The Society
of Business,
Industry, and
Economics

SOBIE 2011

Proceedings of Annual Meetings

Compiled and Edited by:
Vivek Bhargava, Alcorn State University

Editorial Assistant:
Svetlana Verzilina, Graduate Student

April 12 – 15, 2011. Destin, Florida

Proceedings of the Society of Business, Industry and Economics (SOBIE) Annual Meetings

April 12 – 15, 2011
Destin, Florida

PAPERS

Strategic Demarketing of Healthcare Service 5
Sam D. Cappel, Antoinette Phillips and Carl R. Phillips

Performance of HBCUs on the CPA Examination: 2008 and 2009 Top Ten Results 12
Forrest Thompson and Clifford Marshall

Implementation of an Efficient Communication Infrastructure to Enhance Professional Leadership Development: A Case Study 19
Tiki L. Suarez-Brown, Joshua Hankins and Jessica Williams

Experiences in Teaching IS Online 31
Ronald MacKinnon and Kevin Elder

Business Cycle, Corporate Governance, and Bank Performance 36
Rong Guo, Vicky Langston and Linda Hadley

Preferential Trade Agreement and Strategic Environmental Policy 48
Manabendra Dasgupta and Seung Dong Lee

Online Delivery of the Legal Environment of Business Course 56
Donald Mong

A Historical Analysis of Arbitration 67
Khodr Fakih

A Method to Increase Student Comprehension with Illusions 78
Kevin Lee Elder, David E. Deviney and Ronald J. MacKinnon

SAP Graduate ERP Certification 85
Kevin Lee Elder, Tom Case and Ronald J. MacKinnon

The Effects of Clock Rule and Kickoff Rule Changes in NCAA Football 94
Dr. Kenneth Linna and Dr. Evan Moore

Teaching Online: A Principled-Based Look at Lessons Learned 101
Dr. David Deviney, Elizabeth Ball and Dr. Tony Vrba

Are Purchase Frequency and Consumer Service Loyalty Related? 113
Don R. Snyder

Is Timely Billing a Determinant of Timely Payments? What Every Small Business Should Know! 117
Avinash Waikar, Samuel Cappel and Uday Tate

Exchange Rate Forecasting: A Comparison of Arbitrage Pricing Theory, EViews, and Other Models 122
Chad E. Hargon

Understanding Student Learning of Difficult Concepts in Business Statistics: A Study of Pictorial Presentation Formats for Teaching Conditional Probability 133
Alan F. Chow and James P. Van Haneghan

Twitter: An Effective Channel for Business Activities? 140
Latrice Burston, Chiou-Pirng Wang and Cynthia Bennett

How to Deal with the Passive-Aggressive Student 147
Pj Forrest

The impact of the Financial Global Crisis on Oil Companies' Profitability Ratios (British Petroleum, Gazprom, Royal Dutch Shell) 151
Anastasia Khatnyanskaya

Global Trends in The Intangible Value 160
Tatiana Verzilina

Comprehensive Analysis of FDI Impact on the Russian Economy 173
Svetlana Verzilina and Anastasia Khatnyanskaya

Tax Burden Differentiation in the United States 185
Svetlana Verzilina and Tatiana Verzilina

ABSTRACTS

Adam Smith and Ludwig von Mises on the Moral Framework 198
Dr. Walton Padelford

Is the United States Wireless Communication Device Industry Becoming Less Competitive?.198
Matthew Boyle

Using AACSB Assessment to Compare Student Learning Outcomes in Online vs. Traditional Course Delivery Modes 200
Jennifer P. Pitts

Lease Accounting and Faithful Representation: A Summary and Analysis of the FASB/IASD Exposure Draft on Lease Accounting 201
Robert T. Fahnestock and Eric D. Bostwick

The Creation of a Sustainable Business Certification Program: A Case Study 202
Nancy E. Landrum

Monetary Policy Rule Welfare Comparisons 203
Peter V. Bias

A Comparison of Control Charting Applications for Variable Sample Sizes in Service Processes 204
Alan Chow, Kelly C. Woodford and Ameina Tressler

Accounting Meets POGIL 205
Abbie Gail Parham and Dr. Dena Hale

Pricing in the Marketing Text: Time for Review 208
Pj Forrest

Student Opinion Towards the Use of Dedicated Software in Decision Modeling Class 209
Akash Dania, William Pinney, PJ Forrest

Strategic Demarketing of Healthcare Service

Sam D. Cappel, Southeastern Louisiana University
Antoinette Phillips, Southeastern Louisiana University
Carl R. Phillips, Southeastern Louisiana University

Abstract

Selective demarketing of healthcare services is seldom discussed by healthcare providers and insurers, though demarketing is commonly a component of differentiation strategies. Kotler and Clarke (1987) define healthcare demarketing as "finding ways to discourage demand… through the use of…such steps as raising prices and reducing promotion, access, or service". Selective demarketing is further defined by Kotler and Clarke as reducing demand among "parts of the market which are less profitable or less in need of service." This research examines factors stimulating adoption of selective demarketing efforts by healthcare providers, and provides examples of methods employed by some healthcare providers to selectively demarket healthcare services. The question examined in the research is whether the utilization of differentiation strategies supported by selective demarketing will be essential to the future survival of many healthcare providers.

Introduction

Kotler and Levy introduced the concept of demarketing in 1971 defining it as, "the aspect of marketing that deals with discouraging customers in general, or a certain class of customers. in particular on either a temporary or permanent basis." Kotler and Clarke (1987) define healthcare demarketing as "finding ways to discourage demand…through the use of…such steps as raising prices and reducing promotion, access, or service." Selective demarketing is further defined as reducing demand among "parts of the market which are less profitable or less in need of service." Selective demarketing is particularly attractive in healthcare where there is great disparity in revenue received for performing the same service for different classes of customers. Largely due to groups of customers that require service but generate no revenue or minimal reimbursement, many health care providers are experiencing financial challenges.

The financial difficulties experienced by hospitals are well documented. A recent analysis of more than 4,500 hospitals by Alvarez & Marsal (2008) found that more than half were technically insolvent or at risk of insolvency. The hospitals described as insolvent or at risk of insolvency do not make a profit treating patients and thus must rely on alternate and generally unstable sources of funding, such as philanthropic donations, parking fees, and local property and sales tax revenue to break even. This study also found that among the "profitable" hospitals, nearly 1,000 do not generate sufficient cash flow to fund essential, non-discretionary capital expenses that are necessary to comply with regulations and/or remain competitive. In addition to financial challenges for hospitals, physicians are facing financial pressures of their own.

Physician incomes are eroding due to lower reimbursements, higher costs for malpractice insurance, administrative burdens, and complex reimbursement procedures from insurers,

requiring increased professional and clerical man hours, and frequently delaying reimbursement (Kalogredis, 2004). A twenty-five percent reduction in Medicare - Part B reimbursements (which includes Physician services) scheduled to take effect on January 1, 2011, has been postponed for one year. Compounding the pressure of reduced reimbursement is the increasing number of people now receiving Medicaid. Employers are shifting medical care costs to providers and the public, as is evidenced by the number of Medicaid recipients. Enrollment in the program, which provides comprehensive coverage to the low-income uninsured, grew by 8.2 percent from December 2008 to December 2009. There were 48.5 million people on Medicaid at the end of 2009, or about one of every six Americans (Sack, 2010). Reductions in medical reimbursement, combined with growing numbers of uninsured and underinsured patients, put additional pressure on providers to identify and market services to patients who generate higher revenues. In response to growth in the underinsured and uninsured population, many healthcare providers are practicing selective demarketing.

Selective demarketing is defined as reducing demand among "parts of the market that are less profitable or less in need of service." Healthcare providers as individuals and institutions do have the right to target certain patient groups. Providers adopting a differentiation strategy utilizing demarketing may locate in areas where their target customers reside, and be selective about where they advertise, and who receives their information. In addition to strategies targeting the preferred customer group while passively excluding others, demarketing is used to actively discourage demand from certain customer classes. Part of the inducement for selective demarketing may stem from a belief that patients providing revenues in excess of cost seek new providers in response to the growth of new lower socio-economic classes of patients served by their provider. Little has been published about selective demarketing of healthcare services because the topic invariably raises "ethical issues" that most providers choose to avoid. This paper does not attempt to address ethical issues, but rather explores some of the tactics used in support of demarketing strategies, and questions whether current healthcare policy stimulates selective demarketing.

Discussion

A range of tactics are employed to support selective demarketing strategies by healthcare providers. Demarketing tactics discussed within the context of this paper are by no means exhaustive, but serve as examples of efforts by providers to reduce demand in segments of the market that are less profitable to serve. Demarketing tactics may involve offering different levels of services or restricting services to different customer classes, not offering services or discontinuing services that attract certain classes of patients, profit sharing with providers making referrals for service and thus creating financial incentives for the referral of certain classes of patients. Offering different levels of service to different customer classes has been employed by healthcare providers to control customer defections for many years.

Large general medical practices, pediatrics practices, and OB/GYN practices frequently maintain separate facilities for serving different classes of patients. Service to less profitable patients is often provided by physician extenders (such as advanced practice nurses), interns, and new medical graduates. Patients are usually scheduled for short appointments, thus complications or unexpected delays may result in extended wait times to see a provider. Facilities where less profitable patient classes are served may lack the amenities associated with

facilities providing services to more profitable classes of patients. More profitable customers are frequently scheduled for longer appointments to accommodate unexpected events and thus minimize delay, and may be treated by more experienced healthcare providers. Rather than offering different levels of service, some providers refuse to take new patients that generate little to no revenue, though this is the fastest growing and least served segment of the population.

The Patient Protection and Affordable Care Act was signed in to law by President Obama on March 23, 2010. Under current provisions of the act, starting in 2014, the Medicaid program will be expanded to include able-bodied adults with incomes up to 133 percent of the federal poverty level (currently $14,404 for a single adult and $29,326 for a family of four). The government expects Medicaid expansion to account for about half of the 32 million uninsured people who are projected to gain coverage because of the new law. Many enrollees in Medicaid and Medicare programs already find it difficult to find a provider.

A survey by UnitedHealth Group's Center for Health Reform & Modernization,(April 15, 2010) reports that only 10% of primary care physicians believe new Medicaid enrollees in their area will be able to find a suitable primary care doctor (Turner, Cortes and Higgins, 2011). Despite the enhanced federal aid for Medicaid last year, virtually every state made cuts to benefit levels or provider payments in order to balance budgets. As a condition of receiving stimulus money, states were prohibited from lowering eligibility thresholds, which they are allowed to set within federal parameters. Instead, 39 states cut or froze payments to providers, including 20 states that reduced reimbursement rates for doctors. This has the effect of encouraging physicians to selectively demarket Medicaid patients. In addition to reimbursement declines for providers treating Medicaid patients, reimbursement to providers treating Medicare patients are also declining.

According to a report in Medical Verdicts and Law Weekly (2011) the Patient Protection and Affordable Care Act fails to fund the tens of billions of dollars Congress will still have to approve every year to patch Medicare's underpayments to physicians caused by SGR, an automatic formula that offsets higher care costs with lower doctor reimbursement. In addition, cost-containment measures reduce Medicare's payments to physicians another 30% over the next 3 years. *Medicare* actuaries state that the cuts built into The Patient Protection and Affordable Care Act will force as many as 40% of providers to eventually stop seeing *Medicare* patients, or go bankrupt (Turner, Cortes and Higgins 2011). As access for some classes of patients is restricted, services that attract less profitable patients are being curtailed when implementing selective demarketing strategies. Mental health and high level trauma services are among those being discontinued by select providers.

Albright (2010) states that the provision of mental health services by many hospitals has been curtailed because of losses incurred treating classes of patients having little or no insurance coverage, and poor reimbursement by public insurance programs. Attempts by the U.S. Congress to retain these services, which included the extension of the federal medical assistance percentage (FMAP), were inadequate to meet financial needs of mental health service providers. In addition to demarketing mental health services, elimination of level 1 trauma care is frequently utilized for demarketing.

Emergency rooms constitute a high cost area for many hospitals. Because the emergency room provides a gateway to health care for the indigent, much of the uncompensated in-patient care delivered by full service community hospitals is originated by emergency room admissions. A study conducted by the American Health Standards Group found that limited service physician owned healthcare centers demarket emergency care and access to the emergency department by offering a limited range of emergency services, or in some cases no emergency department. Full-service hospitals within the American Health Standards Group study had an average of 14,760 emergency room visits per year or 40.4 visits per day, compared to an average 480 emergency room visits per year or 1.3 visits per day for physician-owned limited service hospitals that offer some level of emergency services (Speak Out on Doctor Owned Services, 1995). Two high ranking administrators with major hospital systems privately disclosed that their hospitals qualify as level 1 trauma centers, but it would not be cost effective to apply for the designation, as serious trauma care is frequently uncompensated or heavily subsidized. Another opportunity for selective demarketing involves the selective referral of certain classes of patients to investor owned (physician ownership or hybrid ownership involving both non-physician and physician investors) specialty hospitals.

Research conducted by Cram, Pham, Bayman and Vaughn-Sarrazin (2008) found patients with more generous insurance are significantly more likely to gain admission to specialty hospitals. Overall, these findings suggest that specialty hospitals may selectively demarket services along socioeconomic lines. This finding was confirmed in The Texas Healthcare Association's "Report on Limited Service Providers". Under the current public medical reimbursement system, which involves capitation, a single fixed rate is reimbursed by primary diagnosis, so it is more profitable for specialty healthcare facilities to demarket services to patients who are "high risk", or lack adequate insurance coverage. Much of this demarketing is accomplished by selective admission practices of investor physicians. State governments are also involved in selectively demarketing services to patients on public insurance programs.

State government can selectively demarket services through the denial of reimbursement for certain types of healthcare services. This may become more popular as states struggle to close budget shortfalls. Arizona has drawn national scrutiny for its decision to drop Medicaid coverage for some organ transplants, as the state tries to plug a $1 billion gap in its health-care budget for next year. The coverage cuts directly affect just a few dozen Arizonans each year and are projected to save the state about $4 million annually, but this situation may provide a preview of controversies to come if other states demarket healthcare services to Medicaid recipients in order to trim deficits. Transplants can be targeted, because they are one of the few areas where states can make coverage cuts in the state-managed program for the poor, funded jointly by federal and state governments.

The tactics discussed in this research are a limited example of tactics used to selectively demarket healthcare. Any attempt to generate a comprehensive list of tactics used to demarket healthcare services in general or to specific classes of customers would be futile. While it may seem unfair, economic pressures require some providers to utilize both passive and active demarketing tactics to survive the current economy.

Conclusion

Reducing reimbursements, managed care concepts, new technological developments, and an increasingly competitive environment in healthcare have done little to slow the escalation of healthcare costs in the United States. Having pressured providers to reduce patient lengths of stay, integrate more technology in the practice of medicine, accept capitation of payments, while facing increasing costs associated with operating their organizations; should it be surprising when providers seek ways to protect and increase their incomes? One way providers can increase revenue for services rendered is by marketing their practices to profitable classes of customers while both actively and passively demarketing services to unprofitable segments of the market.

Approaches for paying providers under the new national healthcare program described by Altman,Tompkins,Wallack and Doonan (2010) and Shortell (2010), monitor quality performance for all patients and providers, and tie the results to payment reforms. Proposed global payment systems reward providers for forming Accountable Care Organizations (ACOs). ACO's are a consolidated comprehensive network of providers, either hospital led or physician led, incentivized to improve quality of care and reduce total costs of care. Patient care within an ACO is based on a primary care model with patients electing or being assigned a primary care provider with care coordination responsibilities. This system is similar to the original HMO model, which rewarded reducing the total costs of care, and utilized a primary care model coordinated by a "gatekeeper". The principle difference between the HMO model and the Accountable Care Organization (ACO) is the focus on measurable quality standards within the new system. Payments to organizations are based on delivery of high quality / low cost outcomes, and include bonus payments for provider organizations exceeding goals -funded by withholds (penalties) for organizations failing to achieve targeted quality and cost objectives. Accountable care organizations (ACOs) as envisioned would share financial risks with payers. Placing financial risk on providers theoretically gives them incentives to minimize costs, and rewards them for improvements in the quality of care delivered.

The restructured system makes provision for a residual fee- for- service sector comprised of providers not participating in an ACO. Providers in this sector would be subject to the same standards of total cost and quality performance as providers involved in ACOs, but fee for service providers would have less opportunity to influence total performance or financial outcomes. Independent providers would thus continue to be paid under prevailing fee for service payment systems. If services offered by this group were equal to or better than target quality and cost levels, their annual cost updates would be unchanged. Should aggregate costs and quality targets fail to be met by this group, their annual cost updates would be withheld.

Demanding that independent providers and provider organizations not affiliated with ACO's meet or exceed quality and cost standards of large accountable care organizations or be penalized by having cost based reimbursement updates withheld puts fee-for service providers at an economic disadvantage. Independent providers lack economies of scale and scope associated with accountable care organizations. Additionally, providers not affiliated with an ACO have limited influence on the total cost or quality of care received by a patient during an episode of treatment.

While the proposed payment structure is presumably designed to "encourage" fee for service providers to join ACOs, those who do not become affiliated with an ACO but survive will likely employ selective demarketing strategies. It is foreseeable that in the future, the majority of our population will receive medical services through large accountable healthcare organizations. Providers not choosing to participate in ACOs are likely to adopt a generic strategy of differentiation. Medical services may be differentiated on the basis of efficiency, quality (real or perceived), customer responsiveness, and innovation. Those providers not associated with accountable care organizations may focusing on classes of patients willing to pay a premium price for medical services.

Gresham's Law states that the "cheaper" segment appears to drive the "dearer" segment from circulation. If Gresham's Law holds true for healthcare providers, successfully adopting generic strategies based on differentiation will likely require a supporting strategy of selectively demarketing healthcare services to the "cheaper" segment of the market.

References

Albright, B. "Reform Promises Dollars but Not Soon Enough" Behavioral Healthcare, 2010, Vol.30, 10-15.

Alvarez and Marsal., "Hospital Insolvency Survey" http://www.alvarezandmarsal.com/en/docs/am_hospital_insolvency_survey_03.2008.pdf Retreived March 8, 2011.

Altman, S., C. Tompkins, S. Wallack, and M. Doonan. "Payment: New Approaches for Paying Providers Will Change the Organization of Healthcare Services" in Futurescan 2010. Chicago, IL, Health Administration Press 11-15.

Bialik, C. "Health Studies Cited for Transplant Cuts Put Under the Knife; Arizona Defends Its Changes to Medicaid" http://proquest.umi.com/pqdweb?RQT=318&pmid=117310&TS=1299514055&clientId=19246&VInst=PROD&VName=PQD&VType=PQD: Dec 17, 2010. Retreived March 8, 2011.

"Coverage for Consumers, Savings for States: Options for Modernizing Medicaid," UnitedHealth Group, www.unitedhealthgroup.com/reform. April,2010, Retreived March 8, 2011.

Cram,P., H. Pham, L.Bayman, and M. Vaughn-Sarrazin. "Insurance Status of Patients Admitted to Specialty Cardiac and Competing General Hospitals: Are Accusations of Cherry Picking Justified?" Medical Care, 2008, Vol. 46, Issue 5, 467.

Dorin, A. "Betrayed by the AMA and Local Medical Societies, **Physicians** Simply Quit" http://www.lexisnexis.com/hottopics/lnacademic/ Medical Verdicts and Law Weekly Retreived March 8, 2011.

Kalogredis, V.J. "Should you consider concierge medicine?" Physician's News Digest, February 2004, Retrieved August 26, 2005, from http://www.physiciansnews.com/business/204.kalogredis.html.

