial banks.

<table>
<thead>
<tr>
<th>Table 1: Eigenvalues and Total Variance Explained</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td></td>
</tr>
<tr>
<td>1</td>
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<tr>
<td>3</td>
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<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>
3. Building Factor Matrix and Extracting Common Factors

After building a loading matrix of original factors based on five extracted common factors F1, F2, F3, F4 and F5, orthogonal rotation of maximum variance to rotate the loading matrix of original factors was used so as to obtain the orthogonal rotation matrix of maximum variances, this paper. As shown in Table 2, based on the orthogonal rotation matrix of factors, metrics can be sorted into five common factors and given name respectively. We name the first one (F1), which has a larger loading on X1, X2, X9, X13, X14, X15 and X16, as size-strength and market power factor; the second one (F2), which has a larger loading on X3, X5, X7, X8 and X10, as security factor; the third one (F3), which has a larger loading on X17, X18, X19 and X20, as development capacity factor; the fourth one (F4), which has a larger loading on X4 and X6, as profitability factor; the fifth one (F5), which has a larger loading on X11 and X12, as liquidity factor.

Table 2 Rotated factor loading matrix

<table>
<thead>
<tr>
<th>Z-score</th>
<th>Factor</th>
<th></th>
<th></th>
<th></th>
<th>Z-score</th>
<th>Factor</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>X1</td>
<td>0.961</td>
<td>0.118</td>
<td>-0.234</td>
<td>0.006</td>
<td>0.076</td>
<td>Y11</td>
<td>-0.077</td>
<td>-0.19</td>
<td>0.193</td>
</tr>
<tr>
<td>X2</td>
<td>0.958</td>
<td>0.124</td>
<td>-0.241</td>
<td>0.001</td>
<td>0.083</td>
<td>Y12</td>
<td>0.107</td>
<td>-0.055</td>
<td>-0.129</td>
</tr>
<tr>
<td>X3</td>
<td>0.283</td>
<td>0.789</td>
<td>-0.299</td>
<td>0.169</td>
<td>0.223</td>
<td>X13</td>
<td>0.961</td>
<td>0.12</td>
<td>-0.215</td>
</tr>
<tr>
<td>X4</td>
<td>0.301</td>
<td>-0.157</td>
<td>-0.079</td>
<td>0.782</td>
<td>0.312</td>
<td>X14</td>
<td>0.949</td>
<td>0.13</td>
<td>-0.268</td>
</tr>
<tr>
<td>X5</td>
<td>0.082</td>
<td>0.81</td>
<td>-0.231</td>
<td>0.051</td>
<td>0.176</td>
<td>X15</td>
<td>0.944</td>
<td>0.176</td>
<td>-0.265</td>
</tr>
<tr>
<td>X6</td>
<td>-0.521</td>
<td>-0.109</td>
<td>-0.17</td>
<td>0.671</td>
<td>-0.099</td>
<td>X16</td>
<td>-0.72</td>
<td>0.025</td>
<td>0.565</td>
</tr>
<tr>
<td>X7</td>
<td>0.041</td>
<td>0.814</td>
<td>0.311</td>
<td>-0.03</td>
<td>-0.21</td>
<td>X17</td>
<td>-0.404</td>
<td>0.388</td>
<td>0.67</td>
</tr>
<tr>
<td>X8</td>
<td>0.075</td>
<td>0.921</td>
<td>0.186</td>
<td>-0.178</td>
<td>-0.111</td>
<td>X18</td>
<td>-0.498</td>
<td>0.055</td>
<td>0.83</td>
</tr>
<tr>
<td>Y9</td>
<td>-0.765</td>
<td>0.104</td>
<td>-0.168</td>
<td>0.512</td>
<td>0.041</td>
<td>X19</td>
<td>-0.191</td>
<td>-0.2</td>
<td>0.904</td>
</tr>
<tr>
<td>X10</td>
<td>0.054</td>
<td>0.89</td>
<td>-0.037</td>
<td>-0.273</td>
<td>0.005</td>
<td>X20</td>
<td>-0.152</td>
<td>-0.022</td>
<td>0.818</td>
</tr>
</tbody>
</table>

Calculating scores of each factor and overall evaluation scores and rankings

The Factor Score Coefficient Matrix of China's listed commercial banks is obtained using the regression method (Xingbo, Yuanyi, and Huanpeng 2010), as shown in Table 3.

Use F1, F2, F3, F4 and F5 to mark scores of each listed bank on the five factors, then:

F1 = 0.172Zscore(X1)+0.173Zscore(X2)-0.003Zscore(X3)+…+0.098Zscore(X20)
F2 = 0.003Zscore(X1)+0.0042Zscore(X2)+0.218Zscore(X3)+…+0.007Zscore(X20)
F3 = 0.053Zscore(X1)+0.056Zscore(X2)-0.036Zscore(X3)+…+0.256Zscore(X20)
F4 = 0.05Zscore(X1)+0.048Zscore(X2)+0.138Zscore(X3)+…+0.055Zscore(X20)
F5 = -0.021Zscore(X1)-0.014Zscore(X2)+0.08Zscore(X3)+…-0.186Zscore(X20)
Table 3: Factor Score Coefficient Matrix