Kotler, P. and S. Levy. "Demarketing, yes, demarketing" Harvard Business Review, 1971, Nov-Dec 1971, 74-80.

Kotler, P. and R. Clarke. Marketing for Healthcare Organizations. Englewood Cliffs, N.J. Prentice-Hall.

One Hundred Eleventh Congress of the United States of America, ''American Recovery and Reinvestment Act of 2009'' Title VIII—Departments of Labor, Health and Human Services, and Education, and Related Agencies, 2009. http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&docid=f:h1enr.pdf Retreived: March 12, 2011.

Sack, K. "Recession Drove Many to Medicaid Last Year" New York Times (Online) September 30, 2010, Retreived March 12, 2011

Speak Out On Doctor Owned Services. (n.d.) Retrieved December 20,2005, from http://www.medicareadvocacy.org

Report on Limited Service Providers. (n.d.) Retreived April 15, 2005, from http://www.thaonline.org

Shortell, S. "Delivery System Reform: Accountable Care Organizations and Patient-Centered Medical Homes" in Futurescan 2010. Chicago, IL Health Administration Press 16-20.

Turner, G., A. Cortes, and H. Higgins. "ObamaCare's March Madness; After one year as the law of the land, mayhem abounds" Wall Street Journal (Online). New York, N.Y.: Mar 6, 2011.

Performance of HBCUs on the CPA Examination: 2008 and 2009 Top Ten Results

Forrest Thompson, Albany State University
Clifford Marshall, Albany State University

Abstract

There are over one-hundred Historically Black Colleges and Universities (HBCUs) in the United States. The majority of these HBCUs are located in the southeast section of the United States. HBCUs are a major supplier of CPAs to the profession. Therefore, the performance of candidates from HBCUs should be of interest to various constituents including educators, employers, parents, students and other stakeholders. The purpose of this paper is to provide statistical ranking of the top ten HBCUs on the CPA examination for the years 2008 and 2009.

Overview

There are over one-hundred Historically Black Colleges and Universities (HBCUs) in the United States. Blacks represent around one percent of all Certified Public Accountants (CPAs). HBCUs are a major supplier of CPAs to the profession. Therefore, the performance of candidates from HBCUs should be of interest to various constituents including educators, employers, parents, students and other stakeholders.

The purpose of this article is to provide statistical ranking of the performance of the top ten HBCUs on the CPA exam for the years 2008 and 2009, the latest years available. Since, 1985 the National Association of State Boards of Accountancy (NASBA) has published statistical data on the performance of candidates by colleges and universities on the CPA exam. In order for a university to be cited by name in the NASBA statistics, a minimum of five candidates must have sat for the CPA exam. The CPA exam consists of the following sections: Financial Accounting and Reporting (FAR), Auditing and Attestation (AUD), Regulation (REG), and Business Environment and Concepts (BEC). The source of all data presented is the NASBA's Candidate Performance on the Uniform CPA Examination, 2009 and 2010 Editions.

The CPA Exam

Historical Overview

In the late 19th century, America society transformed from being primarily rural and agricultural to urban and industrial. This transformation led to two professional organizations, New York Institute of Accountants and the American Association of Public Accountants (now known as the American Institute of Certified Public Accountants- -AICPA), competing to create a framework for professional governance. In 1896, New York enacted legislation titled An Act to Regulate the Profession of Public Accountants, which recognized the licensing of certified public accountants, via a uniform examination.

The mission statement of this Act stated that the purpose of this uniform exam is "to admit individuals into the accounting profession only after they have demonstrated the entry level knowledge and skills necessary to protect the public interest in a rapidly changing business and financial environment." Over a two-day period, the first CPA exam was administered by the Regents of the University of the State of New York on December 15 and 16, 1896. There were only three people that passed this first CPA exam. This Act also included a grandfathering clause that gave experienced practitioners one year to become CPAs without taking the examination. Under this provision, 108 CPA certificates were granted to these individuals with the numbering of the certificates based on the alphabetical order of the experienced practitioner last name. Therefore, Frank Broaker became the first CPA in the United States. Other notable firsts in the include Christine Ross who became the first woman to pass the CPA exam in 1898, and John W. Cromwell, Jr. who became the first Black to pass the CPA exam in 1921.

Over the years, there have been many changes and improvements implemented to the format of the CPA exam. However, the exam has remained extremely challenging based on its content. Initially, the CPA exam was nineteen and half hours long over two and half days. In 1994, the CPA exam was shortened to fourteen hours for all four parts over two days. Starting 2004, the CPA exam is administered in a computerized format and exam takers have an eighteen month rolling window to pass all four parts of the CPA exam. In addition, exam takers need to have a greater knowledge of economics, finance, not-for-profit accounting, and information technology topics. One thing that has remained constant with the CPA exam over the years is that an exam taker must have a score of seventy-five on each part in order to pass the CPA exam.

In order to be eligible for the CPA exam, there are certain educational requirements that must be met first. These requirements vary among the different jurisdictions that offer the CPA exam. Currently, all fifty states, the District of Columbia, Guam, Virgin Islands, Puerto Rico and the Commonwealth of Northern Mariana Islands administer the uniform CPA exam. Each state and territory has a state board of accountancy that regulates the CPA profession. These state boards are responsible for setting entry requirements for licensure, enforcing ethical standards, and continuing education requirements.

Although the requirements between each jurisdiction vary, most jurisdictions require 150 semester hours of education. Many of these jurisdictions have adopted a two-tier approach toward CPA certification that allows candidates to sit for the CPA exam at 120 hours but require 150 hours for licensure.

Recent Developments

The AICPA has announced some sweeping changes to the CPA exam to be launched January 1, 2011. International Financial Reporting Standards will be gradually integrated into the exam while United States standards continue to be tested. In addition, the changes also include a new section time allocation and new exam section structure format.

	Current	01/01/2011
• Business Environment and Concepts (BEC)	2.5 hours	3.0 hours
• Auditing and Attestation (AUD)	4.5 hours	4.0 hours
• Financial Accounting and Reporting (FAR)	4.0 hours	4.0 hours
• Regulation (REG)	3.0 hours	3.0 hours

All of the written communication tasks will be tested in BEC. BEC will change weight from 100% multiple-choice to 85% multiple-choice and 15% written communication tasks. AUD, FAR, and REG will change from 70% multiple-choice, 20% simulations, and 10% written communication tasks to 60% multiple-choice and 40% simulations.

In conclusion, there have been some significant changes to the format of the CPA exam over time, but this rigorous exam remains an important test to identify those individuals who processes the basic core competencies to be called a Certified Public Accountant (CPA).

Top Ten Results

HBCUs Candidates

To become a CPA, a candidate must first sit for the CPA examination. The starting point was to identify the ten HBCUs with the largest number of candidates sitting for the CPA exam. These universities are:

	2008		2009	
University	Rank	Number of Candidates	Rank	Number of Candidates
Howard	1	74	1	84
North Carolina A&T	2	54	3	51
Florida A&M	3	51	2	53
Hampton	4	37	6	38
Jackson State	4	37	4	46
Alabama A&M	6	31	Not Ranked	
Clark-Atlanta	7	28	5	39
Southern-Baton Rouge	8	25	7	31
Bowie State	9	24	Not Ranked	
Tennessee State	9	24	10	26
Langston University	Not Ranked		8	28
CUNY Medger Evers	Not Ranked		9	27

Seven universities are ranked in both years. These universities are Howard, North Carolina A&T, Florida A&M, Hampton, Jackson State, Clark-Atlanta, Southern-Baton Rouge and Tennessee State. These seven are upon the premier HBCUs in the country. Four universities were not cited in both years. Alabama A&M and Bowie State were ranked in 2008 but not 2009. Langston and CUNY Medger Evers ranked in 2009 but not 2008. Howard was ranked first in both years, with North Carolina A&T and Florida A&M alternating the second and third rankings. The rankings are rather consistent from 2008 to 2009. The biggest change was Hampton moving from four in 2008 to six in 2009 and Clark-Atlanta moving from seven in 2008 to five in 2009. All other changes were within one unit change. Thus the rankings are relatively consistent and comparable.

For 2008, these ten HBCUs had a total of three-hundred, eighty-five (385) candidates. This represented fifty-four (54%) percent of the total number of identifiable candidates from thirty-eight (38) HBCUs. In 2009, four-hundred and twenty-three (423) candidates from HBCUs

were identified. This represented fifty-five (55%) percent of the total number of identifiable candidates from thirty-nine (39) HBCUs. In order for a university to be cited by name in the NASBA statistics, a minimum of five candidates must sit for the CPA exam. Thus this article is limited to reporting the performance results from these ten HBCUs.

2008 HBCUs Performance

A passing percentage was calculated for each section of the examination (FAR, AUD, REG, or BEC) by dividing the number of candidates passing a section by the total number of candidates taking that section. These results were ranked from one to ten. A ranking of one was given to the HBCU with the highest pass rate on that section of the CPA exam. The next highest received a ranking of two. The HBCU with the lowest pass rate on that section received a ranking of ten. The overall ranking of these HBCUs are:

	Number of	Overall	Individual Section Ranking				
University	Candidates	Ranking	FAR	AUD	REG	BEC	Total
Florida A&M	51	1	1	1	2	3	07
Alabama A&M	31	2	3	3	1	1	08
Clark-Atlanta	28	3	4	2	3	4	13
Howard	74	4	2	6	4	2	14
Hampton	37	5	5	4	7	8	24
Tennessee State	24	6	6	5	8	6	25
North Carolina A&T	54	7	8	7	6	5	26
Bowie State	24	8	7	8	5	7	27
Jackson State	37	9	9	9	9	9	36
Southern-Baton Rouge	25	10	10	10	10	10	40

Florida A&M had the best performance on the CPA exam for 2008 based on the cumulative ranking of pass rates on the various sections of the exam followed by Alabama A&M, Clark-Atlanta and Howard. These HBCUs can be categorized in the top tier on their performance on the CPA exam. The middle tier consists of Hampton, Tennessee State, North Carolina A&T and Bowie State. The lower tier consists of Jackson State and Southern-Baton Rouge. HBCUs candidates are passing the CPA examination on a consistent basis in relationship with their peer institutions.

These results are not a definitive indicator of the overall quality of the accounting program at any HBCU. A quality program produces graduates that are technically knowledgeable, but also processes analytical skills, communication skills and interpersonal skills to be successful in an increasingly complex business world. Passing the CPA examination is just one indicator of quality.

To further interprets these results, please note that the number of candidates taking the examination for a university does not represent the total number that sat for each section of the examination. In fact, for all universities, the number of candidates sitting for a particular section was always less than the total. Computerization of the examination allows a candidate to take

one or more sections at a time. This variation was consistent across all universities, thus the rankings were not weighted to reflect these differences.

In addition, no distinction was made between first-time candidates and repeat candidates. First-time candidate is determined at the section level. If a candidate takes a section for the first time, that candidate is considered a first-time candidate for that section only. All subsequent taking of that section, that candidate would be considered a repeat candidate. Thus with the computerization of the examination, a candidate might be a first-time candidate for one or more sections and a repeat candidate for other sections.

2009 HBCUs Performance

The ranking for 2009 was calculated in using the 2008 methodology. Thus, a passing percentage was calculated for each section of the CPA exam (FAR, AUD, REG, or BEC) by dividing the number of candidates passing a section by the total number of candidates taking that section. These results were ranked from one to ten. A ranking of one was given to the HBCU with the highest pass rate on that section of the CPA exam. The next highest received a ranking of two. The HBCU with the lowest pass rate on that section received a ranking of ten. The overall ranking of these HBCUs are:

	Number of	Overall	Individual Section Ranking				
University	**Candidates**	**Ranking**	**FAR**	**AUD**	**REG**	**BEC**	**Total**
Howard	84	1	1	1	3	2	07
Tennessee State	26	2	5	2	1	4	12
Florida A&M	53	3	3	5	2	3	13
Clark-Atlanta	39	4	4	3	7	1	15
Jackson State	46	5	2	6	9	5	22
Hampton	38	6	7	4	4	8	23
North Carolina A&T	51	7	6	7	6	6	25
Southern-Baton Rouge	31	8	8	8	8	7	31
Langston	28	9	9	9	5	9	32
CUNY Medger Evers	27	10	10	10	10	10	40

Howard had the best performance on the CPA exam for 2009 based on the cumulative ranking of pass rates on the various sections of the exam followed by Tennessee State, Florida A&M and Clark-Atlanta. These four HBCUs can be categorized in the top tier on their performance on the 2009 CPA exam. The middle tier consists of Jackson State, Hampton and North Carolina A&T. The lower tier consists of Southern-Baton Rouge, Langston and CUNY Medger Evers. Again, HBCUs candidates are passing the CPA examination on a consistent basis in relationship with their peer institutions.

Please note that Alabama A&M was ranked second in 2008 and not ranked in the 2009 results. This is a clear indicator that Alabama A&M 2008 performance was an aberration. Bowie State was also not ranked in the 2009 results. In 2009, the results for Langston and CUNY

Medger Evers are also an aberration and not worthy of further discussion. The same caveat mentioned for the 2008 results applies to interpreting the 2009 results.

The "Morehouse" Impact

Morehouse is the best college in the nation for educating Black men. This article was limited to reporting the performance results for the top ten HBCUs based upon the number of candidates sitting for the CPA exam. The number of candidate sitting from Morehouse was seventeen (17) in 2008 and eighteen (18) in 2009. This was below the cutoff of twenty-four (24) and twenty-seven (27), respectively. However, any article that excludes the performance of Morehouse College would be incomplete.

2008 Performance

Morehouse performances on the 2008 CPA exam compared to national passing percentages by section are as following.

Section	Morehouse	National
• FAR	63.6%	49.2%
• AUD	55.6%	49.1%
• REG	60.0%	48.7%
• BEC	66.7%	47.5%

Morehouse performance was outstanding. Morehouse passing rate exceeded the national standard on all sections of the CPA exam. This is a clear and solid indicator of the quality of the accounting program at Morehouse and further evidence that HBCUs candidates are passing the CPA exam on a consistent basis in relationship with their peer institutions.

2009 Performance

Morehouse performances on the 2009 CPA exam compared to national passing percentages by section are as following.

Section	Morehouse	National
• FAR	40.0%	48.5%
• AUD	18.8%	49.8%
• REG	37.5%	49.8%
• BEC	38.5%	48.3%

Morehouse performance was solid. It shows that their 2008 was not an aberration but a solid indicator that Morehouse consistently produces graduates that are able to pass the CPA exam.

Quantity Versus Quality

The above results clearly reflect that HBCUs have accounting programs that consistently prepares students to be successful on the CPA examination. Of greater concern is the issue of quantity. HBCUs need to increase the number of accounting majors to meet the demands of the

marketplace. There are many programs devoted to increasing the number of accounting majors. For example, scholarships are offered by the American Institute of CPAs, various state societies, Becker CPA Review, and the National Association of Black Accountants (NABA). Another major initiative of NABA is the Accounting Career Awareness Program (ACAP). The goal of ACAP is to increase the understanding of accounting among high school students and prepare students for college and a career in accounting. To assist students to become a CPA, NABA has partnered with Howard University School of Business Center for Accounting Education (HUSB-CAE) to develop the CPA Bound Initiative with four program components: Advocacy, CPA Examination Summit, Ambassador Program, and CPA Examination Boot Camp.

Conclusion

The CPA certificate offers unlimited opportunity for success in an increasingly complex business world. There have been some significant changes to the format of the CPA exam over time, but this rigorous exam remains an important test to identify those individuals who processes the basic core competencies to be called a Certified Public Accountant (CPA). HBCUs are a major supplier of CPAs to the profession now and in the future. Rankings were presented for the year 2008 and 2009. Florida A&M and Howard were ranked number one in 2008 and 2009, respectively. The outstanding performance of Morehouse College was cited even though the number of candidates sitting was smaller than the top ten. Numerous other HBCUs performed well on the CPA exam. However, HBCUs need to increase the number of candidates sitting for the CPA examination to remain a major supplier of CPAs to the profession. These results should be on interest to educators, employers, parents, students and other stakeholders.

References

American Institute of Certified Public Accountants, 2011. "How the CPA Exam Is Scored", *Journal of Accountancy*, May 2011, 24-28.

Hammond, Theresa A., 2002. *A White-Collar Profession: African American Certified Public Accountants since 1921*, The University of North Carolina Press.

Howard University, 2009. *Insights Into Increasing the Number of African-American CPA- -2009 CPA Examination Summit,* Center for Accounting Education, Howard University.

National Association of Black Accountants, 1990. *The History of Black*

National Association of State Boards of Accountancy, 2010. *Candidate Performance On The Uniform CPA Examination- -Reports and Commentary on the 2009 CPA Examination*, National Association of State Boards of Accountancy.

National Association of State Boards of Accountancy, 2009. *Candidate Performance On The Uniform CPA Examination- -Reports and Commentary on the 2008 CPA Examination*, National Association of State Boards of Accountancy.

Uniform CPA Examination Alert Newsletter, Spring 2010.

Implementation of an Efficient Communication Infrastructure to Enhance Professional Leadership Development: A Case Study

Tiki L. Suarez-Brown, Florida A&M University
Joshua Hankins, Florida A&M University
Jessica Williams, Florida A&M University

Abstract

Over the past 20 years, technology has truly revolutionized the way individuals and organizations communicate. People now use smartphones to send and receive text messages, use netbooks or tablet PCs to generate a web presence, check their Facebook pages or to 'tweet' their current status. Individuals within organizations also create and share their work online and access documents from anywhere. This type of communication provides almost anytime, anywhere access to anyone and has in essence created a ubiquitous computing communication environment. This paper discusses how a three dimensional pedagogy is utilized to revamp the Florida A&M University School of Business and Industry's Professional Leadership Development (PLD) current communications infrastructure. The focus of this paper is to (1) discuss the three-dimensional pedagogy model, (2) provide an overview of the School of Business and Industry's Professional Leadership Development Department (PLD) (3) present an overview of the updated communication objectives for PLD, and (4) provide a synopsis of our findings.

Keywords: Technology, Professional Leadership, Social Networking, Communication

Introduction

The utilization of electronic tools has become a significant way to communicate. There are many versatile tools that are currently being used to communicate effectively. Social networking or social networking sites (SNS) have become one such dominating electronic tool which focuses on connecting many people and organizations simultaneously (Finley-Hervey, Suarez-Brown, and Thompson, 2009) and (Smith, 2007). Sites such as Twitter, Facebook, and MySpace have become a natural part of daily communication (Pranke, 2010). Other sites such as Wikis and Wiggio also facilitate communication (Berk, 2010) and (Kharbach, 2011). These sites provide the users with the ability to access information anytime and anywhere.

A study conducted by Burson-Marsteller found that 79 percent of the largest Fortune 500 companies use Twitter, Facebook, YouTube, or corporate blogs when conducting business communication with customers and other stakeholders (Axon, 2010). The growth in the social networking industry is surreal, and companies are adapting to this growth. Businesses are able to take advantage of cost efficient communication through social networking sites. The types of markets that businesses can communicate with are unlimited. Furthermore, younger consumers are a market which social networking shows high efficiency (Kosmicki, 2010).