<table>
<thead>
<tr>
<th>Z-score</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>0.172</td>
<td>0.003</td>
<td>0.053</td>
<td>0.05</td>
<td>-0.021</td>
</tr>
<tr>
<td>X2</td>
<td>0.173</td>
<td>0.004</td>
<td>0.056</td>
<td>0.048</td>
<td>-0.014</td>
</tr>
<tr>
<td>X3</td>
<td>-0.003</td>
<td>0.218</td>
<td>-0.036</td>
<td>0.138</td>
<td>0.08</td>
</tr>
<tr>
<td>X4</td>
<td>0.112</td>
<td>-0.008</td>
<td>0.193</td>
<td>0.489</td>
<td>0.21</td>
</tr>
<tr>
<td>Y5</td>
<td>-0.044</td>
<td>0.219</td>
<td>-0.064</td>
<td>0.058</td>
<td>0.065</td>
</tr>
<tr>
<td>X6</td>
<td>-0.088</td>
<td>0.043</td>
<td>-0.093</td>
<td>0.36</td>
<td>-0.126</td>
</tr>
<tr>
<td>X7</td>
<td>0.035</td>
<td>0.23</td>
<td>0.099</td>
<td>0.096</td>
<td>-0.118</td>
</tr>
<tr>
<td>X8</td>
<td>0.005</td>
<td>0.242</td>
<td>-0.012</td>
<td>-0.012</td>
<td>-0.08</td>
</tr>
<tr>
<td>Y9</td>
<td>-0.154</td>
<td>0.093</td>
<td>0.254</td>
<td>0.253</td>
<td>-0.007</td>
</tr>
<tr>
<td>X10</td>
<td>-0.045</td>
<td>0.227</td>
<td>-0.11</td>
<td>-0.1</td>
<td>-0.006</td>
</tr>
</tbody>
</table>

Calculate scores through evaluating the overall competitiveness of all the listed commercial banks by taking the information contribution rate of each factor as a weight, and the equation below:

\[ F = \frac{(42.351F_1 + 21.342F_2 + 12.345F_3 + 7.812F_4 + 6.389F_5)}{90.239} \]

As shown in Table 4, the scores and rankings of factors of China's listed commercial banks, as well as the overall scores and rankings can be obtained by calculation. It is worthy of note that the competitiveness analysis in the above table shows that scores of some listed commercial banks are negative, even so, it does not mean that their competitiveness is negative.

**CONCLUSION**

**Overview of Rankings**

With respect to overall rankings, ICBC, CCB, ABC, BOC and Bank of Ningbo are China's listed commercial banks with strong competitiveness, while China CITIC Bank, Huaxia Bank, China Minsheng Bank, Bank of Beijing and Shenzhen Development Bank are ranked last five, respectively. Nevertheless, the individual factor rankings corresponding to different listed commercial banks are not consistent with their final overall rankings, and the individual factor rankings of some banks even greatly differ from their overall rankings. It turns out that there is development imbalance existed in contents represented by such individual factors of banks, thereby influencing the rankings of overall competitiveness.
### Table 3: Factor Score Coefficient Matrix

<table>
<thead>
<tr>
<th>Sample Bank</th>
<th>F1 Size-strength</th>
<th>Rank</th>
<th>F2 Security</th>
<th>F3 Development capacity</th>
<th>Rank</th>
<th>F4 Profitability</th>
<th>Rank</th>
<th>F5 Liquidity</th>
<th>Rank</th>
<th>F Overall score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICBC</td>
<td>1.893</td>
<td>1</td>
<td>0.66</td>
<td>4</td>
<td>-0.34</td>
<td>10</td>
<td>0.64</td>
<td>4</td>
<td>0.18</td>
<td>9</td>
<td>1.07</td>
</tr>
<tr>
<td>CCB</td>
<td>1.49</td>
<td>3</td>
<td>0.77</td>
<td>3</td>
<td>-0.74</td>
<td>13</td>
<td>0.43</td>
<td>6</td>
<td>-0.29</td>
<td>11</td>
<td>0.79</td>
</tr>
<tr>
<td>Bank of China</td>
<td>1.24</td>
<td>4</td>
<td>0.25</td>
<td>6</td>
<td>-1.18</td>
<td>15</td>
<td>-0.3</td>
<td>10</td>
<td>-1.3</td>
<td>14</td>
<td>0.37</td>
</tr>
<tr>
<td>ABC</td>
<td>1.7</td>
<td>2</td>
<td>-0.79</td>
<td>14</td>
<td>0.83</td>
<td>4</td>
<td>-1.25</td>
<td>14</td>
<td>1.26</td>
<td>1</td>
<td>0.73</td>
</tr>
<tr>
<td>Bank of Communications</td>
<td>-0.09</td>
<td>6</td>
<td>0.18</td>
<td>7</td>
<td>-0.45</td>
<td>12</td>
<td>-0.26</td>
<td>9</td>
<td>0.36</td>
<td>7</td>
<td>-0.07</td>
</tr>
<tr>
<td>Bank of Nanjing</td>
<td>-0.94</td>
<td>15</td>
<td>2.18</td>
<td>1</td>
<td>0.54</td>
<td>5</td>
<td>-1.35</td>
<td>16</td>
<td>-1.32</td>
<td>15</td>
<td>-0.05</td>
</tr>
<tr>
<td>Bank of Beijing</td>
<td>-1.28</td>
<td>16</td>
<td>0.65</td>
<td>5</td>
<td>-1.13</td>
<td>14</td>
<td>-1.29</td>
<td>15</td>
<td>0.94</td>
<td>3</td>
<td>-0.67</td>
</tr>
<tr>
<td>Bank of Ningbo</td>
<td>-0.32</td>
<td>9</td>
<td>0.99</td>
<td>2</td>
<td>1.77</td>
<td>1</td>
<td>0.81</td>
<td>3</td>
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**Factor Rankings Based Analysis on Strengths and Shortcomings in Competitiveness of Listed Commercial Banks**

In terms of scores of the size-strength and market power factor, ICBC, ABC, CCB and BOC are well ahead of other listed commercial banks, and their overall competitiveness rankings are thereby enhanced.