These electronic tools are also being used in the classroom to increase communication between students and professors (Alexiou-Ray, Wilson, Wright, Peiran, 2003). For example, Blackboard, which is a proprietary learning management system, allows professors to post class PowerPoint presentations, notify students of assignments, store important information pertaining to classes, and many other beneficial tools (Blackboard, 2011). In addition, Wikis are collaborative web sites that are comprised of collective work of many individuals. These sites are similar to blogs in nature, however, a Wiki can allow anyone to edit, delete or modify content that has been placed on the Web site (Kask, 2009). A Wiki page contains information, which can be created and modified at any time and any place by merely accessing its online interface. Many professors create blogs and discussion forums on Wiki pages to facilitate a student's communication with their peers and impact the students' knowledge (Frydenberg, 2008). Social networking sites such as these encourage communication beyond the classroom, outside of a traditional classroom door. Therefore, the collaboration, interaction, and socialization introduced in the class does not end when the student walks out the door. This 21st way of learning has ultimately moved many professors to change or update their teaching styles and incorporate SNS to interact with their students (Saba, 2008).

Florida Agriculture and Mechanical University is an 1890 land-grant institution dedicated to the advancement of knowledge, resolution of complex issues, and the empowerment of citizens and communities (Florida A&M University, 2011). Florida A&M University strives for excellence and is dedicated to implementing its core values into its students. The faculty is involved with nurturing students through education and equipping them with skills which will have a positive impact on society.

The mission of the School of Business and Industry's at Florida A&M University is to produce graduates capable of excelling as future leaders in global business, industry, and commerce (Florida A & M University, 2011). In order to facilitate this growth SBI desires to utilize electronic tools to assist with its course management and delivery functions (Cobb, Washington, Twiggs, & Suarez, 2007), (Suarez, 2007), and (Cannon, Davis, Ward, and Suarez, 2009). The Professional Leadership Development Program within SBI can benefit immensely by employing these modern technologies. The tools will provide alternative methods to enhance students' communication skills and develop ubiquitous access to quintessential information. Given today's advancements in technology there is no reason why students should not be constantly informed of information that will have a positive effect on their business career.

This paper will review a subset of these promising technologies. In addition, the usefulness of these technologies are illustrated through a case study describing their deployment, which is used to guide the communication infrastructure of Professional Leadership Development. The deployment is based on a three-dimensional pedagogy framework methodology. This new communication structure hopes to make communicating information effortless and understandable for incoming as well as current students.

Three-Dimensional Pedagogy

Today's pedagogical methods have changed as technology has moved into the center stage. Concepts like distance-learning, social networks, Wikis, and other emerging collaboration technologies have helped meet the challenges of an ever-growing reliance on IT although many

of these methods have brought mixed results while being utilized both in academia and business environments. As technology continues to develop at a blazing pace, the pedagogical methods used to teach it are evolving as well.

Shabazz and Suarez (2004) introduce an approach entitled “three-dimensional pedagogy” which is used to teach IT to graduate business students at Florida A&M University's School of Business and Industry (SBI). The authors claim that this method of teaching helped the advanced student enhance a broader set of critical competencies. The pedagogical model consists of three integrated silos: technical, applied and policy as displayed in Figure 1. These three silos combine a variety of interactive techniques to create a "value-added" student with enhanced metaskills for business management.

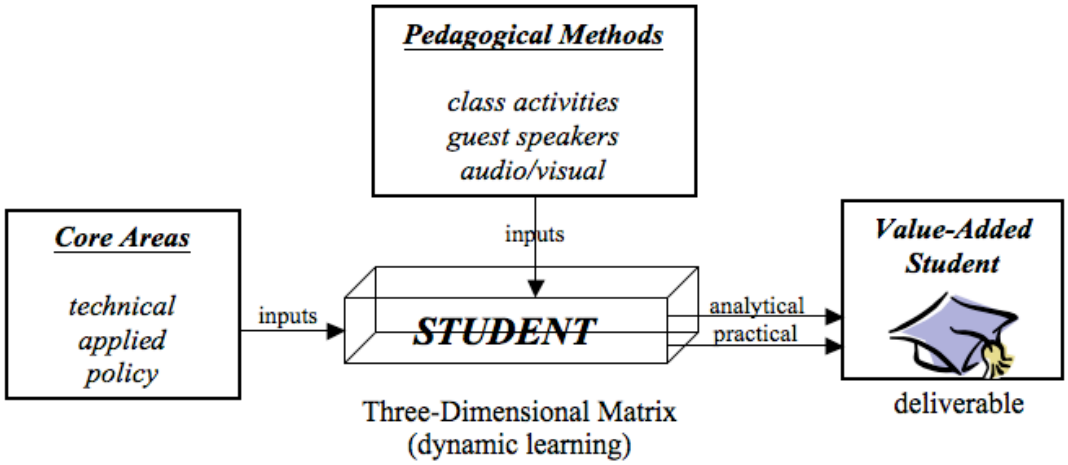


Figure 1. Three Dimensional Pedagogical Model

The matrix intended use is to accommodate the various learning styles of the students to ultimately provide a zestful learning environment to meet the dynamism of the technology industry. The student would be the product going through the process of “production.” The deliverables are analytical and practical knowledge attainment in the three core areas.

This three-dimensional pedagogy has also been utilized within the Professional Leadership Development Program (PLD) at SBI. The PLD program is designed to serve as a “Bridge to Business” and consists of a series of planned activities, which stress confidence-building, oral and written communications, goal-setting, results orientation and time management. In addition, students use the skill sets learned in academic courses and apply them to courses organized around a series of modules or components primarily for behavioral competency development. Furthermore, students enhance their business knowledge based through a continuous array of challenging projects and functions carried out through team activities in “company” and “club” settings.

In this age of emerging technologies, flexible methods are needed for the deliverance of course content. Electronic tools such as SNS can assist with this need as the three-dimensional

pedagogy is applied to both academic and professional development leadership courses within SBI. The PLD program specifically expressed a desire to explore how these technologies can assist with its communication infrastructure.

Case Study

Project Overview

The Professional Leadership Development (PLD) program within the School of Business and Industry (SBI) works to train students in the soft skills needed to be successful within the corporate business world. An essential element to this program is the organization's ability to disseminate the proper information to the correct body of students. Prior to this study, the communication infrastructure was managed and facilitated through the Blackboard Academic Suite. Faculty and student leaders would utilize Blackboard as a communication tool to collect students information to develop teams, post and collect assignments, set schedules, and send event notification emails. Unfortunately, this communication process became convoluted and proved increasingly inadequate. The key factors limiting this system include a lack of user friendliness and training materials, an inability to alert students of last minute changes by mobile means, and a lack of understanding for the culture of SBI and the PLD program by new students.

The infrastructure that is designed must have the ability to effectively communicate via a variety of mediums while fostering an online infrastructure that is attractive and easy for students to use. The dynamic infrastructure administrative access should be limited; especially as it pertains to the dissemination of information. Through analysis of the current system as well as interviews with professors and student leaders the following objectives were selected and implemented:

- *Objective#1:* Establish an online dynamic infrastructure that will provide instruction to new students and faculty as well as provide an online calendar to keep abreast of current SBI and PLD events
- *Objective#2:* Explore additional technological advantages to digitally store and disseminate materials and resources needed for SBI's PLD, its student ran companies, communication and culture
- *Objective#3:* Create a set of procedures, policies, and training materials needed to maintain the aforementioned objectives

Due to the additional insight provided by the project client, the following objectives were included in the project:

- *Objective #4:* Developing a master calendar for more efficient communication about activities/events
- *Objective #5:* Incorporating mobile alerts and reminders into the communication processes of PLD
- *Objectives #6:* Providing PLD Previews of TV-Tapings, Close Ups, etc. to prospective students, as well as student access to a repository of historical and developmental documents such as mock interviews, resume writing, etc.

- Objective #7: Wiki pages for each SBI PLD company

Current State of PLD communication infrastructure

The current process of communication within the PLD department in the School of Business and Industry is antiquated. Currently, the process of executing the delivery of information and assignments is as follows. First, all information is distributed via Blackboard, email, phone, and/or word of mouth. Students input their personal information (e.g. email address, phone number, class scheduling information, etc.) in Blackboard so that it can be used for communication purposes. The student-run company leaders are partnered with various faculty and staff throughout SBI, who in-turn provide the company leaders with details on events and other information that must be passed along to students. The student company leader must then utilize Blackboard to send email notifications to students regarding important events going on throughout SBI, as well as any information that may be of use to students. There is also a calendar feature on Blackboard on which some events are place although not regularly used. Thus, there is a large need to create a better communication infrastructure that will deliver information in a more time efficient manner. The current system does not utilize the latest technology to allow students, faculty, and staff to receive the most accurate information in a timely manner.

The current SBI PLD communication infrastructure desires to become a streamlined communication process that can adapt to our changing environment. It is vital that the all SBI stakeholders receive consistent event and notification information instantaneously. The information, event notifications, and master calendar should all receive data from a centralized location to reduce error and increase the speed of the messages being delivered. The current communication process within PLD includes several modes of communication, but the current system is not capitalizing on the various technological applications available for SBI to remain competitive.

Proposed Infrastructure

The proposed recommendations desires to revise the current communication processes within PLD, thus utilizing a more streamlined infrastructure to accommodate faster and more relevant communication between all levels of the process users. Based on the project objectives, the new infrastructure will contribute to: faster dissemination of information from faculty, student company leaders, as well as from peers, to the students; an increase in student participation in the PLD learning component through the sharing of information and experiences with peers; and the broadening of student learning activities by faculty users. Also, it will utilize a more reliable and widely used master calendar (including automated event reminders) and mobile alerts to keep students abreast of upcoming events and activities, the efficient management of files and improved processes for incorporating new files into the system, as well as the use of social media for certain classroom activities and for sharing information. To accomplish this goal, users (faculty and student leaders) will be properly trained to service the infrastructure's needs. This will help to prevent any unforeseen problems or delays fulfilling its purpose to its end users, SBI students.

From a system flow perspective, the ideal processing of data and information would start at either of the inputs (e.g. students, faculty, student company leaders, administration, etc.) contributing needed information (for example identifying personal information from a student that will assist in grouping of students for alert groups). From there, the information would be adequately stored (in regards to documents that will remain on the infrastructure for an extended amount of time) or passed on to the appropriate group/entity (i.e. various dates of PLD events will be posted on the master calendar with the proper reminders set). The information is then processed into a new form of information (e.g. a mobile alert and/or reminder) and appropriately disseminated. Most of this processing will be managed by faculty and student leaders, so proper training will be needed to ensure the process is as efficient as possible. The complete updated data flow diagram (DFD) and Structured English are displayed in Figures 2 and 3.

Therefore, short- and long-term recommendations were established to assist with reaching the goal of greater ease and efficiency within the PLD communication process. With proper implementation and training, this new infrastructure will certainly make life easier for the entire PLD department.

Short-Term Recommendations:

1. ***Use a Wiki site*** to make it easier for documentation and collaboration among SBI PLD professors, the student run companies and the entire SBI student body. The Wiki site will support objectives 1, 2, 4, 6, and 7.

The process begins by:

A. Creating the PLD Wiki and Wiggio sites

a. It was decided that the most effective Wiki page that should be used is Google Sites[1] in combination with Wiggio[2]. Google sites is a free and easy way to create and share webpages. Wiggio is a completely free, online toolkit that makes it easy to work in groups (Polivy and Lampert, 2009). The PLD Wiki and Wiggio sites will help to give the PLD office the boost of productivity that they need for continuous innovation, smoother information sharing, mobility, information access control and most importantly a secure infrastructure. Other benefits of these sites includes access to group email: where the PLD office can continue to send emails to students or student ran companies if required, keep a shared calendar: which would make providing an online calendar of events much easier, Store and edit documents in one common folder: which allows for real time multi-person document editing and the ability to host web meetings, conference calls, chartrooms, text and voice messages: which would allow the PLD office to communicate via free voice calls and text messaging. (Wiggo.com)

[1] https://sites.google.com/site/sbipld/
[2] http://www.wiggio.com

B. Professional Leadership Development Courses can require all SBI students to join the PLD Wiki and Wiggio sites

C. Train students and faculty on the PLD Wiki and Wiggio sites capabilities

   a. Training for the sites can consist of reference guides that will be created to include all policies and procedures for every aspect within SBI. This will allow for communication to flow while maintaining an overall understanding of how things are supposed to be and not what one thinks. This document will also serve as a training manual for all upcoming leadership. Lastly a training program will be created for all new leaders within SBI.

   b. Job Preparation Videos (Interviewing, writing resume, and cover letter), etc.

      1) The PLD Wiki site allows videos to be shared on the website. Hence, it will assist with the objective of digitally disseminate materials and resources. Providing the capability for students to review videos and documents geared to career development will help students be more prepared when seeking job. Students learn in various ways and the facilitation of visual tools will only enhance their success when pursuing a full time or internship position.

D. PLD historical records – PLD in Action

   a. Since the PLD Wiki site allows videos to be shared on the website, this advertisement can help expand the SBI brand because it will demonstrate and further promote SBI student's business knowledge and professionalism. SBI will be able to utilize this tool to for recruiting purposes and these tools will help enhance the SBI culture.

E. Master Calendar and announcement for events such as Forums, PLD Receptions and etc.

   a. The Master Calendar will also provide a means to display all dates of important events, such as the scheduling of PLD Receptions, forums and visits of corporate guests.

   b. Utilizing a Master Calendar where various individuals are able to make changes will improve communication in real-time. The Wiggio site will allow every authorized stakeholder from the PLD professors to the PLD company leaders to update the calendar and instant notification will be sent out to the students. Allowing the PLD company leaders to have the ability to update the calendar will reduce the tasks of the PLD professors and wrong information being distributed.

F. Wiki pages for PLD student-run companies

a. Currently, there is no one place for students to review information about the student run-companies. Also there is no place for the student-run companies to display what their mission, values, and responsibilities are. Over the years, the PLD advisors have been responsible for maintaining the information, however the previous year's leadership (President and CEO of each student-ran company) would have information for the company in their respective emails or in a yahoo group. Thus, each year the new leadership would have to re-create everything.

b. The PLD Wiki site can have tabs for each of the PLD student-ran companies. And, the new leaders will be able to access the information from the previous year easily. The Wiki page would be a central place and a repository of information.

2. Mobile Alert System

A. The mobile alert and reminder technology will allow the PLD department to rapidly and easily transmit messages via e-mail, SMS, IM and voice notification via text-to-voice translation for any phone number in the US and have around-the-clock access to contacts and communication. The recommended Wiggio site will enable the access to free text messaging and voice calls.

B. The PLD department will notify the students of the new mobile alerts and reminder technology and require the students to sign up to receive urgent text messages. The text messages being sent out should be urgent last minute changes to an event location, time, etc. Once the students sign up for the text messages, SBI PLD department will be able to send a message that goes to all the students who signed up instantly. The students will sign up for the text messages by their respective teams or PLD classes. Hence, text messages will only go to the students that need the information. The cost to receive the text messages would vary based on each student's cell phone plan. Students who do not have text message in their cell phone plan or who do not have unlimited text messaging, will need to utilize the traditional method of communication, email. It is already an expectation for SBI students to check their emails daily.

3. Creation of procedures, policies, and training materials needed (supports objective 3)

A. The manual proposed is a guide that will give SBI professional leadership development department step-by step instructions; on how to utilize the technology to increase the communication capabilities. The Wiki site will allow students to easily retrieve information and reduce contacting the PLD professors or SBI company leaders. Training materials and sessions may need to be held to answer questions from all the stakeholders (faculty and students). Successions plans need to be in place so that individuals are identified and developed before individuals with the technical knowledge of the specific system leave the organization. Training is essential for the success of any dynamic infrastructure. Monthly, and as needed, training should be done to keep professors as well as students up to date with system changes.

Long Term Recommendation

Our ultimate recommendation for the Professional Leadership Development (PLD) Department is to utilize Blackboard 9.1. Blackboard 9.1 is the optimal means of meeting the communication and organization objectives of the department. The website will become a repository for information and reduce information redundancy that is a critical issue for the PLD department. Also, Blackboard 9.1 also supports objectives 1, 2, 4, and 6 but provides a familiar frame of reference for our client. Blackboard 9.1 states it will also provides alert notification; however, the medium for the alerts (email or mobile) is undetermined at the time of this study.

Blackboard 9.1 is a new social learning and teaching tool that fosters more logical, visually impactful, and active learning opportunities for students, helping them stay connected to their educational experience 24 hours a day (Blackboard, 2011). Blackboard 9.1 incorporates Wikis and enables active collaboration around course content and group projects. The users collaborate on a document using only a web browser. The PLD professors can see the process and evolution of the work and even participate. Furthermore, the PLD professors can see each participant's contributions and grade accordingly.

1. Also, Blackboard 9.1 easily integrates rich media learning content using Web 2.0 resources from YouTube, SlideShare, and Flickr. The PLD professors can deliver more engaging course content in a convenient and powerful way by searching, finding, and inserting in a few clicks. Blackboard has added an accessible wrap around the YouTube player to make it accessible to everyone.

    a. The media learning tools using Web 2.0 resources will assist with posting PLD historical records (PLD Preview, TV-tapings, close-ups, etc.) and Job Preparation videos (Interviewing, writing resume and cover letter), etc.

2. Lastly, the integration of the Blackboard Connect platform provides students the alerts and notifications they need to better manage academic priorities and course deadlines. Students can stay informed of vital course-specific updates and deadlines through the familiar Blackboard Learn interface.

    a. Company website: blackboard.com/learn

3. The OIT (Office of Instructional Technology) at Florida A&M University informed us that Blackboard 9.1 will be available in 2011 at the time of this study.

Discussion

In implementing these changes in the communication infrastructure of SBI's PLD program we ensure that our technologies continue to move forward. The business benefits of the implementation of this new infrastructure include:

- Increase awareness about SBI culture for perspective students, possibly increasing enrollment
- Improved communication within PLD for current students and faculty

- Enhance classroom activities by using blogs to communicate
- Easier integration into SBI, increasing retention rate among students within the School
- More pleasurable student experience as confusion is drastically decreased
- Increase professor capabilities (SBI does not allow PhD students to teach classes, which will allow additional time for professors to conduct research. With this system professors should have more time to conduct research although still not as much as professors at universities where graduate students do teach classes)

The purpose of the enhanced system is to improve the learning experience of students, streamline the communication process between faculty and students, and provide greater efficiency in the management and dissemination of information. The system involves gaining a comprehensive understanding on how information is collected, stored, updated, accessed and distributed updated. The study's objective was to create an infrastructure that will produce efficient management of information for the PLD faculty and students. Moreover, the new infrastructure will provide instruction to new and existing students as well as faculty to the SBI PLD culture and training for individuals who will be responsible for facilitating this process. Lastly, the improved online infrastructure will put in place procedures and processes that ensure the fulfillment of SBI and PLD's mission.

By enhancing the current system, the PLD department will operate more efficiently. Incorporating the new technologies will allow for a better flow of information throughout the whole infrastructure. The ability for updates to be immediately communicated to those affected, the culture of SBI to be at the fingertips of all who are interested and to incorporate new technologies in the classroom are all aspects that will not only enhance the system but SBI entirely.

As Blackboard 9.1 is implemented, some parts of this proposed infrastructure will become obsolete and will need to be discontinued. However, the proposed infrastructure will continue to be useful in communicating to outside parties as Blackboard 9.1 is a closed system only accessible by faculty and students. Thus, in order to satisfy all of our objectives it is important that we continue to utilize the Wiggio and Wiki sites.

Conclusions

The implemented infrastructure will be tremendous value added asset to the PLD program within the School of Business and Industry at Florida A&M University as it can be implemented with immaterial monetary cost. The cost-benefit analysis of the project, along with the rest of the feasibility assessment indicate that the infrastructure that is being proposed will prove to be cost effective; being that the use of social networks, in this instance Wiki pages, are mainly offered as free web accounts to the public. The new infrastructure calls for the utilization of technology and equipment that SBI already possess and students already have access to. These technologies include, computers, Internet access, mobile alerts, Blackboard 9.1 and much more.

The communication system for PLD will be enhanced considerably with the implementation of three-dimensional pedagogy infrastructure. The Wiggio and Wiki sites will be the primary tools used to implement these enhancements. These sites will enable students to stay

up-to-date with current events that are taking place within PLD, and have access to tools, which can enhance their job preparation. Two important tools, which the Wiggio site contains, are mobile alerts and the Master Calendar of PLD events. These tools will keep important information in student's possession in an adequate and timely manner. The Wiki site will allow student ran companies to place to post information and communicate effectively. Video conferencing and student blogs will allow students to have more hands on communication.

Communicating effectively between PLD and current students is the primary objective for introducing Wiggio and creating the Wiki site. However, recruitment efforts can be enhanced dramatically through this system as well.

As Blackboard 9.1 becomes available it is important that SBI proactively integrate its use into this new proposed system. The advantages of Blackboard 9.1 as well as its connection to the campus wide technology infrastructure will make this the best option going forward. The ability for the new Blackboard to support our objectives will eliminate the need for the technologies previously discussed. As the capabilities of Blackboard 9.1 capabilities become better incorporated and available it is important that the long-term recommendation is implemented and the outdated technologies are phased out.

References

Alexiou-Ray, J.,Wilson, E., Wright, V. & Peirano, A. "Changing Instructional Practice: The Impact of Technology Integration on Students, Parents, and School Personnel" Electronic Journal for the Integration of Technology in Education, 2003, retrieved 21st March 2008, http://ejite.isu.edu/Volume2No2/AlexRay.htm

Axon, Samuel. (February 23, 2010). Social Media Trends at Fortune 100 Companies. Retrieved March 18, 2011 from http://mashable.com/2010/02/23/fortune-100-social-media/.

Berk, R. (2010). How Do You Leverage the Latest Technologies, including Web 2.0 Tools, in Your Classroom? Retrieved from http://www.sicet.org/journals/ijttl/issue1001/1_Berk.pdf.

Blackboard.(2011) Building a Better Education Experience. Retrieved from http://www.blackboard.com/

Cannon, D., Davis, B., Ward, K., and Suarez-Brown, T. "Employing Resources to Enhance Academic Advisement" The Journal of Management and Engineering Integration, 2009, Vol 2, No. 2, 113-119.

Cobb, W. D., Washington, J., Twiggs, B., and Suarez, T. "Student Assessment and Initial Perceptions of Information Literacy at Florida A&M University" Proceedings of the 13th International Conference on Industry, Engineering and Management Systems, 2007, Cocoa Beach, FL.

Coverdale, J.K., and Zaver, J.S. "Bridging the IS Expectation Gap: Cognitive Learning Styles and the IS 2002 Curriculum" Issues in Information Systems, 2003, Vol. 4, No. 2, 423-429.

Finley-Hervey, J., Suarez-Brown, T, Thompson, F. "Exploring Neters' Perceptions and Usage of Online Social Networking Media" Journal of Business, Industry and Economics, 2009, Vol 12, 49-60.

Florida A & M University.(2011) Mission Statement. Retrieved from http://www.famu.edu/index.cfm?strategic

Florida A & M University.(2011) About the School of Business and Industry. Retrieved from http://www.famu.edu/index.cfm?sbi&About

Frydenberg, M. "Wikis as a Tool for Collaborative Course Management" MERLOT Journal of Online Learning and Teaching, 2008, Vol 4, No. 2.

Kask, B. (2009). Synchronous and Asynchronous Communication:Tools for Collaboration. Retrieved from http://sites.wiki.ubc.ca/etec510/Synchronous_and_Asynchronous_Communication:Tools_for_Collaboration

Kharbach, M. (2011). Wiggio: The Educative Way to Communicate and Work in Groups. Retrieved April 1, 2011 from http://educationaltech-med.blogspot.com/2011/01/wiggio-educative-way-to-communicate-and.html

Kosmicki, Elliot. (2010). How to Attract Younger Customers. Retrieved April 1, 2011 from http://goodplum.com/business/marketing/how-to-attract-younger-customers/.

Panke, Stephanie. (2010) Social Networking: Weaving the Web of Informal Ties. Retrieved March 18, 2011 from http://etcjournal.com/2010/02/01/social-networking-weaving-the-web-of-informal-ties/.

Polivy, L, and Lampert, D. Peer Review: Wiggio, Multimedia Educational Resource for Learning and Online Teaching. 2009. Retrieved April 1, 2011, from http://www.merlot.org/merlot/viewCompositeReview.htm?id=374744

Saba, Farhad. "Learning Management Systems of the Future: A Theoretical Framework and Design" Merlot Journal of Online Learning and Teaching, 2008, Vol 4, No. 2.

Smith, F. "How to Use Social-Networking Technologies for Learning" Edutopia, 2007, Retrieved April 2, 2011 from http://www.edutopia.org/how-use-social-networking-technology.

Suarez, T. "Access Grid Technology in Classroom and Research Environments" Special Issue on High Performance I/O Architectures and Systems. Journal of Supercomputing, 2007, Vol. 41, No. 2, 133-145.

Suarez, T., and Shabazz, D. "Three Dimensional Pedagogy for Business IT Education." Issues in Information Systems, 2004, Vol 5, No 2, 322-327.

Experiences in Teaching IS Online

Ronald MacKinnon, Georgia Southern University
Kevin Elder, Georgia Southern University

Abstract

There are many factors involved with teaching a traditional information systems courses but teaching information systems online offers many additional challenges. This paper will discuss the challenges involved in teaching information systems online based of several years of experience.

Background

This paper presumes that a faculty member has access to an online learning system like Blackboard/WebCT/GeorgiaView. The author of this paper has taught CISM 1120 Computer Concepts over 40 times over the past 10 years. He has mainly taught this course in a traditional face to face mode but has also taught this course at a blended/hybrid mode and in a completely on-line mode. This paper is based on the experiences of teaching this course in a completely on-line mode.

There are many on-line universities offering all on-line courses and most universities have been offering on-line courses for several years now. This paper might be helpful for faculty teaching on-line courses for the first time.

Online teaching is a rapidly changing field and it is not surprising that there are many references to online teaching challenges that are on the web. The references at the end of this paper are a selection of some relevant internet pages on online teaching challenges. There are hundreds of additional references that can be found with a Google search.

Cheating

There are many concerns that a faculty member teaching an online course for the first time might have. One of the most common concerns is cheating. If a faculty member gives quizzes and exams, can he/she be guaranteed that it is the student in his class completing the quiz or exam? The answer is no. The student registered for the course could have hired someone to complete the exam or the student could have a group of people help him/her.

Can you prevent cheating?

Yes but it can be expensive. If you have the quizzes and exams proctored there will be a minimum of cheating but it is expensive to provide proctors and it is not practical.

Can you at least minimize cheating?

Yes. A professor can put a time limit on each question so that a student will not have enough time to look up all the answers to questions and even several friends would have a difficult time looking up answers to exam questions.

Choosing consecutive questions for different chapters also makes it more difficult to look up answers to exam questions.

What are some problems with teaching completely on-line?

In a traditional or blended/hybrid course a professor can usually inform most of the students that they must print out the syllabus and course schedule and the professor can impress on how important it is to log into Blackboard/WebCT/GeorgiaView. However, in a completely online course there are a significantly larger number of students who do not print out the syllabus and the course schedule and they do not log into Blackboard. Since they do not print out the syllabus or the schedule these students have no idea of the assessment, quiz and exam schedules. They have no idea of dates for assignments, quizzes and exams. Since they do not log into to Blackboard it is often difficult for the professor to contact these students.

Having taught this Computer Concepts many times over the past 10 years, it has been my experience that for some reason there are more immature students in an online course who do not think that they are responsible for following instructions and meeting exam dates in the course syllabus.

Some students rarely read their course e-mail

Many students read Facebook several times a day but they often go days and even weeks without reading their course e-mail. The professor can send out reminders to the class for assignments, quizzes or exams but they are never read by some students.

Students do not login to blackboard/webct/georgiaview

Many times the course syllabus and schedules, quizzes and exams for online course are given on the Blackboard/WebCT/GeorgiaView software. When an online course student does not log into their online software system, they have no idea of what is expected to them in the course. It is surprising how shocked they are to find out that they were expected to complete assignments in an online course.

Due dates are ignored

Because some students do not print out their syllabus and course schedule, they have no idea of due dates for assignments. As a consequence, they are shocked to find out that online courses also have academic assignments with due dates.

False claims

It is much more common for some students in online courses to claim that they did the assignments or exams but the computer must have lost their assignments. These students do not seem to comprehend how the online software systems work. They do not know that every time they log into the online software the time they login is recorded, all the pages they look at are recorded and the time they logoff is recorded.. It is common to find out that the student did not even log into the online software on the date they claim that the computer lost their assignment.

Some students get belligerent

Some students have been advised by their friends that online courses are easy. You do not have to go to class, and your quizzes and exams are not monitored and you can get a high grade without a lot of work. When they find out that there are real assignments, quizzes and exams and a high grade is not guaranteed, they get belligerent stating that this is not what they signed up for.

Students "accidently" delete their e-mail

This is a common online problem for faculty but it can be remedied but is time consuming for faculty to find the missing message and to resend it to the student.

Faculty can sometimes delete students messages

This is a common problem with online courses and it is embarrassing. However, it is solvable but the software must have a backup so that the messages can be retrieved.

The professor can be swamped by e-mail messages

With large classes there will be a lot of e-mail messages on a regular basis. However, if anything goes wrong, there can a flood of messages. On the day of my first online exam, our server for GeorgiaView crashed. I immediately had 100+ messages asking me if I knew the server had crashed. When the server was not immediately available, I had another 100+ messages asking me what I was going to do. When the server was finally available, I had almost another 100 students sending me a message that they could not take the exam on the alternate exam dates and times. When the exams were finally completed I had another 100+ messages from GeorgiaView with the students grades. That is over 400 e-mail message for one exam that was supposed to be easy.

Faculty concern 1

Faculty who has never taught a completely online course is concerned that preparing a completely online course will take much more faculty time than a traditional course. It is the experience of the lead author of this paper that this is true. An online course takes much more time to prepare. Some faculty in published articles claim that it takes up to twice as much time to teach a completely online course (Hausler & Sanders, Problems and Solutions for Teaching Technology Online, April 2002.

Faculty concern 2

Faculty who teach a traditional course teach 2 or 3 times a week and have a few students e-mail them or come to their office to talk to them. With a completely online course, a faculty member is on duty 24/7. Students send the faculty member an e-mail message and they expect an immediate answer. This can be a considerable problem with a large class. Students often get irritated if they do not get an immediate reply to their message. This is especially true on a weekend when a faculty member is likely not on their computer all day.

Advice for online faculty

It is crucial that the online course syllabus state when the faculty member will be available to answer questions. The syllabus might state that the instructor will attempt to answer all questions within a 24 hour period and perhaps 48 hours on weekends. The faculty member must set some boundaries for online replies.

Blended/Hybrid courses

A blended/hybrid course is a course that is mainly online but can have a first class or classes where students get the required instructions for the course. Instead of online exams, exams can be given in the usual proctored manner.

Conclusion

Completely online courses present several challenges to faculty. Some students, especially first year students are not nature enough to complete online assignments and meet due dates. Blended/hybrid courses provide most of the advantages of completely online courses along with the advantage of meeting the students for the first class to make sure that students print out the course syllabus and schedule.

References

Berry, Roger W., "Meeting the Challenges of Teaching Large Online Classes: Shifting to a Learner-Focus" http://jolt.merlot.org/vol5no1/berry_0309.htm

Brink, T. L., "Online Teaching", APS Observer, September, 2001, http://www.psychologicalscience.org/observer/0901/tips.html

"Challenges to Teaching Online" http://members.shaw.ca/mdde615/chlngs.htm

"Confronting Challenges in Online Teaching: The WebQuest Solution" MERLOT Journal of Online Learning and Teaching Vol. 3, No. 1, March 2007 http://jolt.merlot.org/vol3no1/burchum.pdf

"Disconnected Interactions: Challenges in Teaching Online" http://www.businesscommunication.org/conventionsNew/ProceedingsNew/2003New/PDF/28ABC03.pdf

Drews, Patricia, "Challenges and Lessons Learned in Teaching an Online GIS Course", http://proceedings.esri.com/library/userconf/educ03/p5044.pdf

Haussler, Joel, Sanders, Jay, "Problems and Solutions for Teaching Technology Online", http://frank.mtsu.edu/~itconf/proceed02/42.html

Holly, Cheryl, Timothy J. Legg, Dale Mueller, Deborah S. Adelman, "Online Teaching: Challenges for a New Faculty Role" http://www.professionalnursing.org/article/S8755-7223%2807%2900177-9/abstract

Murphy, Tim, "Meeting the Challenges of International Online Teaching http://scholarspace.jccc.edu/cgi/viewcontent.cgi?article=1023&context=sidlit&sei-redir=1#search=%22problems+with+online+teaching%22

"My Biggest Challenge in Online Teaching is...", Teaching Geoscience Online, Virtual Workshop http://serc.carleton.edu/NAGTWorkshops/online2010/discussions/my_biggest_chal.html

Navarrette, Carlos J., Ruth A, Guthrie, "Challenges in Teaching Large Online Sections" http://aisel.aisnet.org/amcis2008/377/

"Online Course Delivery: Issues and Challenges" http://www.iacis.org/iis/2001_iis/pdf%20files/Haugen127.PDF

"Online Teaching Challenges, and Some Solutions" http://teachinggeography.wordpress.com/2010/09/13/online-teaching-challenges-and-some-solutions-part-one-of-a-series/#comments

Ritter, Greg, "Problems with Online Teaching, Teaching with Online Teaching", Teaching with Blackboard, Sept 5, 2007. http://www.niu.edu/blackboard/resources/onlineassessprobs.shtml

Simonson, Michael, "Teaching Courses Online A Challenge for the Field" , http://www.infoagepub.com/products/journals/qrde/articles/7-4_txt.pdf

"Standards for Quality Online Teaching", SREB's Educational Technology Cooperative http://publications.sreb.org/2006/06T02_Standards_Online_Teaching.pdf

"The Challenges of Teaching Online"' http://www.flo-joe.co.uk/teachers/articles/teaching_online.htm

"Transitioning from Traditional to Hybrid and Online Teaching"' http://library.nakanishi.ac.jp/kiyou/gaidai%2832%29/13.pdf

Turbill, Jan, "From Face-To-Face Teaching to Online Distance Education Classes: Some Challenges and Surprises". http://www.ascilite.org.au/conferences/auckland02/proceedings/papers/127.pdf

Business Cycle, Corporate Governance, and Bank Performance

Rong Guo, Columbus State University
Vicky Langston, Columbus State University
Linda Hadley, Columbus State University

Abstract

We argue that the corporate governance structure can have a different effect on the performance and asset quality of the financial industry at different stages of the business cycle. Our sample contains about 15,000 firm-year observations and covers two contraction periods, specifically, 1990-1991 and 2001 recession. We examine the relationship of our governance variables with the various performance measures and loan quality measures for economic contraction years and economic expansion years separately. Our empirical evidence supports our hypothesis that bank performance and asset quality are related to different corporate governance variables for different stages of business cycle.

Introduction

Most studies on corporate governance exclude firms in financial industry. An often cited reason is that the financial industry is a regulated industry; therefore corporate governance in this industry is not as important as in other industries. However, the 1994 Riegle-Neal Act and the 1999 Gramm-Leach Bliley Act deregulated the banking industry. With deregulation comes the increased expectation and burden of corporate governance structures to insure performance and manage risk taking. It is possible that we observe a more significant effect of corporate governance on the bank performance after the passage of these two acts.

The optimal corporate governance can differ across industries (Gertner and Kaplan, 1996; Romano, 1996; and Hermalin and Weisbach, 2003). Some corporate governance features can be good for a certain industry due to its specific industry characteristics, but may not be good for other industries. So it is more appropriate to study the corporate governance structure within a single industry than across different industries. As banks are required to report financial information in a uniform way to their regulators, banking industry can be very suitable to investigate the relationship of corporate governance system and the performance and risk taking in a particular industry.

The optimal corporate governance can also differ for different stages of the business cycle. Cornett, McNutt, and Tehranian (2010) examine the corporate governance system and the performance of publicly traded U.S. banks in the most recent financial crisis. They find that bank performance decreases dramatically after the crisis, and corporate governance variables such as CEO ownership and board independence weaken significantly around the crisis. As corporate governance variables change from expansion years to contraction years, we may find different effects from these variables for these two stages of business cycle.

Our paper takes a different direction from the prevailing literature in that we examine the significance of various governance factors on performance and risk taking during contraction phases and during expansion phases using data from 1990 to 2003 which includes two business cycles. We hypothesize that there may be significant differences in the role these factors play depending on the economy and what may be very sound structures during expansion phases may not be best during contractions and their aftermath. We examine two factors representing CEO dominance and three factors representing board size and makeup, as well as institutional ownership.

Literature review

The literature focuses on CEO pay, CEO ownership and the role the CEO plays on the Board. The literature has recognized that the dominance of the CEO can present an agency problem, but can also be a strong motivational factor in creating value. Nevertheless, the Board of Directors is the primary governance mechanism that oversees management decisions. It has been argued that when boards get bigger, they become more symbolic and less a part of the management process, thus the agency problems are more severe. More outside board members should increase firm value and manage risk better by providing expertise and objective opinions. The institutional investor group has a large ownership stake and thus has a strong incentive to monitor the managers and has a big impact on performance and risk taking.

CEO Dominance

CEO compensation and ownership can motivate the manager to create firm value and align the interest of managers and shareholders. Core, Holthausen, and Larcker (1999) find that CEO pay goes up with the number of outsiders appointed by the CEO, the number of directors over age 69, board size, and the number of busy directors (proxied by the number of additional directorships held by a director). It follows that firms that pay their CEOs higher compensation tend to have higher agency costs.

By owning the stocks of the bank they work for, CEO will be rewarded for good performance and punished for poor performance, so they are more motivated to make the right decisions and maximize shareholders' value. Previous studies have shown that CEO ownership is positively related to firm performance as measured by ROA or Tobin's q (e.g. Morck, Shleifer, Vishny, 1988; McConnell and Servaes; 1990, Mehran, 1995). The more recent literature focuses on the relationship of CEO ownership and risk taking behavior of banks. Without ownership of the bank, the CEOs may prefer playing it safe and are reluctant to take on risky projects that may benefit the shareholders. Saunders et al. (1990) document evidence that banks with higher CEO ownership usually takes more risk. Spong and Sullivan (2007) used a sample of state-chartered community banks in the Midwest and find that CEO ownership can improve banks' performance and encourage banks to take more risk.

Institutional Ownership

Institutional ownership represents the large blocks of shares owned by institutional investors such as mutual funds and pension funds. Due to their large ownership stake, institutional investors usually play an important monitoring role of corporate managers (Shleifer

and Vishny, 1997). As the depositors are protected from explicit deposit insurance and have few incentives to monitor the banks, the monitoring role of the institutional investors is more essential for the banks. Previous research has documented evidence that institutional ownership is positively related to shareholder's value (Smith, 1996), future operating performance (Coffee, 1991; Bushee, 1998), and bank performance (Elyasiani and Jia, 2008; Grove et al, 2009).