In terms of liquidity, ABC performs pretty well. Meanwhile, when it comes to the size-strength and market power and the development capacity, ABC has certain advantages which lead to a higher score and higher ranking on overall competitiveness. However, with respect to security and profitability, ABC is among the laggards and needs to improve the two factors to increase its overall competitiveness.
competitiveness.
In terms of security, Bank of Nanjing generally has an outstanding performance, well ahead of other listed commercial banks. Its capital adequacy ratio is 14.83%, core capital adequacy ratio is 13.85%, NPL ratio is 0.99% and equity capital ratio is 8.68%, showing a certain advantage in capital security. However, with respect to size-strength and market power, profitability and liquidity, Bank of Nanjing lies in a big disadvantage and the most marginalized position.
In terms of development capacity, Bank of Ningbo, China Everbright Bank and Huaxia Bank score higher. These banks have a clear market positioning, good market opportunities and positive development of various services; they innovate, develop and promote new products with a pioneering spirit to meet diverse needs of investors. However, with respect to the overall competitiveness, they fall a certain behind the top listed commercial banks. The three banks, therefore, in the future development process, shall continue to break conservative and old development models and development strategies, and realize a rapid expansion while ensuring stability and strengthening risk prevention.
In terms of profitability, the Industrial Bank and Shanghai Pudong Development Bank are among the best, and the Industrial Bank is particularly prominent, with the return on average equity reaching 25.64% and earnings per share reaching 3.38 Yuan, significantly ahead of other listed commercial banks. All the data show that the Industrial Bank has strong profitability from equity and a strong per capita profitability. Its business performance is excellent, but it does not have the advantage in size-strength and market power.
In summary, although the traditional big banks have gained high overall rankings by virtue of their size and market share advantages, small banks achieve better results in such capital efficiencies as per capita profitability and market development. With the deepening of China's financial reform and the implementation of Basel III regulatory guidelines, we expect the financial innovation and improved financial regulations (Lin and Zhang 2009). China's commercial banks face not only external "disintermediation" challenges, but also increasingly fierce internal competition. In 2014, China's economy encountered a decline in external demand, internal restructuring and industrial upgrading, which are new requirements and new challenges for banks to carry out a scientific development. Banks should attach great importance to various types of risk in credit, market and operational sector during economic and social transformation, and improve their competitiveness against their different characteristics to make a timely response to changes happened in the macro-economy, policies and situations.

REFERENCES


MINING THE BUREAU OF LABOR STATISTICS FOR JOB SKILLS

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ABSTRACT  
The United States Bureau of Labor Statistics (www.bls.gov) provides information about occupations including growth rates, median salaries, and job descriptions. Determining which skills will be most in demand in the next decade can assist higher education in designing relevant curriculum. Determining common skills among hundreds of occupation descriptions is a tedious task which lends itself well to a technology-based solution. This applied research applies data mining and topic analysis techniques to job descriptions and duties from BLS.gov in order to extract the most relevant job skills. Job descriptions for the top growing jobs, as defined by number of new positions projected, were extracted from BLS.gov. The descriptions were then mined for the highest frequency terms to determine the skills most relevant in the next decade. Preliminary results indicate terms such as analyze, software, develop, systems, computer, technology, data, systems, and information are in the top 50 terms thereby indicating the importance of technology in the future job market.

Keywords: Data mining, employment trends, topic analysis
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ABSTRACT

In higher education, requiring students to work in a small group on a project has become a popular teaching method particularly in business programs. Group projects offer students a chance to develop social skills, increase retention of knowledge, improve self-esteem, enhance motivation and the overall learning experience (Parr, 2007). Despite such good opportunities, group project learning does not always generate positive outcomes or positive student affect. A main concern is grading approaches toward individual group member’s potentially uneven contribution. To reduce these negative factors and increase student motivation, instructors strive to find the best way to assess each member’s performance as well as the group's overall performance in order to fairly allocate grades. This study investigates current group evaluation assessment approaches and students’ perceptions toward the approaches in order to provide useful information for assessing group project evaluations. Additionally it will be argued that assessment approaches be linked to course objectives and desired outcomes.

Most research findings are consistent in that the peer evaluation assessment approach is the most effective (Topping 1998; Brew, Riley, and Walta 2009; Weaver and Esposito 2012) among group assessment methods and many instructors use some form of peer assessment to identify individual contributions on group projects (Lejk and Wyvill 2001). Several factors including the type of assessment instrument and the extent to which the peer evaluation affects individual grades should be considered when applying a peer evaluation assessment. When an instructor applies an instrument to evaluate individual contributions to a group project, the instrument should assess and support the discrete attributes of fairness, productivity, satisfaction, motivation, and learning (Orr 2010).

To identify the students’ perspective, several focus groups were conducted. Participants expressed various concerns related to the effectiveness of peer evaluations, particularly acute when a group was comprised primarily of friends. Participants also thought peer evaluations may provide a medium where personal differences could be vented. They revealed that multiple peer evaluations – on a regular basis - minimized the opportunities for free riding.
Based on previous research and focus group findings, this study suggests the following: First, holistic peer evaluation is better than category-based peer evaluation when team building is not emphasized as a course objective. The overall assessment provided by the holistic approach focuses on individual contribution to the final project rather than an evaluation of individual contribution to team processes. Relatedly, a category-based peer evaluation is better than a holistic peer evaluation when team building is identified as a course objective. In this case, individual contributions to processes associated with successful teams such as performance group maintenance and other social and task functions are assessed and therefore reinforce team building objectives. Second, an undisclosed individual peer evaluation score in terms of fairness is better than an open evaluation. If an individual peer evaluation score will be disclosed, students may become pressured and mark a peer as an equal contributor because they do not want to have any personal conflict. Third, self-assessment should be included in peer evaluation. Without self-assessment, the basis of an evaluation can be biased. Fourth, more than one peer evaluation is better than a single evaluation during the duration of the project. Multiple peer evaluations can be used not only for grading individual contributions but also for encouraging a change in attitude for the participant who did not contribute to the group project actively in an earlier stage of the process.

This study suggests several important factors for instructors to consider when applying group and peer assessments. Furthermore, providing a clear evaluation policy at the beginning of the course that is consistent with the course objective, nature and complexity of the assignment is crucial for successful team project outcomes and positive student affect.

**Keywords:** Student group projects, peer evaluation, project evaluation

**Additional References Available on Request**
ON CHINA’S INTELLECTUAL PROPERTY RIGHTS IN INTERNATIONAL TRADE

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ABSTRACT
Many economic powers have taken the protection of the comparatively advantageous intellectual property rights as one of their competitive strategies. The protection of intellectual property rights has become an important measure of winning competitive edges for countries and enterprises, and a significant impetus for the economic development and social progress of a country. In some countries it has been raised to the height of economic and political significance. It is proved that the analysis of the protection policy of intellectual property rights is of great significance in maintaining the international economic order.

Keywords: intellectual property rights; protection; insights

As China’s pace of merging into the global economy grows faster, the necessity of the protection of intellectual property rights has also provided insights into the development of China. With more and more Chinese enterprises and their products playing important roles in the global markets, comes the crisis of intellectual property rights negatively affecting the process of globalization. Therefore, under the background of fierce international economic and trade competition and strong intellectual property right barriers, it is of great significance to offer favorable conditions for the development of self-owned intellectual property rights and to improve the relevant enterprises’ ability to use the rights.

Current Status of the Protection of Intellectual Property Rights in China
China began to construct the legal system of intellectual property rights protection in the 1980s, According to the needs of economic development and the present experiences of intellectual property right protection in international treaties, conventions and foreign laws, China has continuously improved its legislative system. Recently, the legislative system of intellectual property right protection of China is made up of laws, administration regulations, and department codes. A comparatively improved legislative system of intellectual property right protection is built and it has won universal approval of the world and many international organizations. Moreover, China is now researching and stipulating new laws and regulations on intellectual property rights.

At the same time of continuously improving the construction of the legislative system of intellectual property right protection, since the 1980s, China has participated in some major international treaties, conventions and relevant agreements of intellectual property rights protection such as the International Convention for the Protection of Intellectual Property Rights (participating
in 1980), Paris Convention on the Protection of Industrial Property and Nice Agreement on the International Categorization of Commodities and Services, etc. Moreover, China is now researching the possibility of participating in other international conventions on intellectual property rights.

At the same time of launching the propagating activities of the significance of intellectual property rights, the Chinese government has taken a series of measures on fake products and piracy crackdown, with mainly two channels: firstly, enhance public education regarding intellectual property right protection laws through interviews, TV & broadcasting, and regular seminars, especially relatively new ones. Secondly, merge the education of intellectual property right protection laws into the cause of nationwide legal propaganda and education, and expose some typical crimes through public supervision strengthening and media reporting in order to achieve the effect of frightening and warning.

With the situation of intellectual property right protection, one important feature of intellectual property right law enforcement in China is that governments can use administrative powers to protect intellectual property rights. On the one hand, according to relevant regulations in intellectual property rights law, administrative departments or local governments in China can set up specialized intellectual property right management organs. On the other hand, in order to effectively execute copyright law, the National Copyright Administration of China and provincial-level copyright administrations were established. The overall legislative framework of intellectual property right protection of China was settled more than twenty years ago, and now the major part of the framework is made up of Patent Law of the People’s Republic of China, Trademark Law of the People’s Republic of China and Copyright Law of the People’s Republic of China, supplemented by various kinds of protection codes such as Regulations of People’s Republic of China on the Protection of New Varieties of Plants, Regulations for the Protection of Layout-design of Integrated Circuits and Regulation of the P. R. China on the Customs Protection of IP Rights (revised draft).” The achievements of intellectual property rights legislation are reflected in specialized clauses concerning intellectual property rights protection in Civil Law of the People’s Republic of China, Criminal Law of the People’s Republic of China and Foreign Trade Law of the People’s Republic of China. Moreover, intellectual property rights protection in China has put equal emphasis on both administrative protection and judicial protection. The People’s Court finally has the authority to execute relevant laws, regulations and administrative codes, thereby strengthening executive power. At the same time, enterprises have begun to realize the significance of intellectual property rights protection, and improved their self-protection capabilities.

Problems of Intellectual Property Rights Protection in China
Since 1982 when the “Trademark Law” was made, China has developed a relatively functional legal system of intellectual property rights protection. However, for many Chinese enterprises, the awareness of intellectual property rights protection is still weak, and they cannot turn their own research achievements into intellectual property rights in a short time. Furthermore, they pay limited attention to the work of intellectual property rights application abroad. As a result, their achievements cannot be protected effectively by local laws and regulations. Some Chinese brands have even been maliciously registered in many places abroad. Some enterprises have their own intellectual property rights; however, they cannot instantly use laws to effectively guard their legal rights when necessary, finally leading to failure.

Due to insufficient available sanctions and widespread local protectionism, the amount of compensation codified in laws concerning intellectual property rights protection in China is relatively small. As the gradual recognition of the market economy’s leading role in China and the
continuous growth of its domestic economy, local protectionism has gradually been repressed in relatively developed areas. However, in some underdeveloped areas or areas lacking information communication networks, the phenomena of making and selling fake brands (mainly well-known ones) are still very common, let alone other crimes of intellectual property rights violation.

Administration organs of intellectual property rights are not strong in power and relevant personnel are not enough. Industrial associations of intellectual property rights protection are weak in operation compared with their foreign counterparts. There are no effective communications channels between the administrative organs of intellectual property rights and domestic enterprises, and the circulation of information is not flowing smoothly. Enterprises do not know which departments to look for when facing problems. On the one hand, China’s personnel on intellectual property rights protection are still lacking. Some have rich professional knowledge, but are not willing to make contributions to or to strive for the innovation of knowledge. On the other hand, the number of professional personnel on both laws and relevant technologies are not enough in China. These professionals play an irreplaceable role in the process of intellectual property rights protection, and the shortage poses a threat to the protection of intellectual property rights in China.

The current setup of patent protection organizations is irrational. The present patent application types in China include invention patents, utility model patents, and design patents. However, among the patent applications, it is design patents that comprise the highest percentage, while that of invention patents is only 27%. In the patent protection systems of some developed countries, it is invention patents that take the highest percentage, with utility model patent holding the lowest percentage of less than 2%.