Board Characteristics

There is a cost for large board. For example, Jensen (1993) argues that larger board is less effective because of the free-riding problems. Yermack (1996) examines the relationship between the board size and Tobin's q after controlling for other variables that are likely to affect Tobin's q. He documents a significant negative relationship between board size and Tobin's q. However, large board can also be beneficial because of the increased pool of expertise and resources available to the firm. Adams and Mehran (2005) used a sample of banking firms during 1959-1999 and found that for banking firms, larger board is not associated with poor performance in terms of Tobin's q. Their results suggest that the advantages of larger board outweigh the costs for banking firms.

It is argued that outsiders on the board of directors act like referees between shareholders and managers (Fama, 1980). The prevailing empirical evidence implies that more outsiders on the board are related to better governance. In particular, Brickley and James (1987) find that more outsiders on the board can decrease managerial consumption of perquisites in the banking industry. Gillette, Noe, and Rebello (2003) find that uninformed outsiders on board can implement institutionally preferred policies if the board consists of a majority of outsiders. All these studies document evidence that more outsiders on boards can effectively reduce agency costs. Previous studies find that more outside board members are related to better stock returns and operating performance (Baysinger and Butler, 1985; Rosenstein and Wyatt, 1990; Byrd and Hickman, 1992; Cornett et al., 2006; and Ravina and Sapienza, 2009). However, Adams and Mehran (2005) find that there is not a significant relationship between board composition and performance for the banking firms.

According to Brickley et al. (1997), the CEO also serves as the chairman of the board (duality) for eighty percent of U.S. companies. This concentration of power can weaken the effective monitoring from the board of directors and is considered as an indicator of weak governance (Yermack, 1996; Larcker et al., 2007). Studies such as Carpeto et al. (2005) find the separation of the roles of CEO and chair of board can result in significant abnormal returns. However, separating the CEO and Chairman positions can be costly. For example, there are costs in monitoring the Chairman, costs of information sharing between CEO and the Chairman, and incentive costs related to the succession process in which the CEO is promised the Chairman title. Brickley, Coles, and Jarrell (1987) find that firms that combine the duties do not underperform those that separate them. They also find that for the firms that separate the titles, most of them eventually granted their good performing CEOs both titles. It follows that some firms use the title of Chairman as an incentive for new CEOs, and the difference in duality may largely reflect the cross-sectional differences in the timing of CEO successions.

Sample selection and descriptive statistics

We start with all commercial banks that are included in the Compustat dataset. We identify commercial bank as firms with SIC codes that are between 6000 and 6099. Then we merged with Compact disclosure dataset to get our corporate governance variables. Our final sample contains 11,517 firm-year observations from year 1990 through 2003. The fourteen year period covers two business cycles that allow us to study how the corporate governance variables affect bank performance and risk-taking behaviors differently for different stages of business cycle. We define the years when the economy is from peak to trough and the year after it as contraction years. The rest of the years in our sample are defined as expansion years. There are 3,780 firm-year observations for the contraction phases, and the remaining 7,737 observations for the expansion phases.

We use three different variables to measure bank performance. The first measure is the quality of revenue ratio (QOR), which is the ratio of cash collected from customers over the bank's reported revenues. Banks that lend money to borrowers with poor credit history, or book asset sales as revenue have lower quality of revenue ratio. The second measure is the return on assets, which is often used as an accounting-based performance measure. The third measure is Tobin's Q, which is calculated as the market value of a firm's assets divided by the book value of its assets. This variable is usually used as a market-based performance measure for firms.

There are two proxies for the riskiness of bank's assets: the loan loss reserve ratio (LAA) and the non-performing assets ratio (NPAA). The loan loss reserve ratio is the loan loss reserve scaled by total assets. It represents how much the net loan losses is relative to the average loans outstanding for a specific period of time. Non-performing assets refers to the loans on which the borrower is not current on payments (such as restructured loans, foreclosed properties and repossessions) and reflects the losses in the banks' loan portfolio. It is calculated as the ratio of non-performing assets over total assets.

The corporate governance variables are all computed using the data in Compact disclosure dataset. The CEO compensation, CEO ownership, board size, composition and duality, as well as institutional ownership are used as the basic corporate governance structure of the banking firms. To control for bank characteristics, we constructed bank size (natural log of total assets) and growth opportunities (book value to market value of bank's equity). Because the book value to market value of a bank's equity is highly correlated with Tobin's Q, this variable is excluded from the regression when Tobin's Q is the dependent variable.

Table 1 displays the summary statistics of bank characteristics and governance characteristics during contraction years and expansion years, separately. Our control variable, bank size, is larger for contraction years than for expansion years. This is consistent with the 'too big to fail' in the banking industry, and the fact that the larger banks are more likely to survive the hard time. The other control variable, book to market value, is higher for contraction years, which is also consistent with the fact that the market value usually falls during those years.

The lower ROA and Tobin's Q for contraction years can be related to the fact that firms are more reluctant to take on new projects during the economic downturn. There is also a lower non-performing assets ratio for contraction years, which may be related to the increased caution

and strictness for banks to extend loans during these years than during economic expansion years.

As to corporate governance characteristics, banks pay their CEO less and tend to have larger board in contraction years. The lower CEO pay is more likely to be a result of poor bank performance during the economic downturn, and the larger board in contraction years can be related to larger bank size for these years. The other corporate governance variables do not seem to be quite different for these two stages of business cycle. Unlike the study by Cornett, McNutt, and Tehranian (2010), which examines the most recent recession, we do not find any changes in CEO ownership and board composition.

Regression analysis is used to analyze the factors. The model used in both contraction and expansion years is

$$Z_{it} = a + b * X_{it} + c * Y_{it}$$

Where Z_{it} represents a performance or risk measure and X_{it} represents the control variables and Y_{it} represents CEO dominance factors, institutional ownership and board characteristics.

Results

Results regarding how the corporate governance characteristics affect bank performance and risk taking during contraction years are reported in Table 2. The first column shows the relationship of quality of revenue and corporate governance variables: the larger the board, the higher the quality of revenue. The board size is also positively related to return on assets and negatively related to non-performing assets. This implies that larger boards can be beneficial to firms in the banking industry. Specifically, a larger board can improve the quality of revenue and accounting-based revenue, and decrease non-performing assets.

Institutional ownership is the most important governance variable in explaining the bank performance and asset riskiness for contraction years. Except for the quality of revenue, all the other bank performance measures and asset riskiness measures are significantly related to institutional ownership. Higher institutional ownership is related to better firm performance and higher asset quality. It seems that institutional owners plays an essential role in monitoring the firms and is very effective in controlling agency costs and improving bank performance and asset quality in contraction years.

Another important corporate governance variable for contraction years is CEO compensation. CEO compensation is positively related to both the accounting-based performance and market-based performance, and is negatively related to the loan loss reserve ratio. CEO compensation may reflect CEO capability; then it follows that CEOs with higher capabilities will have better bank performance and loan quality.

CEO ownership aligns the interest of CEO with that of the shareholders, and CEOs with a big ownership stake will have a stronger incentive to increase firm value. It is shown that CEO

ownership has a positive effect on return on assets. However, CEO ownership also promotes risk taking. It is associated with an increased level of non-performing assets.

The board composition has the least effect on bank performance and asset quality for contraction years. It is only significantly related to the loan loss reserve ratio. The loan loss reserve ratio is higher for banks with more outsiders on board. This is inconsistent with the agency cost theory.

In sum, the institutional ownership, board size and CEO compensation are more important than other governance variables in explaining the bank performance and risk taking in contraction years.

Table 3 reports the relationship of bank performance and risk taking with corporate governance variables for expansion years. Column 1 indicates that banks that pay their CEO more and have a higher percentage of outsiders on board have better quality of revenue. This suggests that outside board members play a very important role for monitoring and consulting purposes and can improve the quality of revenue in expansion years. Now board size is no longer significant. This is different from our results for contraction years.

The most important governance variable for contraction years, institutional ownership becomes the least important for expansion years. It is only significantly related to return on assets. This implies that institutional owners are more vigilant in monitoring the banks they invest in during contraction years than during expansion years.

The least important governance variable for contraction years, the board composition, becomes one of the most important governance variables for expansion years. More outsiders on board are positively related to quality of revenue ratio and accounting-based performance, but it is also positively related to loan loss reserve ratio and non-performing assets. This indicates that outsiders on board that serve as the monitors of the firm can have a positive effect on bank performance, but it comes with a cost of poor asset quality.

The CEO ownership has a positive relation with all the performance measures and asset quality measures except for quality of revenue ratio. This is consistent with the previous finding that CEO ownership can enhance bank performance but it also encourage risk taking.

CEO compensation is positively related to all three performance measures and negatively related to loan loss reserve ratio, implying that the banks with more capable CEOs are usually have superior performance and loan quality.

Board size is positively associated with both accounting-based performance and market-based performance, and negatively associated with non-performing assets for expansion years. It seems that banks with larger board performed better and have fewer non-performing assets. This suggests that it is preferable for banks to have a large board. To summarize, board composition, CEO ownership, CEO compensation and board size play a more important role on bank performance and risk taking in expansion years.

Conclusion

This study investigates whether corporate governance variables can affect bank performance and risk taking differently for contraction years and for expansion years. We find that institutional ownership is the most important governance variable for contraction years, but is least important for expansion years. On the other hand, the board composition is the least important governance variable for contraction years, but it is one of the most important governance variables in explaining the bank performance and risk taking for expansion years. CEO ownership is also much more important for expansion years than contraction years. As to each performance measure and asset quality measure, it is also affected by different corporate governance variables for these two stages of business cycle. For example, quality of revenue ratio is only affected by board size for contraction years, but is affected by CEO compensation and board composition for expansion years. Two common factors across contraction and expansion phases is the larger the Board the better, and the more capable the CEO the better.

An important implication from this study is that we should focus on different governance variables for different stages of business cycle. Specifically, we should choose banks with higher institutional ownership during contraction years and choose banks with higher percentage of outside board members and higher CEO ownership during expansion years. But no matter which stage of business cycle, the larger board and more capable CEO are always beneficial to the banks.

References

Adams, R. and H. Mehran, "Is Corporate Governance Different for Bank Holding Companies?", Economic Policy Review, Federal Reserve Bank of New York, 2003, 123-142.

Adams, Renee B., and Hamid Mehran, "Corporate Performance, Board Structure and its Determinants in the Banking Industry", 2005, available at SSRN: papers.ssrn.com/Sol3/papers.cfm?abstract_id=302593

Baysinger, B.D. and H. Butler, "Corporate Governance and the Board of Directors: Performance Effects of Changes in Board Composition", The Journal of Law, Economics, and Organization, 1985,Vol. 1, 101-124.

Brickley, James. and Christopher James, "The takeover market, corporate board composition, and ownership structure: The case of banking", Journal of Law and Economic, 1987, Vol.30, 161-180.

Brickley, James, Jeffery Coles, and Gregg Jarrell, "Leadership structure: Separating the CEO and Chairman of the board", Journal of Corporate Finance, 1997, Vol.3, 189-220.

Bryd, J., and K. Hickman, Do outside directors monitor managers? Evidence from tender offer bids, Journalof Financial Economics, 1992, Vol 32, 195-222.

Bushee, B., "The Influence of Institutional Investors on Myopic R&D Investment Behavior", The Accounting Review, 1998, Vol. 73, 305-333.

Carapeto, M., M.A. Lasfer, and K. Machera, "Does duality destroy value? Cass Business School Research Paper, 2005, available at SSRN: http://ssrn.com/abstract=686707.

Coffee, J., "Liquidity versus Control: The Institutional Investor as Corporate Monitor", Columbia Law Review, 1991, Vol. 91, 1277-1368.

Core, John, Robert Holthausen, and David Larcker, "Corporate governance, chief executive officer compensation, and firm performance", Journal of Financial Economics, 1999, Vol.51, 371-406.

Cornett, M.M., J.J. McNutt, and H. Tehranian, "Performance changes around bank mergers: Revenue enhancements versus cost reductions", Journal of Money, Credit, and Banking, 2006, Vol 38, 1013-1050.

Cornett, Marcia M., Jamie John McNutt, and Hassan Tehranian, "The Financial Crisis, Internal Corporate Governance, and the Performance of Publicly-Traded U.S. Bank Holding Companies, 2010, available at SSRN: papers.ssrn.com/sol3/papers.cfm?abstract_id=1476969

Elyasiani, E. and J.J. Jia, "Institutional Ownership Stability and BHC Performance", Journal of Banking & Finance, 2008, Vol. 32, 1767–1781.

Fama, Eugene, "Agency problems and the theory of the firm", Journal of Political Economy, 1980, Vol.88, 288-307.

Gertner, R. and Kaplan, S. "The Value-Maximizing Board." Working Paper, University of Chicago and NBER, 1996.

Gillette, Ann B., Thomas H. Noe , and Michael J. Rebello, "Corporate board composition, protocols, and voting behavior: Experimental evidence", Journal of Finance, 2003, Vol.58, 1997-2031.

Grove, Hugh, Lorenzo Patelli, Lisa M. Victoravich, Pisun Xu, "Corporate Governance and Performance: Evidence from U.S. Commercial Banks", 2009, available at www.mfa-

2010.com/.../governance%20and%20bank%20performance.pdf

Hermalin, B. and Weisbach, M. "Boards of Directors as an Endogenously-Determined Institution: A Survey of the Economic Literature." Economic Policy Review, 2003, Vol. 9, 7-26.

Jensen, M. "The modern industrial revolution, exit, and the failure of internal control systems." Journal of Finance, 1993, Vol.48, 831-880.

Larcker, D.F., S.A. Richardson, and I. Tuna, "Corporate Governance, Accounting Outcomes, and Organizational Performance", The Accounting Review, 2007, Vol. 82, 963-1008.

McConnell, J. and Servaes, H. "Additional evidence on equity ownership and corporate value." Journal of Financial Economics, 1990, Vol. 27, 595-612.

Mehran, H.. "Executive compensation structure, ownership and firm performance." Journal of Financial Economics, 1995, Vol.38, 163-184.

Morck, R., Shleifer, A. and Vishny, R. "Management Ownership and Market Valuation: An Empirical Analysis." Journal of Financial Economics, 1988, Vol.20, 293-315.

Ravina, E., and P. Sapienza, What do independent directors know? Evidence from their trading, Review of Financial Studies, 2009,forthcoming Vol.35

Romano, R. "Corporate Law and Corporate Governance." Industrial and Corporate Change, 1996, Vol.2, 277-337.

Rosenstein, S., and J.G. Wyatt, Outside directors, board independence, and shareholder wealth, Journal of Financial Economics, 1990, Vol.26, 175-191.

Saunders, A., F., Strock and N. Travlos, "Ownership Structure, Deregulation and Bank Risktaking", Journal of Finance, 1990, Vol. 45, 643–654.

Shleifer, A. and R.W. Vishny, "A Survey of Corporate Governance", The Journal of Finance, 1997, Vol. 52, 737-783.

Smith, M., "Shareholder Activism by Institutional Investors: Evidence from CalPERS", The Journal of Finance, 1996, Vol. 51, 227-252.

Spong, Kenneth R., AND Richard J. Sullivan, "Corporate Governance and Bank Performance", 2007, available at SSRN: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1011068.

Weisbach, Michael, "Outside directors and CEO turnover", Journal of Financial Economics, 1988, Vol. 20, 431-460.

Yermack, D. , "Higher Market Valuation of Companies with a Small Board of Directors", Journal of Financial Economics, 1996, Vol. 40, 185-211.

Table 1. Summary Statistics of Firms in Contraction Years and in Expansion Years

This table displays summary statistics of the firm characteristics and governance characteristics for firms split by contraction years and expansion years. Contraction years include years from peak to trough and the year after it. *LSIZE* is the natural Log of total assets, *QOR* is the ratio of cash collected from customers and the firm's revenue; *ROA* is income before extraordinary items over total assets; *TOBINQ* is the market value to the book value of assets; *LAA* is the loan allowance over total assets; *NPAA* is the ratio of non-performing assets to total assets; *BKTOMK* is the book value to market value of total assets. *PAY, CEOOWN, BINS, NUMDIR, DUAL, and INST* are from the Compact Disclosure dataset. *PAY* (in thousands) is CEO compensation; *BINS* is the percentage of insiders on board; *NUMDIR* is the board size; *DUAL* is a dummy variable that takes the value one if the CEO is also the Chair of the Board, and is zero otherwise; and *INST is* percentage ownership by institutions. The table includes 11,517 firm-year observations from 1990 through 2003. 3,780 of these belong to contraction years, and the remaining 7,737 belong to expansion years. The difference in mean (median) is conducted using a t-test (Wilcoxon two-sample z-test).

Variable	Contraction (N=3780)			Expansion (N=7737)			Difference (Contraction-Expansions)	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	T-Stat	Z-Stat
LSIZE	7.433	7.196	1.776	6.903	6.527	1.730	12.33[a]	13.84[a]
QOR	3.384	0.574	17.163	2.768	0.216	14.994	1.39	11.69[a]
ROA	0.021	0.021	0.011	0.022	0.022	0.010	-6.70[a]	-7.68[a]
TOBIN Q	1.039	1.023	0.077	1.057	1.040	0.082	-9.26[a]	-12.05[a]
LAA	0.010	0.009	0.006	0.009	0.008	0.005	6.85[a]	6.26[a]
NPAA	0.007	0.005	0.009	0.008	0.005	0.010	-3.92[a]	-2.87[a]
BKTOM K	0.966	0.977	0.059	0.951	0.962	0.063	10.56[a]	12.05[a]
PAY	476.3	273.4	686.4	542.1	285.5	765.4	-4.09[a]	-4.30[a]
CEOOW N	0.019	0.006	0.039	0.020	0.008	0.036	-0.33	-3.22[a]
BINS	0.270	0.214	0.222	0.264	0.222	0.191	1.33	-2.33[b]
NUMDI R	10.711	10.000	4.928	10.342	9.000	4.704	3.82[a]	4.53[a]
DUAL	0.454	0.000	0.498	0.437	0.000	0.496	1.62	1.62
INST	17.698	11.040	18.933	17.205	11.375	18.123	1.23	0.27

[a]: Significant at 1% level;. [b]: Significant at 5% level;. [c]: Significant at 10% level.

Table 2. Bank Performance and Risk Taking with Governance Factors: Contraction Years

This table displays regression analysis of bank performance and governance factors split by contraction years and expansion years. Contraction years include years from peak to trough and the year after it. *LSIZE* is the natural Log of total assets, *QOR* is the ratio of cash collected from customers and the firm's revenue; *ROA* is income before extraordinary items over total assets; *TOBINQ* is the market value to the book value of assets; *LAA* is the loan allowance over total assets; *NPAA* is the ratio of non-performing assets to total assets; *BKTOMK* is the book value to market value of total assets. *PAY, CEOOWN, BINS, NUMDIR, DUAL, and INST* are from the Compact Disclosure dataset. *PAY* is CEO compensation; *BINS* is the percentage of insiders on board; *NUMDIR* is the board size; *DUAL* is a dummy variable that takes the value one if the CEO is also the Chair of the Board, and is zero otherwise; and *INST is* percentage ownership by institutions. Value is the parameter value of each regression.