Chinese institutions remain short of the wherewithal to put into research and development for the country and for enterprises. The activity of research and development is a resource and foundation to obtain and possess intellectual property rights for a country/area and/or enterprise. Because of insufficient expenditures, the result is that the ability to develop new technology by one’s own is too low, many enterprises follow a way of “bring in – fall behind – bring in again – fall behind again.” Thus it is difficult to update Chinese industry and foreign trade rapidly. Industry takes a passive stance and key technology depends on importation, dominated by others.

Although the legal system of China was set up in less time than in the developed countries, it is not totally in compliance with the international intellectual property rights system. There is no law against monopoly and as a complement, anti-competition is only emphasis on protection of intellectual property rights. Up to now, although Chinese laws and regulations applicable to monopoly act of the patent rights on some degree, it mainly focus on adjusting the patent permission; there is no clear restriction for the abuse of patent rights to restrain trade, and no complete scope to adjust. At same time there is no intact standard system in China. Compared to developed countries, there is a long way to go to reach the level of international standards.

Enlightenment and recommendation for Chinese intellectual property rights protection:
Change ideas and reinforce learning
China is a member country of the World Trade Organization (WTO). It is important to note the rules of WTO, support Chinese intellectual property rights in the course of enterprise business, understand the law of intellectual property and practices of the main trading partners, master legal provisions, legislative tendencies and judicial case law, in order to avoid running into the trap of intellectual property rights violations. Of course, meanwhile China carries out earnestly its obligations, following the example of its trading partners so that it fully enjoys its deserved rights as a member of WTO, protecting the industry and market of our country. First, change the attitude toward intellectual property
rights protection. Changing the negative attitude toward intellectual property rights to a positive attitude. Quite a few Chinese enterprises are afraid lawsuits will effect on development of their enterprise. They always give up the chance to respond to lawsuits, surrendering the chance to preserve their own rights in vain. Meanwhile, Chinese enterprises should perfect the establishment and employment of the chamber of commerce, form an effective organization, coordinate in harmony, and participate in far-ranging enterprise alliances. In this way they will enhance to seek the help and support, all round including the government.

Second, accelerate training and management for talent. Promote people-oriented science and technology. Develop, possess, and apply intellectual property rights to enterprises. Emphasize the importance of the function of intellectual capital, as it is embodied in human talent and value. At present the competition between enterprises and even countries in fact is a talent competition: the more talents you have, the more advantage you obtain. In recent years, transnational corporations have already increased their talent plunder of China. If Chinese enterprises do not strengthen the importance of talent, they will lose the source of the enterprise’s future development. Simultaneously, enterprises should quicken and deepen the revolution of the talent development system and construction, strengthening and perfecting motivation systems and reward mechanisms, train their own talent teams. We must reinforce learning, master in a short time all kinds of knowledge and rules of intellectual property rights, so that the whole society will understand the importance of intellectual property rights protection.

Third, adopt going-global strategy and bringing-in strategy to enforce the law. Choose a set of excellent young legal executives, who should study abroad by going to countries advanced in intellectual property rights protection or engage in advanced studies in well-known domestic colleges and universities, or invite domestic and overseas scholars to share related theoretical knowledge. By education and training, comprehensive quality in enforcement of intellectual property rights protection will improve. Intensify publicity, increase the awareness of intellectual property rights protection in the general public and enterprise, and make local governments and related departments realize that intellectual property rights protection contributes to bringing in foreign investment and development of the local economy, and then move to break the regional protectionism as part of law enforcement efforts.

Fourth, raise intellectual property rights protection to national strategy. China holds a large amount of intellectual property but is not a powerful country. After accession to WTO opened the market, China faces fierce international competition, and the threat of the developed countries in patents. We only consider intellectual property as nationally significant strategy. We can transform the intellectual property crisis into a good chance for technological development, by eliminating barriers and restrictions in trade development.

Additional recommendations

1) Preferential policy, financial support. A policy switch from general support to key sustaining patent projects, particularly high-tech patent items. Construct a high-tech national industry group to support Chinese proprietary intellectual property rights. On the funding side, governments at all levels should set up patent funds according to financial resources, enterprises as the main body, open up largely capital source, multiple channel, multiform raise fund. Put emphasis on supporting those patented technologies with extensive market prospects, high technology, and high value added.

2) Reinforce legislation, improve the law. Move further to either acting on international conventions or in accord with the situation of Chinese intellectual property laws and regulations. China must revise and perfect patent, trademark, and copyright law, as well as protection of folk
literature and artistic works, genetic resources, and traditional knowledge. Meanwhile, perfect further administrative enforcement of law procedure, according to law, just, efficiently solve intellectual property rights dispute.

(3) Build on experience. Develop the economy in a way that will protect intellectual property rights with a distinctly Chinese character. We must give intellectual property rights protection a strategic focus and direction in accord with our own country and region.
ANALYSIS OF MASS CUSTOMIZATION PRODUCTION SOLUTIONS FOR DOMESTIC CLOTHING PRODUCTION ENTERPRISES

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ABSTRACT
In this paper, the problems that clothing production enterprises face, along with the development tendency of clothing production enterprises in the domestic clothing market, are introduced and analyzed. A new production mode, Mass Customization Production, is proposed and analyzed in detail. Under the rubric of Mass Customization Production, various issues existing in clothing production enterprises are identified, and solutions and optimization measures are proposed.

Keywords: Production Control, Mass Customization Production, Production Modes, Current Production Optimization

Food, clothing, shelter, and transportation are the basic necessities of life. Clothing is also very important for various aspects of livelihood issues. The clothing industry historically has occupied very important position in the national economy in China. At present, clothing production in China is the highest in the world, not only earning foreign exchange through exports but also satisfying the clothing requirement of 1.3 billion people. This has made clothing manufacturing an important industry that has increased employment opportunities and improved the prosperity of cities. The nationwide clothing industry not only effectively supports the process of industrialization of China but also has a significant impact on world trade, economy, and even politics. It is thus necessary to discuss and to solve the problems existing in domestic clothing production management by fully analyzing clothing production and management characteristics.