	(1)QOR		(2)ROA		(3)TOBINQ		(4)LAA		(5)NPAA	
Variable	Value	T-stat	Value	T-stat	Value	T-stat	Value	T-stat	Value	T-stat
PAY	0.0000	-1.25	0.0000[a]	2.59	0.0000[a]	10.78	0.0000[c]	-1.79	0.0000	0.93
CEOOWN	-6.2259	-0.45	0.0209[a]	2.89	-0.0639	-1.15	0.0013	0.31	0.0169[a]	3.06
BINS	-3.0134	-1.33	-0.0006	-0.46	0.0006	0.06	-0.0019[a]	-2.72	0.0011	1.28
NUMDIR	0.3029[b]	1.96	0.0001[c]	1.69	-0.0002	-0.29	0.0000	0.95	-0.0002[b]	-2.23
DUAL	1.3923	1.12	-0.0005	-0.69	-0.0039	-0.81	0.0004	1.01	-0.0006	-1.28
INST	-0.0187	-0.44	0.0001[a]	2.72	0.0005[a]	3.13	0.0000[a]	-3.42	0.0000[b]	-2.06
LSIZE	0.0731	0.11	-0.0003	-0.87	-0.0131[a]	-4.97	0.0017[a]	8.03	0.0009[a]	3.17
BKTOMK	2.0977	0.21	-0.0773[a]	-14.68			0.0116[a]	3.18	0.0341[a]	6.57

[a]: Significant at 1% level;. [b]: Significant at 5% level;. [c]: Significant at 10% level.

Table 3. Bank Performance and Risk Taking with Governance Factors: Expansion Years

This table displays regression analysis of bank performance and governance factors split by contraction years and expansion years. Contraction years include years from peak to trough and the year after it. *LSIZE* is the natural Log of total assets, *QOR* is the ratio of cash collected from customers and the firm's revenue; *ROA* is income before extraordinary items over total assets; *TOBINQ* is the market value to the book value of assets; *LAA* is the loan allowance over total assets; *NPAA* is the ratio of non-performing assets to total assets; *BKTOMK* is the book value to market value of total assets. *PAY, CEOOWN, BINS, NUMDIR, DUAL, and INST* are from the Compact Disclosure dataset. *PAY* is CEO compensation; *BINS* is the percentage of insiders on board; *NUMDIR* is the board size; *DUAL* is a dummy variable that takes the value one if the CEO is also the Chair of the Board, and is zero otherwise; and *INST is* percentage ownership by institutions. Value is the parameter value of each regression.

	(1)QOR		(2)ROA		(3)TOBINQ		(4)LAA		(5)NPAA	
Variable	Value	T-stat	Value	T-stat	Value	T-stat	Value	T-stat	Value	T-stat
PAY	0.0000[b]	2.49	0.0000[a]	7.38	0.0000[a]	11.30	0.0000[b]	-2.35	0.0000	0.19
CEOOWN	-8.4411	-1.33	0.0194[a]	4.56	0.1469[a]	3.52	0.0105[a]	4.04	0.0303[a]	6.00
BINS	-3.0459[b]	-2.26	-0.0027[a]	-2.96	0.0030	0.34	-0.0022[a]	-3.97	-0.0041[a]	-3.89
NUMDIR	0.0783	1.21	0.0002[a]	3.50	0.0013[a]	3.03	0.0002[a]	6.39	-0.0001[b]	-2.41
DUAL	0.1085	0.23	-0.0001	-0.28	0.0059[c]	1.88	0.0000	-0.08	0.0004	1.01
INST	0.0107	0.63	0.0000[a]	3.50	-0.0002	-1.47	0.0000	-0.54	0.0000	0.16
LSIZE	-1.4776[a]	-5.62	-0.0011[a]	-6.14	0.0020	1.15	0.0004[a]	3.98	0.0000	0.10
BKTOMK	14.3757[a]	3.96	-0.0662[a]	-27.22			-0.0041[b]	-2.43	0.0318[a]	9.70

[a]: Significant at 1% level;. [b]: Significant at 5% level;. [c]: Significant at 10% level.

Preferential Trade Agreement and Strategic Environmental Policy

Manabendra Dasgupta, University of Alabama at Birmingham
Seung Dong Lee, University of Alabama at Birmingham

Abstract

We use a three country-one good oligopoly model to analyze the impact of a free trade areas (FTA) between countries 1 and 2 on tariff and pollution tax in the presence of both local and trans-boundary pollution. We show that FTA between countries 1 and 2 does not necessarily lower tariff imposed by FTA members on country 3 while tariff imposed by country 3(rest of the world) will higher. Furthermore, FTA will lower pollution tax imposed by FTA members while it will raise tax imposed by rest of the world. We show that under FTA while environmental tax is lower for all three countries tariffs imposed by FTA members are lower but tariff imposed by country 3 is higher.

Keywords: FTA; Trans-boundary Pollution; Optimum tariff; Environmental tax; welfare; Imperfect competition.

JEL Classification Codes: F10; F13; F15

Introduction

The growing body of literature on preferential trade agreement (PTA) and strategic environmental policy has analyzed the impact of trade liberalization on tariff and environmental tax or pollution tax (see Bakshi and Ray Choudhury(2008), Bagwell and Staiger(1997), Barrett(1994), Bond et al(2004), Burguet and Sempere(2003), Freund(2000), Hamilton and Raquate(2004), Kennedy(1994), Krishna(1998), Panagaria(2000), Tanguay(2001)). In the literature on PTA several authors, using a three country-one good Cournot oligopoly model, have shown that free trade areas, FTA, (PTA with zero tariff) where two of the three countries remove tariff on each other ‘s import will lead to a lower tariff imposed by FTA members while leaving tariff imposed by the third country (rest of the world) unchanged (see Krishna(1998), Bagwell and Staiger(1997)). Bond et al(2004) has also shown that FTA induces members to reduce tariff while rest of the world may increase tariff. In the literature on strategic environmental policy Barrett(1994) and Kennedy(1994) have shown that bilateral tariff reduction will lower environmental tax. This is known as “ecological dumping”. In the absence of tariff environmental tax may be used as a rent extracting instrument. In other words, by lowering tax environmental policy is being used as a substitute for trade policy to give domestic firm a competitive advantage. While Tanguay(2001) and Bakshi and Ray Choudhury(2008) have incorporated trans-boundary pollution in a Cournot duopoly model and confirmed that trade liberalization will lower environmental tax, Burguet and Sempere(2003) used a model with local pollution to argue that tax may increase under certain conditions. A bilateral reduction in tariff will increase output and lower price. But it also damages environment. This reduces the incentive

for the government to use environmental policy strategically to gain competitive advantage and increases incentive for higher environmental protection. On the other hand, lower tariff revenue reduces appeal for import and increases that of export and thus reduces incentive for environmental protection. The effect on environmental tax depends on these two opposite effects. As Burguet and Sempere(2003) have shown, either of these effects can dominate.

While models used in Krishna(1998), Bond et al (20040 and Freund(200) do not consider the implication of environmental damage, the literature on strategic environmental policy uses a duopoly model and thus ignore the possibility of trade diversion. Furthermore, Barrett(1994), Burguet and Sempere(2003), Hamilton and Raquate(2004) and Kennedy(1994) only consider local pollution. In this paper, we incorporate both local and trans-boundary pollution in a three country-one good Cournot oligopoly model to analyze the impact of an FTA on tariff and tax. Our findings regarding tariff are two-fold. First, trans-boundary pollution leads to a lower optimum tariff. Secondly, while FTA may or may not lower tariff imposed by FTA members, tariff imposed by rest of the world (third country) will definitely increase. This contradicts "tariff complementarity effect" suggested by Bagwell and Staiger(1997). Finally, we show that while in FTA members it raises tax in rest of the world.

The paper is organized as follows. In the second section, we provide the basic model and In section III, we derive optimum tariff and tax and analyze the effect of FTA on tariff and tax.. In the last section we provide some concluding remarks.

The Model

We consider a reciprocal dumping model of trade (see Brander-Krugman (1983) and Brander-Spencer (1985)) with three firms located in three countries, Home (1), Foreign (2) and Rest of the World (3). Each firm sells in all three countries. In each of the countries, demand for the good is given by an inverse demand function,

$P_j = A_j - \sum_i q_j^i$, i,j = 1, 2, 3, where q_j^i represents output sold by firm i in jth market.

In each country government maximizes welfare by choosing environmental tax, e^i and import tariff, t^i with i = 1, 2, 3. We assume that d_i, for i = 1, 2, 3, represents damage caused by pollution emitted by each unit of output. We simplify the analysis by assuming constant and identical marginal costs of production and marginal damages in all three countries given as follows:

$$c_i = c \text{ and } d_i = d \text{ for } i = 1, 2, 3.$$

We also assume[1] that $(A_j - c - d) > 0$ for j = 1, 2, 3. Following Burquet and Sempere (2003), Hamilton and Requet (2004) and Tanguay (2001), we consider a two-stage game. In the first stage Home, Foreign and Rest of the world governments choose e^i and t^i for i = 1, 2, 3. In the second stage, after observing the choices of the first stage, firms choose their output. It needs to be pointed out that while Burguet and Sempere (2003), Hamilton and Requate (2004) and

Tanguay (2001) use a two-country model with Hamilton and Requate (2004) introducing an intermediate good. Our paper extends their model to include a third country but does not include intermediate good. Finally , we incorporate trans-boundary pollution following Tanguay (2001) and Ray Chowdhury and Baksi (2008).

Main Results

Optimal Tariff and Tax.

We solve the second stage first. Firm j chooses q_i^j for i, j = 1, 2, 3 by maximizing profit, π^j, given t^i and e^j where $\pi^j = \sum_i [A_i - Q_i - c_i] q_i^j - \sum_{i \neq j} t^i q_i^j - e^j Q^j$ for i , j =1, 2, 3. Note that $Q_i = \sum_j q_i^j$, $Q^j = \sum_i q_i^j$, e^j and t^i represent consumption in ith nation, production in jth nation, environmental tax in jth nation and tariff imposed by ith nation respectively. Given t^i and e^j , i , j = 1, 2, 3, first order conditions (F.O.Cs) yield the following solutions for q_i^j :

$$q_i^j = \frac{1}{4}\left\{A_i - c - 2t^i - 3e^j + \sum_{i \neq j} e^j\right\}$$

$$q_i^i = \frac{1}{4}\left\{A_i - c + 2t^i - 3e^i + \sum_{i \neq j} e^j\right\} \qquad (1)$$

Finally, note that $\pi^j = \sum_i (q_i^j)^2$ for i , j=1, 2, 3.

Government, in the first stage, maximizes welfare, W_i , and chooses t^i and e^i where,

$$W_i = CS_i + \pi^i + TR_i + e^i Q^i - d\,Qi - rd \sum_{i \neq i} Q^i$$

Note, for all i, j =1, 2, 3, $CS_i = \frac{1}{2}(A_i - P_i)Q_i = \frac{1}{2}Q_i^2$, $TR_i = t^i \sum_{i \neq j} q_i^j$, $e^i Q^i$ and dQ^i represent consumers' surplus, tariff revenue, tax revenue and environmental damage respectively. Trans-boundary pollution is introduced through the parameter r where r represents fraction of total costs of foreign pollution that enters national welfare. Also, following Bruguet and Sempere (2003) we assume that all three countries have identical demand. That is, A_j =A for all j = 1, 2, 3.

Using (1), FOCs yield the following solutions for optimum tariff , tax and output, for all i,j,k =1, 2, 3; k≠ i and k≠ j,

$$e^i = d - 0.1875\,(A - c - d) - 0.375rd$$

$$q_i^i = 0.25\,(A - c - 3e^i + \sum e^j + \sum t_j^i)$$

$$q_j^i = 0.25\,(A - c - 3e^i + \sum e^j - 3t_i^j + t_k^j)$$

$$Q^i = Q_i = 0.75(A - c - e) - 0.5t^i \qquad (2)$$

Note that if $r = 0$ then t^i = 0.2812(A – c – d) and e^i = d – 0.1875(A – c – d). Therefore, it follows that trans-boundary pollution lowers both optimum tariff and tax. Introduction of trans-boundary pollution leads to two opposite effects on national welfare in terms of environmental damage and firms' profits. On the one hand, since $r < 1$, increase in pollution cost due to increase in domestic production is higher than increase in pollution cost due to increase in import. Therefore, national governments have an incentive to lower tariff to encourage import and discourage domestic production. On the other hand, lower tariff also lowers domestic output and hence lowers profit. Therefore, governments have an incentive to encourage domestic production and discourage import by raising tariff. It is clear that trans-boundary pollution effect dominates the profit effect. This leads to a lower optimum tariff. A similar argument also explains why pollution tax is lower with trans-boundary pollution. A lower tax makes domestic production more attractive and import less attractive. Hence local pollution increases and trans-boundary pollution decreases. Again higher domestic output leads to higher profit. A higher tax has the opposite effect. Therefore, in the case of tax, the profit effect dominates leading to a lower optimum tax.

From (1) and (2), it is clear that higher (resp. lower) marginal damage will result in higher (resp. lower) environmental tax and lower (resp. higher) domestic output. Also, higher (resp. lower) marginal damage will lead to lower (resp. higher) optimum tariff. Note that relatively higher marginal damage will make domestic production relatively less attractive and import relatively more attractive. Hence, government has an incentive to encourage import by lowering tariff. In fact, if marginal damage is high enough, optimum tariff may be negative. In other words, an import subsidy may be optimum. These results are consistent with those obtained in the literature.

Effect of FTA on tariff and pollution tax

In this section we analyze the impact of trade liberalization on tariff and tax where two of the three countries form an FTA among themselves. Suppose, without loss of generality, countries 1 and 2 form an FTA where they remove tariff on import from each other while maintaining tariff on import from country 3. We denote tariff imposed on imports from country 3 by countries 1 and 2 by t_F^1 and t_F^2 respectively. Also, t_F^3 represents tariff imposed on imports from countries 1 and 2 by country 3. We let, for i = 1, 2, 3, Q^{iF}, Q_{iF}, q_{iF}^j and e^{iF} represent consumption, production, output and tax respectively under FTA.

In the second stage firms maximize profit under FTA, π_F^i, given by, for i , j = 1, 2, i≠ j

$$\pi_F^i = \sum_j (A_j - Q_{jF} - c)q_i^j - (A_3 - Q_{3F} - c - t^3)q_{iF}^3 - e^{iF}Q^{iF} \text{ and}$$

$$\pi_F^3 = \sum_i (A_i - Q_{iF} - c - t^i)q_i^3 - (A_3 - Q_F^3 - c)q_{3F}^3 - e^{3F}Q^{3F}$$

FOCs yield the following solutions for i , j =1, 2 and k = 1, 2, 3,i≠ j

$$q_{jF}^i = \frac{1}{4}(A_j - c - 3e^i + \sum_{k \neq i} e^k + t^j)$$

$$q_{3F}^{3} = \frac{1}{4}(A_3 - c - 3e^3 + \sum_i e^i + 2t^3) \quad (3)$$

For i = 1, 2, 3, letting CS_{iF} and TR_{iF} denote consumers' surplus and tariff revenue respectively under FTA, governments choose tariff and tax, t^{iF} and e^{iF} respectively, by maximizing W_{iF}, welfare under FTA where, for j=1, 2, 3,

$$W_{iF} = CS_{iF} + \pi_F^i + TR_{iF} + (e_F^i - d)Q_F^i - rd(\sum_{i \neq j} Q^j)$$

Optimal tariff and tax are given as follows. For i,j =1,2 and i $\neq$ j,

$$t_F^i = 0.0764(A - c - d) + 0.1905rd$$
$$t_F^3 = 0.3055(A - c - d) + 0.7944rd$$
$$e_F^i = d - 0.3076(A - c - d) - 0.8204rd$$
$$e_F^3 = d - 0.1867(A - c - d) + 1.99rd \quad (4)$$

From (4), it is clear that in the absence of trans-boundary pollution (r = 0) higher (resp. lower)marginal damage leads to lower (resp. higher) tariff and higher (resp. lower) tax. Therefore, in the absence of trans-boundary pollution, marginal damage and tariff are inversely related (Dasgupta and Lee (2010)). But the relation between marginal damage and tariff is not so clear once trans-boundary pollution is introduced in the model. It can be easily checked that for tariff to be inversely related to marginal damage a necessary condition is $r < 0.4$.It is interesting to note that same condition holds for both FTA members and the rest of the world (country 3). As damage increases domestic production becomes less attractive relative to import since $r < 1$. However, as r becomes large ($r > 0.4$) cost imposed by trans-boundary pollution may become large enough to induce national governments to raise tariff (rather than lower tariff) in response to higher damage. Note that since $r < 1$ it is clear from (4) that the direct relation between marginal damage and tax holds for all three countries even in the presence of trans-boundary pollution.

Next, we consider the effect of FTA on tariff and tax in the presence of trans-boundary pollution. From (2) and (4) we get, for i=1,2,

$$t_F^i - t^i = 0.9405rd - 0.2048\,(A - c - d) \quad (5)$$

It follows from (5) that $t_F^i \gtreqless t^i$ if and only if $\frac{rd}{(A-c-d)} \gtreqless 0.22$.

This result is a departure from the one obtained in literature on preferential trade agreement (see Bond et al(2004)) which states that an FTA lowers tariff imposed by FTA members on rest of the world. This is well-known tariff-complementarity effect (see Bagwell and Staiger(1997)). From (5), it is clear that if $r = 0$ tariff-complementarity effect continues to hold. However, in the presence of trans-boundary pollution, this result may or may not hold. A bilateral removal of tariff by countries 1 and 2 will result in higher import into these countries. This will also lead to higher pollution since $r > 0$. If $r > 0.22\,\frac{(A-c-d)}{d}$, FTA-members have

incentive to reduce import from the rest of the world. This explains why, for a high *r*, countries 1 and 2 may raise tariff on country 3. Again, using (2) and (4) we get

$$t_F^3 - t^3 = 0.0243(A - c - d) + 1.5444rd \qquad (6)$$

Since (6) is positive, for country 3, an FTA between countries 1 and 2 clearly leads to higher tariff. This differs from the result found in the literature on preferential trade agreement where an FTA between countries 1 and 2 leaves tariff imposed by country 3 unchanged(Bagwell and Staiger(1997) and Dasgupta and Lee(2011)). However, it is consistent with the result found in preferential trade literature when only local pollution is considered (*r = 0)*.

Finally, we consider the effect of an FTA between countries 1 and 2 on tax.

From (2) and (4) we get,

$$e_L^F - e^L = -.1201(A - c - d) - 0.4454rd \qquad (7)$$

Clearly,($e_F^i - e^i$) < 0. This is consistent with one of the main results of strategic environmental policy literature which states that trade liberalization lowers environmental protection by lowering pollution tax (see Barrett (1994), Kennedy (1994)). It appears that trans-boundary pollution provides an additional reason to encourage domestic production. This is especially true given that tariff as an instrument of protection against each other is no longer available for the FTA members. However, comparing (4) with (2) shows that
$(e^3 - e_F^3) < 0$

FTA between countries 1 and 2 raises tax in the rest of the world (country 3). We have shown elsewhere that if only local pollution is considered FTA between countries 1 and 2 will lower tax in rest of the world (see Dasgupta and Lee (2010)). It is well-known that both tariff and tax can be used to protect domestic industries by raising tariff and/or lowering tax. However, the presence of trans-boundary pollution and higher tariff make pollution tax less attractive and less necessary as an instrument of protection of domestic industry.

Conclusion

We have shown, using a three country -one good model, that in the presence of trans-boundary pollution an FTA between two of the three countries does not necessarily lower tariff imposed by FTA members on rest of the world (country 3) while tariff imposed by rest of the world will definitely increase. Therefore results obtained in preferential trade literature (see Krishna (1998), Bond et al (2004)) do not necessarily hold when both local and trans-boundary pollution are present. Also, results in strategic environmental policy literature indicate that free trade leads to lowering of environmental tax. Although this result continues to hold for FTA members in our model it does not hold for rest of the world where an FTA leads to a higher environmental tax. When trans-boundary pollution is introduced it adds an additional dimension to the tradeoff between domestic production and import. Domestic production means higher profit and higher damage while, since *r <1,* import means lower damage than domestic

production but also lower profit. Therefore, the final outcome regarding tariff and tax depends on relative strength of profit and environmental damage.

References

Antweiler,W, B. R. Copeland and M. S. Taylor. "Is Free Trade Good for Environment?" American Economic Review, 2001, Vol. 91, 877-908.

Bakshi,Soham and Amrita Ray Chaudhury. "Trans-boundary Pollution, Trade Liberalization, and Environmental Taxes" Mimeographed. 2008. Tilburg University.

Bagwell,K and R. Staiger. "Multilateral Tariff Cooperation During the Formation of Free Trade Areas" International Economic Review, 1997, Vol.38, 291-319.

Barrett, S. "Strategic Environmental Policy and International Trade" Journal of Public Economics, 1994, Vol.54, 325-338

Brander, J and P. Krugman. "A Reciprocal Dumping Model of International Trade" Journal of International Economics, 1983, Vol. 17, 313-321.

Bond, E. W, R.G. Riezman and C. Syropoulos. "A Strategic and Welfare Theoretic Analysis of Free Trade Areas" Journal of International Economics, 2004, Vol. 64, 1-27.

Brander, J and B. Spencer. "Tariff Protection and Imperfect Competition" in: H. Kierzkowski (Ed), Monopolistic Competition in International Trade, Oxford University Press, Oxford, 1985.

Brander, J and B. Spencer. "Export Subsidies and Export Share Rivalry" Journal of International Economics, 1985, Vol. 18, 83-100.

Burguet, R and J. Sempere. "Trade Liberalization, Environmental Policy and Welfare" Journal of Environmental Economics and Management, 2003, Vol. 46, 25-37.

Dasgupta, M. and S. D. Lee. "Trade Liberalization, Welfare and Negative Externalities" Proceedings of SOBIE Annual Meetings, 2010, 104-109.

Dasgupta, M. and S. D. Lee. "Regionalism, Trade Liberalization and Imperfect Markets" Journal of Business, Industry and Economics. 2011, Vol. 16, 31-46.

Freund,C. "Multilateralism and Endogenous Formation of Preferential Trade Agreement" Journal International Economics, 2000,52: 359-376

Hamilton, S and T. Requate. "Vertical Structure and Strategic Environmental Policy" Journal of Environmental Economics and Management, 2004, Vol. 47, 260-269.

Kennedy, P. W. "Equilibrium Pollution Taxes in Open Economies with Imperfect Competition" Journal of Environmental Economics and Management, 1994, Vol. 27, 49-63.

Krishna, P. "Regionalism and Multilateralism: A Political Economy Approach" Quarterly Journal of Economics, 1998, 113(1): 227-251

Tanguay, G. "Strategic Environmental Policies under International Duopolistic Competition" International Tax and Public Finance, 2001, Vol. 8, 793-811.

Ulph, A. "Environmental Policy and International Trade when Government and Producers Act Strategically" Journal of Environmental Economics and Management, 1996, Vol. 30, 265-281.

Walz, U and D. Wellisch. "Is Free Trade in the Interest of Exporting Countries when there is Ecological Dumping?" Journal of Public Economics, 1997, Vol. 66, 275-291.

Online Delivery of the Legal Environment of Business Course

Donald Mong, Slippery Rock University

Abstract

Recent studies indicate dissatisfaction with online delivery of the legal environment of business course. Such dissatisfaction might stem from the underlying pedagogy of the legal environment course itself. We thus examine the contextual and relational nature of the course, how it differs from the more substantive and advanced law courses from which the legal environment course evolved, and how those differences present special challenges to instructors who elect online delivery.

Introduction

Online courses are growing in popularity. Means, Toyama, Murphy, Bakia & Jones (2009) found that over 12 million students were enrolled in online courses in 2006-7 and that two-thirds of those courses were sponsored by traditional colleges and universities. Means, Toyama, Murphy, Bakia & Jones further found that most of those courses used asynchronous delivery in which the instructor posted lessons online and each student could then choose his or her own time to download and study each lesson. Asynchronous delivery was especially attractive to students because it provided great flexibility in learning times and locations. Still, such delivery might not be suitable for every course. Recent studies suggest emerging dissatisfaction with online delivery of the legal environment of business course.

Dissatisfaction

Shelley, Swartz, & Cole (2007) compared the traditional classroom delivery of legal environment of business courses with the online delivery of such courses. Shelley, Swartz, & Cole looked at both student performance, which was measured by grades, and student satisfaction, which was measured by surveys. Both the traditional and online versions were taught by the same instructor and used the same textbooks and assignments. Results indicated no significant differences between the traditional or online versions in either student performance or student satisfaction. A year later, however, Shelley Swartz, & Cole (2008) repeated the study and found significantly higher dissatisfaction with both the instructor and the course structure among online students than among traditional students. Performance grades, though, were higher for online students.

Shelley, Swartz, & Cole (2008) were baffled by the results of their second study. Russell (1999) and a string of other studies had concluded that there should be no significant differences in either student performance or student satisfaction between traditional and online courses. Still, Shelley, Swartz, & Cole believed that some fundamental differences between traditional and online delivery could present major challenges for instructors and suggested further studies.

Swartz, Cole, & Shelley (2010) studied the satisfaction levels of instructors, rather than that of students. Swartz, Cole, & Shelley asked 112 business law instructors how they rated traditional versus online course delivery in each of Berge's (1995) four requirements for successful online learning. Those four requirements were a sound pedagogy, the promotion of social interaction among students and faculty, sufficient technology, and managerial ease of delivery. Swartz, Cole, & Shelley found that the business law instructors favored traditional delivery over online delivery in every one of the four main categories and in all but a few of comprehensive subcategories. Even in those few subcategories, online delivery only equaled, rather than topped traditional delivery.

Swartz, Cole, & Shelley (2010) concluded that these survey results differed significantly from prior research. That prior research had indicated that instructor satisfaction should have favored online delivery so long as sufficient technology, peer support, academic recognition, and financial rewards were present. In particular, Marcel (2002) had advocated online law courses, especially in upper levels of the curriculum. Yet, Swartz, Cole, & Shelley were now finding that online delivery was not preferred by business law instructors.

Online legal courses are still relatively new, and the literature has not fully examined them. Further studies will be needed to determine if Swartz's, Cole's, & Shelley's (2010) results were an anachronism or the beginning of a dissatisfaction trend. However, some recent studies of non-legal courses suggest that Swartz, Cole, & Shelley are not alone in raising concerns about dissatisfaction and limitations of the online delivery of certain courses.

Harrison & El Mansour (2008) surveyed faculty perceptions of online teaching among 184 instructors at Indiana State University. Fifty-three percent (53%) were positive about online delivery, but 54% still reported reservations about workload, 45% about course quality, and 45% about monetary support. One-hundred percent (100%) agreed that online teaching required more time than face-to-face teaching. That unanimity reinforced Holt (2005), who had found that significantly more faculty time was required for online courses than for traditional courses, and Worley & Tesdall (2009), who had pegged that increased time at 20% in one particular course.

Lam (2009) compared traditional and online delivery in information technology courses. She found no significant differences in student performance or satisfaction when the legal subject matter was technical (how to perform a task). However, when the subject matter was contextual (understanding terms and concepts), Lam found significantly higher student dissatisfactions with online courses than with traditional courses. Such dissatisfaction did not appear to affect performance in the courses.

Lam (2009) concluded that traditional courses triumphed over online courses in the areas of perception, group projects, and satisfaction. Online courses triumphed in eliminating gender bias in student performance and in helping students to solve step-by-step problems. Online courses also had advantages in allowing students to revisit those web pages requiring the most focus and in providing material to students without good listening skills, but disadvantages in requiring good reading skills, self-discipline, and comfort with isolation from other students. Simply put, Lam found that online courses were good for some students and not so good for others.

Scagnoli, Buki, & Johnson (2009) found limited transfer-back among traditional instructors who began teaching online. Transfer-back referred to the instructor using his or her newly acquired online skills in his or her traditional classrooms. Previous studies had suggested that the new online skills were so effective that transfer-back should be automatic, but Scagnoli's, Buki's, & Johnson's qualitative study of experienced social science teachers yielded mixed results. Scagnoli, Buki, & Johnson cautioned that transfer-back worked best in situations where the instructor could facilitate student learning, rather than having to deliver authoritative lectures.

Finally, Lukaitis & Davey (2010) returned to the student side of online delivery when they compared the study practices of 137 online students with those of 638 traditional students. Previous comparative studies had primarily used grades to gauge student performance and surveys to gauge satisfaction. By contrast, Lukaitis & Davey looked at the actual times, frequencies, and durations of computer log-ins to see how online students were actually utilizing online delivery. Lukaitis & Davey found that online students were logging in at roughly the same times that their traditional counterparts were studying or attending class. Also, online students primarily logged in during instructor office hours, the equivalent of attending a traditional class at a set time. Finally, online students were just as good as their traditional counterparts at procrastinating, doing the bulk of their work right before tests and assignments were due. Lukaitis & Davey (2010) concluded that online students were making far less use of the flexibility of asynchronous delivery than had previously been thought.

Lukaitis & Davey (2010) also found that online students made limited use of available student-to-student interaction opportunities. This finding was consistent with earlier studies that had shown that online students did not form the peer-support networks of traditional students. Lukaitis & Davey thus stressed that neither every student, nor every course could be packaged for effective online delivery.

If our previously cited authors are correct, then online delivery might be best for courses that are more technical and less contextual in nature and that do not already require significant instructor time, authoritative lectures, and student-to-student interaction. Is legal environment of business one of those courses? To answer that question, we must first look at the nature of the legal environment course, for Downing (2001) has made clear that the successful delivery of any online course depends on that course having a core pedagogy that is adaptable to online delivery.

The Legal Environment of Business Course

Law courses have been part of business schools since the very beginning (Tanner, Keaty, & Major, 2004), but not every business law course is a legal environment course. Business law courses originally emphasized substantive law, the black-letter law of specific subjects like contracts and torts. The Gordon-Howell and Pierson reports in 1959 and AACSB's shift from a substantive law requirement to a legal environment requirement in 1969 changed that focus. The required course was now to emphasize the interrelationships between law and other business, political, and socio-economic topics. Much of the legal environment literature thus emphasizes the importance of providing students with those contextual relationships and advocates the specific substantive topics that the particular author believes will best serve his or her focus.

Thomas & Usry (1991) advocated legal environment courses for entrepreneurs. After surveying 1000 Virginia businesspeople, Thomas & Usry concluded that entrepreneurs lacked the time and money needed to work with lawyers on every legal problem encountered. The entrepreneurs thus needed to develop a working legal knowledge of topics like mortgages, leases, and collections. Thomas & Usry believed that these topics were more important than traditional legal environment topics like antitrust and securities.

Prentice (2001) addressed the particularly close relationship between law and accounting. Law had been a required section of CPA exams since 1896, and accounting departments had thus preferred the teaching of law courses to focus on the substantive topics that appeared on those exams. Prentice, however, believed that accounting should be a learned profession, not merely a technical one, and that legal environment courses could help accountants to broaden their perspectives. Prentice emphasized that law was interwoven into virtually all business transactions and needed to be taught accordingly.

Rosen (2002) commented on the business value of a broad legal education when he surveyed law school graduates who had became CEO's. One study had found that 32% of CEO's with graduate degrees had JD's, while 30% had MBA's. Those executives listed leadership and communication as the most important skills for business success. Rosen's analysis suggested that law courses could contribute to managerial effectiveness by furthering analytic skills, problem solving, professionalism, and ethical recognition.

Morgan (2003), however, believed that legal environment instructors had become too generalized and strayed too far into political science. He advocated an interdisciplinary approach to legal environment, but one that focused primarily on law's relationship with other business disciplines. Morgan's approach balanced private law, public law, and developmental law. Private law was to consist of such traditional topics as contracts and torts. Public law was to include such topics as antitrust, employment law, securities law, and consumer protection. Finally, developmental law was to include such topics as the emerging socioeconomic, political, and technological developments that could alter existing business/legal relationships.

Tanner, Keaty, & Major (2004) advocated a return to substantive teaching when they examined the differences between substantive law courses and legal environment courses. Tanner, Keaty, & Major surveyed nearly 1000 alumni of a business school and found that 75% wanted more law in the business curriculum. The alumni also wanted increased coverage of topics like UCC sales and warranties, negotiable instruments, secured transactions, product liability, creditor protections, bankruptcy, insurance, and estates and trusts. These topics were to be in addition to the normal introductory topics of property, contracts, agency/employment law, and forms of organization. Tanner, Keaty, & Major thus proposed having legal environment taught as an introductory course and mandating substantive law as an advanced course in the business curriculum.

MacDonald & Ramaglia (2005) took perhaps the broadest approach to business law courses when they promoted a liberal arts approach focusing on the historical and contextual evolution of the law. MacDonald & Ramaglia argued that understanding the contextual relationships of business transactions was sometimes more important than understanding the details of the transactions themselves. The authors further argued that the liberal arts approach

could help students to better develop the critical thinking, social, communication, and lifelong learning skills needed for success in business.

Lampe (2006) sought to move beyond the debate between substantive law and legal environment when he proposed teaching from the business manager's perspective, rather than the lawyer's perspective. Commenting that only a small percentage of business law students would become CPA's or attorneys, Lampe urged instructors to focus on topics like preventing legal problems, hiring and managing lawyers, using negotiation, mediation and alternate dispute resolution to stay out of court and lay-level self help. To make room for these topics in the syllabus, Lampe called for de-emphasizing traditional topics like contracts, torts, and agency law.

Kocakulah, Austill, & Long (2008) then suggested a compromise of including both legal environment and substantive law in the introductory business law course. Kocakulah's, Austill's, & Long's own preference was for more substantive law to better prepare accounting students for CPA exams. However, Kocakulah's. Austill's, & Long's extensive survey of accounting chairs revealed that the majority of those chairs had now come to favor the legal environment approach.

In reality, most legal environment instructors will probably use some form of Kocakulah's, Austill's, & Long's (2008) compromise approach and Lampe's managerial relevance in their classrooms. Few of today's business schools have room for more than one required law course in their curricula. Some students might take advanced law courses within their majors, but the majority of students will probably graduate with one shot at acquiring all of the legal knowledge needed for success in upcoming careers and graduate work. We instructors owe those students a course that simultaneously provides the full range of legal contexts and interrelationships in which business transactions occur, the substantive law of those transactions, and the managerial relevance of the material studied.

That obligation means that legal environment instructors must pack a lot of material into one semester, whether it be in a traditional classroom or online. For example, this author's own traditional legal environment course surveys 47 chapters and 850 pages of material in an attempt to expose students to virtually all of the topics and contexts listed above. Creating the learning environment to enable students to absorb such extensive coverage is no easy task, particularly when the legal environment course is taught to undergraduates at the introductory level. Instructors must thus understand the pedagogical differences between teaching introductory law courses and more advanced courses and the ramifications that those differences have for transitioning legal environment courses to online delivery. We begin with the literature of traditional introductory courses.

Introductory vs. Advanced Courses

Recall that Tanner, Keaty, & Major (2004) observed that legal environment courses were often taught the introductory level, with substantive law courses reserved for advanced levels. Reinsch & Wambsganns (1994) had previously compared some of those introductory legal environment students with some advanced substantive law students. After controlling for GPA variations in the students, Reinsch & Wambsganns found that sections of the introductory legal

environment courses that encouraged student participation had significantly higher test scores than sections that did not. This difference was not found in advanced substantive law sections. Reinsch & Wambsganns concluded that student participation mattered far more in introductory contextual courses than in advanced substantive courses.

Much earlier, Reinsch & Wambsganns (1981) had focused on the relationship between teaching settings and student success rates. Reinsch & Wambsganns had studied 643 traditional business law students at a time of rapid expansion of business schools and the larger class sizes necessitated by that rapid expansion. The purpose of the research had been to determine whether students could learn as well in larger lecture settings as in smaller discussion settings. Reinsch & Wambsganns concluded that teaching settings were less important than the individual talents and motivations of the students themselves.

Later, Yordy (2008) applied cognitive development theory to undergraduate law courses. Cognitive development theory described how students progressed from passively receiving knowledge as freshmen to actively acquiring and challenging knowledge as seniors. Yordy believed that cognitive development theory could help legal environment instructors to order the coverage of their syllabi since legal topics ranged from simple to complex and since legal authority ranged from clear-cut to ambiguous. His purpose was to produce an undergraduate course that neither overwhelmed nor underwhelmed students at different steps of their familiarity with legal terms and concepts. Yordy's advice is sound in theory, but sometimes difficult in practice when dealing with interrelationships as complex as legal environment ones. Instructors need the ability to constantly gauge whether students are absorbing material sufficiently or are alternately bored by it.

McDevitt (2009) took a somewhat opposite approach to undergraduate instruction than Yordy (2008) by immediately immersing introductory law students in appellate-level cases. McDevitt noted that 40% of Supreme Court cases involved business issues and therefore felt that having students research and argue pending appeals could teach the students about those issues. He emphasized that the students were business students, not law-school students, but felt that even undergraduates could conduct in-depth Internet research, write briefs, and present oral arguments. McDevitt's purpose was to challenge students at a level above their existing knowledge to stimulate active learning and sharpen research and communication skills. McDevitt did acknowledge numerous obstacles to his approach, which would appear more suited for advanced substantive courses than for introductory legal environment ones.

McDevitt (2009) is in the minority in believing that even exceptional introductory students can immediately perform at an advanced level. Most legal environment instructors will have to approach the course by quickly conveying overall legal contexts of individual topics of business law and then by building the substantive bases for those topics through individual terms and concepts. As previously stated, the course must simultaneously convey large amounts of contextual relationships, substantive knowledge, and managerial relevance to introductory level students. To neither overwhelm nor underwhelm those students at various stages of the course, the instructor must rely on student participation to gauge the rate at which students are absorbing the material. In traditional classrooms, instructors can maintain daily personal contact to gauge that rate, but how does an instructor transition the legal environment course to effective online delivery?

Transitioning to Online Delivery

Powell (2006) studied online education at the law school level, noting that the American Bar Association (ABA) defined the broader category of distance education as "…any separation in time or place between instructor and student." The ABA had recently revised its standards to permit law schools to offer up to 12 credits of upper-level courses as distance education. That allowance, however, was permitted only after the student had completed the first 28 credits of instruction in traditional classrooms. The reasoning was that law courses required considerable student-to-student and class-to-instructor interaction to convey the complex interrelationships of the law. Undergraduate business law is seldom taught at the law-school level of complexity. Still, if even law students require initial face-to-face contact to ground them in law's contextual relationships, should we provide any less to introductory undergraduates?

Powell (2006) then reviewed different modes by which law schools could offer distance education. Synchronous delivery, where instructors and students were all together in real time, but separated by distance, was strongly preferred to asynchronous delivery. Synchronous deliveries included videoconferencing and allowed instructors and students to maintain in-depth discussions and Socratic questioning, albeit with short delays in transmissions. Powell acknowledged that current synchronous modes were more expensive than asynchronous modes and that they currently limited classrooms to 15 students apiece. However, multiple classrooms could be employed, and students could then help one another whenever the instructor was remote. While skeptical that online quality could equal traditional courses, Powell did acknowledge that asynchronous delivery could be useful in upper-level courses. Again, if even law students cannot be adequately served by asynchronous delivery of introductory courses, should we expect that introductory undergraduates can be?