As is well known, with the development of clothing production technology and the increase of competition, clothing industry has made a great breakthrough in aspects of production patterns and processing equipment, transforming clothing production from a labor intensive mode to a knowledge and technology intensive mode, and changing the basis of competition from a quantity/cost advantage to quality, brand advantage, and variety. With the individuation of clothing market demand and the intensification of competition, a corresponding improvement of clothing production management systems has become an urgent issue. Clothing production management efficiency improvement has drawn the attention of more and more enterprises and countries. Mass customization production has become a major trend of development of many manufacturing industries. At the same time, it has become an urgent need for domestic clothing production enterprises to find solutions to problems during the clothing production process, to improve production efficiency and quality, and to establish production management systems that are suitable for current markets.

At present, the environment that Chinese domestic clothing enterprises face is complex and fickle. For example: shorter and shorter product life cycles, rapid technological advances, uncertainty of resource supply, order production and individualized service, etc. Therefore, in order
to adapt to the market and to increase enterprise competitiveness, processing methods of “just-in-time production”, “agility”, and “flexibility” have arisen. The characteristics of clothing sewing historically have been multi-process, multi-personnel, multi-equipment, longtime occupations, with high technology requirements and complex management. In the mass production era of the Chinese clothing industry, the process rarely changed, which made for high efficiency production. However, under the current situation of enterprises pursuing individuation and diversification in a highly competitive environment, even small changes in the clothing design may cause major adjustments in process arrangements, which may in turn cause significant impact on the balance of the production line. In the worst-case scenario the aforementioned changes may cause bottlenecks and even paralyze the production line. This requires production line organizers to quickly make adjustments to production line organization plans according to process changes and market requirements, so as to ensure high efficiency of the production line after adjusting for production type and style. In order to meet the individualized requirements of customers and to keep low production cost and short delivery period of the enterprises, Mass Customization Production mode has come into being. To fully understand the connotations and precautions of Mass Customization and to apply Mass Customization Production mode into operation will be of great importance for domestic clothing production enterprises.

CONCEPT AND CONNOTATION OF MASS CUSTOMIZATION
Mass customization is a recently developed enterprise production and operation mode combining the advantages of pure customization and traditional mass production to not only meet the individualized requirements of customers but also, at the same time, keep low production costs and short delivery periods. Mass customization can identify and realize individual customer requirements and needs without affecting the efficiency, effectiveness and cost. It is a new thinking model that can bring enterprise success and that consists of a number of advanced manufacturing technologies and management concepts. At present, the market has converted from seller’s market into a buyer’s market. At the same time, the competition has converted from price competition to competition based on a comprehensive index of varieties, delivery time, cost, quality and service, etc. Thus, enterprises must be demand oriented, guided by system concepts and industrial engineering, supported by information technology, elaborately organized, and efficiently managed so as to meet TQCFSE (Time, Quality, Cost, Flexibility, Service, Environment). Mass customization is a production mode providing products according to the specific needs of each customer with the efficiency of mass production. It realizes a combination of personalized customer demand and mass production and is considered the new industrial revolution. Mass customization has three major elements:

1. Advanced design technology and manufacturing technology;
2. Including innovative management structure and organization of all kinds of resources or activities within the entire life cycle of the product, i.e. general management techniques;
3. With people have the knowledge, skills and properly licensed.

The key of implementation of Mass Customization was to effectively integrate the three elements above. Only through that, will the desired effect be achieved and the basis of competitive advantage be gained. Mass Customization could be achieved by adopting modern advanced production technology and flexible management technology of advanced manufacturing technology, information technology, network technology, etc. The ideal state in mass customization is to design products together with customers to meet their individualized demands comprehensively and
accurately, to provide individualized products at acceptable price and delivery period of the customers, and to establish permanent partnerships with customers through networking and good after-sales service.

CLOTHING PRODUCTION STRATEGY OF MASS CUSTOMIZATION
Mass customization in clothing production is quite different from the old production mode. Its corresponding strategy has different requirements: Clothing enterprises must first change their management concepts to fully bring out enthusiasm, creativity, and solidarity of their staffs through flexible organic organization. By doing so, managers can replace bloated and large organizations with high-quality staff teams. Mass customization requires a flexible organizational structure that can make quick response to market demand. If mass customization can be reasonably adopted, product cost can be greatly reduced. By using information technology enterprises can improve mechanization and automation levels. There may be disadvantages in time compared to mass production at first, because the production is put forward after consumer demand is identified. In the stage of coexistence of mass customization and mass production, the key point for mass customization enterprises to achieve overall competitive advantage is to reduce the time needed for providing products and services to customers. The competition among Mass Customization enterprises is thus focused on speed. Therefore, in the era of rapid development of information technology, making full use of information technology and applying quick response systems to mass production will bring significant support to enterprises.

Clothing Production via Mass Customization
Production mode is closely related to production strategy. By properly matching mode to strategy, the full effect of mass customization can be realized in clothing production.

Product Family Design Technology
The demand of customers toward clothing was more and more diversified and individualized. Among those demands there were common demands and individualized demands. We could reach the final target by recombination of the products.

Standardized and Regulated Production
Applying standardized parts and accessories may be convenient for management and may be benefit for reducing the cost. Standardized improvement in frequency of utilization of parts and accessories may reduce the inner inventory of parts and accessories of enterprises and reduce the management expense of parts accordingly.

Quick Response System and Rapid Process Design
One of the key requirements of mass customization production modes is speed. Chinese clothing manufacturers can seize the market, obtain more production orders, and realize mass production only by grasping market demand quickly and customizing clothing that customers need, want, and desire. Otherwise, it is difficult to ensure smooth operation of a mass customization production mode.

Production Line Balanced Design
Through operation of production line functional modules, one may further implement production line balanced design. Safety, order, and stability of mass production can only be ensured by a stable
and highly efficient production line.

**Data Resource Sharing**
Mass customization production modes increase the requirements for enterprise information systems. Mass customization not only requires data sharing between internal departments of enterprises, but also requires sharing between suppliers and customers. In this way enterprises can make faster responses and better organize production (Zhang 2006).

Mass customization is an advanced clothing industry management mode and production mode suitable for Chinese circumstances. It includes product family design technologies, standardized and regulated production, product configuration design and quick response systems, etc. It seeks to replace mass production modes with the development of technology and can be seen as an inevitable trend of clothing industry development.

To implement a mass customization strategy, Chinese industry must incorporate the actual situation of domestic clothing industry to realize responsiveness and to enhance the competitive ability of enterprises through business process reengineering and information technology utilization, production mechanization, automation improvement, and modular design application, which may gain domestic clothing industry enough market share in both domestic and international markets with strong customer demand for individualized solutions and furious competition. There are still many extant challenges for domestic clothing enterprises during the transformation from the traditional mass production mode to mass customization production mode.

**CURRENT DOMESTIC CLOTHING PRODUCTION SITUATION AND EXISTING PROBLEM**

**Low Organizational Structural Efficiency**
Many clothing production enterprises adopted linear functional structures. The value of such a structure is that it may allow each functional department to provide help and instruction for production workshops. But in practical work, all departments are at the same level, leading to a fragmented situation in which collaboration cannot be fully achieved. For example, equipment is designated to be administered by the power department, but the power department does not know the progress of productive tasks, which results in special machines of some workshops being idle while the same machines are unavailable in other workshops, causing production bottlenecks.

**Inaccurate Hour Norms**
Many clothing production enterprises are unable to achieve balanced production due to inaccurate hour norms. In many clothing production enterprises there have been examples of obvious differences between actual working hours and working hour plans. In order to reduce discontent in workshops, technology departments of some clothing enterprises would grant 30% margins for hour norms. Workshops would basically reset after receiving the hour norm stipulated by technology department, which was not only a waste of time but also a failure of the purpose (to regulate production by hour norm).

**Unscientific Production Planning**
A lot of clothing production enterprises did not attach importance to scientific rigor of production plans. The production planning department usually simply calculated the machine, set requirements and let each production workshops report their production tasks and forced the average distribution on orders with poor cost performance. Therefore, the good orders would be battled for and the bad
orders would be ignored. In cases where parties could not reach a compromise, administrative orders intervene to solve the problem. This was not beneficial for establishment of a fair and impartial working environment and would negatively effect the accomplishment of production tasks.

BEST PRACTICES FOR PRODUCTION PROCESS MANAGEMENT OPTIMIZATION

Optimization of Organizational Structure
Optimization of organizational structure is the first step of clothing production process management optimization. For example, the abovementioned separation of production planning and marketing departments could be solved by merging departments. The merged departments would be named “Production and Operations Department” and would be not only in charge of production planning, but also responsible for marketing and obtaining purchase orders. To do that we could not only make the production planning more scientific and rigorous, which would in turn be beneficial for forming balanced production, reducing work in process (WIP) inventory, and increasing working efficiency. In addition, a special quality control department responsible for inspection to improve the quality of clothing products is needed.

Optimization of Hour Norms
The realization of just-in-time production cannot be achieved without accurate hour norms. Accurate hour norms rely on standard processing time. Based on standard processing time, combined with batch coefficients and daily output coefficients, accurate processing quantities can be determined. Based on accurate hour norms, reasonable pitch times can be determined to realize balance production.

Optimization of Production Planning
The purpose of production planning is to balance production. Only with all production processes in line with the production plan, will balanced production be achieved. At the same time, preparation of production plans could also reflect comprehensive technology and management levels of enterprises. During production activities, new situations and conflicts may appear among departments and production processes. The production plan needs to be revised from time to time. To adjust plans and to arrange production according to new situations and new conflicts will help establish new balanced relationships so as to ensure smooth production (Feng 2006).

In conclusion, domestic clothing production enterprises should adopt correct and efficient production modes compatible with domestic national conditions and market requirements. After perfections of all production problems in domestic clothing production enterprises, Chinese domestic clothing production enterprises will embrace a warm spring in international market occupation by adopting a mass customization production mode.

REFERENCES

ANALYSIS OF APPROACH AND METHOD IN REVITALIZING ENTERPRISE ASSETS

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ABSTRACT

Enterprise assets historically consist of tangible and intangible assets. With the development of the economy, the status of a third type of asset, human resources, is gradually standing out and attracting increasing attention. Owing to gradual adjustment in social industrial structure, improvement in scientific technique, continuous changing of consumption concepts, and failures in decision making, there is an idle condition in all the above three assets to various degrees. In response to the development of economy, an effective revitalization of idle assets has become an important factor affecting an enterprise in its increase of economic benefit and competitiveness. This article makes a brief analysis on the causes of idle assets and revitalizing approaches, and illustrates the dialectical relationship in their mutual promotion.

With the deepening of reform and opening up of the development of social economy, there is an increasing fierce competition in the market, so that enterprises must keep enhancing their market to survive and have development. Thus, an effective revitalization of idle asset to accelerate the turnover of each asset has become an important way to improve the competitiveness of enterprises. Meanwhile, there is a rising impact, which is also becoming more important, on enterprise development due to the adaption to the job of human Resources, the user of an enterprise's assets, as well as appointing the right person to right job and the ability of the personnel at that post.

Keywords: Human resources, enterprise assets, idle capacity

THE CAUSES OF IDLE ASSETS

Idle asset refers to any asset failed to function in enterprise operation and production instead of the non-performing asset since the idle asset of an enterprise could be quality asset for another enterprise.

Subjective Causes

1. Give up halfway. It leads to the idling of the project such as happens when giving up a plan, when developing new techniques or expanding production, due to insufficiency of funding and the subsequent weakness.
2. Failure in decision making. It results in failed investment leading to an idle investment given decision makers, in the pursuit of immediate profit, make blind launch without long-term market analysis.
3. Market shrinkage, which causes an idling of equipment resulting from a decline of product sales resulting in a forced decrease of production due to a slow product upgrading which cannot keep pace with the market development.
4. Mismatch between personnel and positions, idling human resources if leaders know little of personnel in ability and specialties. Improper staffing may result, due to the human resource department’s failure to report relevant and important personnel information.
Objective Causes

1. New techniques. With new techniques emerging, there may be idle due to the existing equipment becoming unable to meet the demand. Some employees have insufficient skill in the new technologies and cannot operate it properly, thus they are unable to meet the requirement of the jobs, causing idling in human resources.

2. Product structure changed. In order to meet the market demand and conform to the new concept of consumption, and thus to achieve sustainable development, several enterprises consuming high energy or pollution might need to be shut down gradually. Therefore, enterprises need to develop in a way depending on the economic situation and gradually adjust their product structure, which may cause idle assets.

The Dialectical Relationship among the Three Types of Assets in Revitalization

Human resources assets are supposed to be the business assets with the greatest liquidity, but there is human resource idling in some enterprises due to problems in their system or to bad communication. Because of a bad matching between staff and jobs, staff cannot do their job well and the jobs do not work well in their duties, which may further cause an idle in the other two assets. Therefore, revitalizing the asset of human resources is the precondition and of the other two shall be the target, so it is supposed to make human resources play its role in driving the use of enterprise assets to ultimately increase the economic benefit and market competitiveness of an enterprise.

The Approach in Revitalizing Idle Asset

Revitalization of idle assets should be under the guidance of government policy, on the basis of the market demand, targeting at the benefit maximized, to break the traditional concepts and ultimately achieve the purpose of a good revitalization of the overall idle asset.

To Revitalize the Asset of Human Resources Effectively

Human resources asset is an important dynamic asset of an enterprise. Its management condition is directly related to the overall benefit of the enterprise, so the idle asset of human resources is in the first place to be revitalized. The specific ideas are as follows:

1. By adhering to assigning right staff to right jobs and making decision of staff number as required, every post will have the most suitable employee, and by implementing targeted encouragement, staff may maximize their potential ability and performance.

2. In the actual status of enterprise staff, building archives of human resources helps to form a rational mechanism of talent flow. According to the archive of each person's specialty and characteristics, it is supposed to provide the talent with the post enabling them to develop in their expertise, and make it possible for picking the right person from the archive to the appropriate job. Thus staff may have the chance to play their role well with encouragement and creativity, which further improves talent competitiveness and helps ultimately the achievement of enhancing the overall strength of an enterprise.

3. It is advised to build up rational career development for employees, and exactly implement the manager management system with promotion and demotion by abolishing the mode of retaining a position for one person and breaking the phenomenon of position promoting without demotion, so as to attract more talent and retain our good employees.
(II) To Improve the Management of Enterprises

1. To establish enterprise resource management system. By building up the database of existing resources with specific manager for the timely reflection of the usage of various assets of enterprise, it enables an accelerated and convenient provision of the information of idle assets, so as to get the optimization of asset structure and thereby to revitalize enterprise idle asset.

2. Property rental. Obtaining market information timely and renting out enterprise properties that is not required temporarily would not only save the expense on managing that part of asset and the spirit for managing personnel, but meanwhile bring a certain amount of capital inflow, which are both improvement of enterprise benefits.

3. Transfer to other enterprises. In any asset definitely no longer required in later production and operation, it is suggested to make a transfer by directly selling it out or seeking for investment partner, thus may not only revitalize the asset and bring in economic benefit, but effectively eliminate the items without truth in financial statement, which makes the report a more accurate reflection of the enterprise actual situation letting it serve better in production decision making.

4. To make donations. Any asset no longer needed for production and operation or requires a high cost of transfer is advised to be donated to the programs for public good and areas affected by natural disaster such as non-profit organizations and government agencies. This made both a promotion of enterprise image and relieving of the expense on asset management, as well as obtaining benefit in enterprise taxation.

5. To make full use of the asset market. It is suggested to build up improved network and real asset trading markets by making use of the trading information platform established by government, which enables effective transfer of enterprise idle asset as soon as possible and thus to reduce asset use, therefore, enterprise may increase its economic benefit with the idle asset playing a good role in social value.

Due to the differences in the scale, degree and cause of enterprise idle asset, various ways are required for revitalizing asset. Revitalization of the asset of human resources should be the basis, because, only by the handle of the right user can the asset be made full use, which is regarded as a perfect assignment. Meanwhile, increasing scientific and technological innovation and strengthening enterprise management for the purpose of revitalizing enterprise idle asset shall be the only way for an enterprise to make good use of its overall brand effectiveness and achieve strategic target and social value.

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USING SIMPLE DATA MINING TECHNIQUES WITHIN A COURSE MANAGEMENT SYSTEM

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ABSTRACT
Research has shown that discussion forums add value to traditional and online classroom experiences. However, while many instructors embrace discussion forums to add interactivity in online courses as well as encourage class-room activity outside of class, individually reading and manually grading student discussion posts can be a daunting and time consuming process for the instructor. The purpose of this pilot research study was to utilize data mining techniques to assess asynchronous discussion forums and examine its effectiveness between those individualized manually graded.

Keywords: Online education, data mining, assessment, discussion forums
ONLINE EDUCATION: STATUS AND CHANGE

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Research has shown that online education has grown leaps and bounds with the last decade, alter the way students learn, and provided opportunities for students and schools to further education beyond the boundaries of the physical school. However, with every technology change a large budgetary item also comes. Providing online education courses within public school districts is not cheap. Currently, many public school districts have been experiencing heavy budgetary problems. Has Pennsylvania’s state budget problems affected public schools’ efforts to go online? The purpose of this study was to examine the status of fully online and blended learning environments in Northeastern Pennsylvania K-12 public schools, as well as provide indicators of change.

Keywords: Online education, K-12 education, Pennsylvania, education funding