Newman & Doherty (2008) went a step further when they studied how well seasoned professionals could retrieve legal information from online data bases. The information related directly to the specific professions of the professionals, and the professionals had surprisingly little difficulty understanding the substantive legal terms themselves once those terms were located. Yet, the professionals had over twice the difficulties in retrieving the information as a control group of lawyers did because the professionals did not understand the contexts in which the terms might occur. Perhaps Newman's & Doherty's findings should not surprise us, for they seem to support the principle that substantive issues are much easier to convey online than contextual ones.

Online legal courses are still relatively new, and the literature has not thoroughly examined them. Reid & Weber (2008) believed that online delivery modes could be useful in teaching ethics as part of traditional law classes, and Fang (2009) believed that online recordings of actual classroom lectures could be useful for students who missed classes. However, the gaps in legal online literature now spur us to turn to its non-legal counterparts for further clues about successful transition to online delivery.

In a heavily cited paper, Webster, J. & Hackley, P. (1997) cautioned that the specific online technology chosen to deliver a given course had to be both rich and reliable. In other words, the technology had to be able to deliver multiple clues to each speaker's meaning without

providing distractions from that meaning. Webster & Hackley observed that even half-second delays in transmissions could interrupt the flow and understanding of classroom discussions.

Davies & Graff (2005) studied 1122 undergraduates and found that students who passed online courses did not greatly increase their grades through greater interaction, but that students who failed the course interacted significantly less frequently. There thus seemed to be a plateau of student participation, below which negative results would be seen. Perhaps that plateau was not so different from what Reinsch & Wambsganns (1994) found in traditional classrooms. Recall that Reinsch & Wambsganns found that student participation could raise grades in introductory legal environment courses much more than in advanced substantive law courses.

Mortagy & Boghikian-Whitby (2010) observed a change in student perceptions of online learning over their eight years of surveying 316 traditional students and 348 online students. Mortagy & Boghikian-Whitby found that students now believed that online faculty held them to high performance standards and provided them with quality online courses, feedback, and opportunities for critical thinking. Mortagy's & Boghikian-Whitby's study was limited to the students of one instructor, but did reveal possible maturity and interactive differences between traditional and online students. Traditional students in Mortagy's & Boghikian-Whitby's study were mostly aged 19-25, whereas online students were mostly aged 25 and older. Twice as many of those online students sought faculty interactions as sought student-to-student interaction. This second finding echoed previous finding of Marks et al. (2005) and should give instructors some pause for any course like legal environment that depends on student-to-student interaction as part of its pedagogy.

Groves & O'Donoghue (2009) recommended an approach to online learning that blended online lessons with face-to-face contact among students and instructors. Groves & O'Donoghue cautioned that deep learning could not occur where student participation meant simple online assignments, rather than meaningful interactions. Groves & O'Donoghue also reinforced what we saw Downing (2001) say: Successful online delivery requires a sound underlying pedagogy for the particular course being offered, rather than a mere reliance on online technology.

Endrean, Bin, & Ruo (2010) too emphasized that point as part of their study of world-wide quality control standards for online courses. Endrean, Bin, & Ruo also believed that test scores alone could not be used to judge the success of online courses, since test scores sometimes depended on the quality of the students themselves, rather than the quality of the course. This observation was very much in line with Blackburn & Niedzwiedz (1981) whom we saw find that success rates in law courses often depended more on the talents and motivations of the students themselves than on the mode of teaching.

Online Delivery of the Legal Environment of Business Course

Should the legal environment of business course be delivered online? Ultimately, that is a decision for individual instructors in individual settings. Instructors of exceptional students with the maturity and life experiences to understand law's contextual relationships may find that such students do perfectly well online. Likewise, instructors who choose to focus more on the substantive law of fewer topics, rather than the contextual relationships of multiple topics, may find online delivery useful. Finally, those few instructors who are able to teach legal

environment as an advanced course may find that online delivery presents few hurdles to student satisfaction.

As we have seen, however, current asynchronous delivery modes present considerable hurdles to adequately conveying the range and complexities of the legal contexts upon which the introductory legal environment course is based. Such modes may also overwhelm introductory students with the sheer volume of substantive law knowledge required to support those contexts. Finally, such modes make it difficult to fully convey the managerial relevance of legal environment topics by removing many of the spontaneous student-to-student and instructor-to-student interactions that occur in live classroom discussions.

Online proponents continue to develop substitute techniques for engaging students, and online demand continues to press for online delivery of the legal environment course. Yet we legal environment instructors do our students no favors by delivering a course that incompletely prepares them for the legal complexities that await them in future careers and graduate work. The wide availability of synchronous technology, which could remove many of the hurdles of delivering the legal environment course online, should only be a few years away. If Lukaitis & Davey (2010) are correct about the true study habits of online students, then both students and faculty should be receptive to such synchronous delivery. Does it not make since to wait until our online technology can match our underlying course pedagogy before attempting to deliver the legal environment of business course online?

References

Blackburn, J.D. & Niedzwiedz, E. (1981). Do teaching methods matter? A field study of an integrative teaching technique. American Business Law Joural, 18(4), 525+.

Davies, J. & Graff, M. (2005). Performance in e-learning: Online participation and student grades. British Journal of Educational Technology, 36(4), 657-663.

Downing, K. (2001). Information technology education and health care constructivism in the 21st century. Education Studies, 27(3), 229-235.

Endean, M., Bin, B., & Ruo, D. (2010). Quality standards in online distance education. International Journal of Continuing Education and Lifelong Learning, 3(1), 53- 71.

Fang, W. (2009). Online law school video repository: The flash way. Computers in Libraries, 29(6), 20-24.

Groves, M. & O'Donoghue, J.O. ((2009). Reflections of students in their use of asynchronous online seminars. Educational Technology and Society 12(3), 143- 149.

Harrison, M. & El Mansour, B. (2008). Online teaching as perceived by faculty: A case study of indiana state university. Malaysian Journal of Distance Education, 10(1), 81-95.

Kocakulah, M.C., Austill, A.D, & Long, B.J. (2008). The business law education of accounting students in the USA: The accounting chairperson's perspective. Accounting Education, 17(supplement 1), 17-36.

Lam, M. (2009). Effectiveness of web-based courses on technical learning. Journal of Education for Business, 84(6), 323-331.

Lampe, M. (2006). A new paradigm for the teaching of business law and legal environment classes. Journal of Legal Studies Education, 23(1), 1-51.

Lukaitis, A. & Davey, B. (2010). Motivations of the online student. Issues in Informing Science & Information Technology, 7, 25-39.

MacDonald, D.B. & Ramaglia, J.A. (2005). Teaching international business law. Journal of Legal Studies Education, 22(1), 39-64.

McDevitt, W.J. (2009). Active learning through appellate simulation: A simple recipe for a business law course. Journal of Legal Studies Education, 26(2), 245-262.

Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2009). Evaluation of evidence-based practices in online learning: A meta-analysis and review or online learning studies. U.S. Department of Education, retrieved from EBSCOhost.

Mortagy, Y. & Boghikian-Whitby, S. (2010). A longitudinal comparative study of student perceptions in online education. Interdisciplinary Journal of E-Learning & Learning Objects, 6, 23-44.

Morgan, J.F (2003). Legal studies in business: Toward realizing its potential in the new millennium. Journal of Education for Business, 78(5), 285-289.

Newman, D.R. & Doherty, U. (2008). Making the law accessible to non-lawyers: Effects of different kinds of expertise on perceived usability of online legal information services. Behaviour & Information Technology, 27(5), 423-437.

Powell, D.C. (2006). Five recommendations to law schools offering legal instruction over the internet. Journal of Technology Law & Policy, 11(2), 285-312.

Prentice, R.A. (2001). The case for educating legally aware accountants. American Business Law Journal, 38(3), 597-632.

Reid, L.A. & Weber, C.M. (2008). Using technology-enabled active learning tools to introduce business ethics topics in business law courses: A few practical examples. Journal of Legal Studies Education, 25(2), 283-305.

Reinsch, R. & Wambsganss, J.R. (1994). Class participation: How it affects results on examinations. Journal of Education for Business, 70(1), 33+.

Rosen, R.E. (2002). Educating law students to be business leaders. International Journal of the Legal Profession 9(1), 27-53.

Scagnoli, N.I., Buki, L.P., & Johnson, S.D. (2009). The influence of online teaching on face-to-face teaching practices. Journal of Asynchronous Learning Networks,13(2), 115-128.

Swartz, L.B., Cole, M.T., & Shelley, D.J. (2010). Instructor satisfaction with teaching business law: Online vs. Onground. International Journal of Information & Communication Technology Education, 6(1), 1-16.

Shelley, D.J., Swartz, L.B., & Cole, M.T. (2007). A comparative analysis of online and traditional undergraduate business law classes. International Journal of Information and Communication Technology Education, 3(1), 10-21.

Shelley, D.J., Swartz, L.B., & Cole, M.T. (2008). Learning business law online vs. onland: A mixed method analysis. International Journal of Information & Communication Technology Education, 4(2), 54-66.

Tanner, J., Keaty, A. & Major, C. (2004). A survey of business alumni: Evidence of the continuing need for law course in business curricula. The Journal of Legal Studies Education, 21(2), 203-224.

Thomas, D.S. & Usry, M.L. (1991). Entrepreneurship classes must include more legal topics. Business Forum 16(4), 10.

Webster, J. & Hackley, P. (1997). Teaching effectiveness in technology-mediated distance learning. Academy of Management Journal, 40(6), 1282-1309.

Worley, W.L. & Tesdall, L.S. (2009). Instructor time and effort in online and face-to-face teaching: Lessons learned. IEEE Transactions on Professional Communication,52(2), 138-151.

Yordy, E.D. (2008). Using student development theory to inform our curriculum and pedagogy: A response to the secretary of education's commission on the future of higher education. Journal of Legal Studies Education, 25(1), 51-73.

A Historical Analysis of Arbitration

Khodr Fakih, Lebanese American University

Abstract

This paper is to report the historical development of arbitration as a method of settling international commercial disputes. As an Alternative Dispute resolution type, arbitration is a method of resolving dispute by neutral third-parties. Because it has a fast and flexible process, the international community has been increasingly attracted to arbitration as an alternative method to judicial courts. Despite this popularization, various concerns have been raised regarding the validity of the arbitration method. This paper will shed a light on these concerns (mistrust and benefits) between the West and the East to clarify the impact of arbitration in the international arena.

Key Words: Shariah, International, Commercial, Arbitration, Disputes, Development.

Introduction

Arbitration is a long-standing method of settling dispute between two or more litigants outside the court system.[3] Historically, arbitration was experienced and developed in various lenses which differed between *Shariah*[4] and modern legislators. For example, *Shariah* subjects political disputes to arbitration, while modern legislation considers that this subject-matter is non-arbitrable. The development of arbitration has led to an increase in the number of arbitral cases in both domestic and international spheres. This trend can be seen in the rise of international arbitral institutions.[5] Despite this, there have been various concerns by Western and Eastern parties regarding the applicability and admissibility of arbitration. On one hand, Western parties have legal and political concerns regarding arbitration and arbitral awards implemented in the Middle East.[6] On the other hand, Middle Easterners view arbitration with suspicion because it is considered a method that favors Western interests, and threatens national sovereignty. Based on these concerns, various Middle Eastern countries have been influenced by the Calvo Doctrine.[7] Nevertheless, privatization and globalization, along with international conventions, have ensured collaboration and mutual benefit of arbitration between Western and Eastern countries. This paper explores these historical trends (Chapter I) along with the various concerns (Chapter II) and benefits (Chapter III) comprising arbitration.

---

[3] Arbitration was known both in ancient Greece and in Rome. http://links.jstor.org/sici?sici=0003-0554(191211)6%3A4%3C642%3ATILACO%3E2.0.CO%3B2-N See also for example the use of arbitration during the Islamic period when arbitration was used by Prophet Mohammed. See Abi Abdallah Mohamed Ben Kharaj Al Maliki (known as Ibn Al Talah), *The Judgments of the Prophet*, investigated by Mohamad Diaë Al Azmi, 676 (1978).

[4] Islamic law which is based on Quranic verses and Prophetic traditions.

[5] Such as, the International Chamber of Commercr and the American Arbitration Association.

[6] The term Middle East traditionally encompasses Southwest Asia and North Africa.

[7] See http://en.wikipedia.org/wiki/Calvo_Doctrine, "The Calvo Doctrine is a foreign policy doctrine which holds that jurisdiction in international investment disputes lies with the country in which the investment is located."

The Historical Development of Arbitration

Arbitration, a system of resolving dispute has historically been reflected and affected by various modes. These forms relate to socio-political conditions that influenced the development of arbitration as an alternative form of dispute resolution. As a result, it is important to provide a comparative framework that traces the development of arbitration in *Shariah,* the Middle East, and the West.

Section I-The Development of Arbitration in Shariah

In the Middle East, arbitration was known in the pre-Islamic period,[8] as a method of settling dispute among tribes[9] by the tribal chief. Arbitration resolved various types of disputes, although the settlement itself was neither organized nor binding.[10] However, customs compelled the parties to willingly execute the rendered award as a sign of honor and respect.[11]

In contrast, the advent of Islam legalized arbitration and consequently arbitral proceedings became better organized. Arbitration was the most dominant[12] method of resolving dispute in the early stages of Islam primarily because the features of courts/judges were not established.[13] Indeed, arbitration is documented in the Quran[14] and the *Sunnah*,[15] and these sources cover many issues including domestic, civil, commercial, contractual, and political dispute.[16] Arbitration in Islam results in a binding contract among parties.[17] Once they agree to arbitrate in any matter,[18] parties must honor the agreement and the decision rendered by the arbitrator(s).[19] In the Quran God commands you to give back anything the people have entrusted to you. If you judge among the people, you shall judge equitably. The best enlightenment indeed is what God recommends for you. God is Hearer, Seer.[20]

---

[8] Pre-Islam dates before 610 A.D.

[9] Abdul Hamid El-Ahdab, *Arbitration with the Arab Countries*, 11 (2d ed., Kluwer 1999).

[10] During this period, legal qualifications were not imposed on arbitrators or tribal chiefs. While handling disputes, arbitrators could be illiterate or lack a legal background. Arbitrators held such positions based on their standing in the tribe.

[11] Abdul Hamid El-Ahdab, *Arbitration with the Arab Countries*, 11-12 (2d ed., Kluwer 1999).

[12] During the colonial and postcolonial period, the use of arbitration within *Shariah* diminished in the Middle East because foreign parties were involved in litigations.

[13] The Islamic judicial system (court) was adopted from the Byzantine and Persian Empires. See Hassan I. Hassan in, *Islam*: *A Religious, Political, Social, and Economic Study* (Beirut), for judicial systems under the Umayyad, Abbasid, and Fatimid Dynasty.

[14] Islamic holly Book. Also see The Quran [4:58].

[15] Sunnah refers to what Profet Muhammad said or behavied. The Prophet appointed an arbitrator (Al Awar Ben Bechana) in a case on his behalf, and accepted the arbitrator's decision. Abi Abdallah Mohamed Ben Kharaj Al Maliki (known as Ibn Al Talah), *The Judgments of the Prophet*, investigated by Mohamad Diaë Al Azmi, 676 (1978). The Prophet also advised the Beni Qarnata tribe to have a dispute arbitrated. In this matter, see Ali Haidar in *Durar AI Hukkam Fi Charh Medjullat Al-Ahkam*. the book of the judicial organization section 4. The arbitrator in the Beni Qarnata case was Saad Ben Maad.

[16] The first time arbitration was conducted in the political arena occurred after the death of Osman Ben Affan (the third Caliph) 659 A.D. when Muawiyah (who was the governor of Damascus, Syria) refused to recognize Ali Ben Abi Taleb's right to the Caliphate. A war occurred between Abi Taleb and Muawiyah. Whilst Abi Taleb was defeating Muawiyah, the latter ordered his troops to waive Quran's. The war ended and Muawiyah asked Abi Taleb to appoint one of his followers to settle the dispute in compliance with the provisions of the Quran. Abi Taleb agreed, and the dispute was settled, which was the first time that a political matter was settled through arbitration.

[17] The Quran [5:1]. The binding character of arbitration is derived from the general concept of contract in Islam. Awards have the same binding nature as a court's judgment and can be enforced without court intervention (except in the Shafi school-of-thought). This concept is adopted by the Hanafi school-of-thought and the Majalla. Al-Barakat Abdullah ibn Ahmad Al-Nasafi, *Matn al-kanz*, 138 (1292 H); See Ali ibn Khalil Al-Tarabulusi, *Mu'in al-Hukkam*. See also the "Majalla of legal Provisions" which was the first codification of *Shariah* under the Ottoman Empire (Article 1842, 1848, and 1849). It was derived from the science of *Fiqh* relating to civil acts and the prevailing opinion of Hanafi doctrine.

[18] Arbitration is permitted under Islamic law in civil, commercial, and other matters as long as it does not defy God's commands.

[19] The Quran [5:1] commends those who "believe" [to] respect their contractual undertakings."

[20] The Quran [4:58].

According to this verse, the parties are obligated to execute the decision rendered by the competent authority (judges/arbitrators), which must end the dispute in a fair manner. If this decision is not implemented, then the defaulting party would be penalized as a transgressor by the competent authority. Furthermore, the word arbitrator (Hakam) was used in the Quran to describe the judicial role of the Prophet, or the person who is conducting such a task. In addition, the Prophet settled disputes based on his personal reasoning (wisdom) because an organized court system had not yet been established.[21]

Despite this, scholars and readers should be aware that there is no methodical definition of arbitration in the major sources of *Shariah*.[22] Arbitration was characterized in *Shariah* as a replacement method for the role of judges. However, the systematic definition of arbitration can be found in the Majalla,[23] and among Hanafi treatises.[24] One of the most successful attempts in defining this concept was undertaken by M. S. Madkur who stated that arbitration was the "submission by two or more parties to a third party of a dispute to be adjudicated according to *Shariah*."[25]

Section II-The Development of Arbitration in the Middle East

Arbitration, as a major mechanism for international dispute resolution, has always been problematic for Middle Eastern countries adapting *Shariah*. Historical developments, during the colonial and postcolonial period, shaped the parameters and forms of arbitration. Furthermore, commercialization in the Middle East—including mineral, capital, and oil exports—promoted a worldwide system of international arbitration. However, currently many Middle Eastern countries have failed to enact laws that conclusively distinguish between international and domestic arbitration.

In the Middle East, the historical development of international arbitration can be divided into three major stages. The first stage took place between 1945-1973. International arbitration arose out of long-term oil concessions concluded in the Mandate Period. During this period, European oil companies had fixed clauses and monopolies over Middle Eastern oil. These companies stipulated that dispute must be resolved through arbitration. These regulations also tended to dominate Islamic law, favor foreign parties, and were entirely based upon Western regulations. As a result, arbitration came to be seen by many in the Middle East as an "extraterritorial court" imposed by European powers.

The second stage (1970s-1980s) developed new attitudes towards international arbitration. This attitude was shaped by 1) the end of colonialism, 2) Cold War rivalries, 3) Arab nationalism, and 4) OPEC crisis of the 1970s. These events led to the rejection of international

[21] For a detailed historical study of arbitration in the pre-Islamic period, see Emile Tyan, *Histoire de L'organisation Judiciaire en pays d'Islam*, 27-61 (1960). For a short account, see Subhi Mahmasani, *Al-Awda al-tahri 'iyya fil duwal al-'Arabiyya,* 29-9 (1957).

[22] We should mention that in Islam, especially within the conduct of the Prophet, confusion existed between the concept of arbitration and the concept of conciliation. Some of the verses in the Quran mentioned the word arbitration, and some of the well-cited references in the *Sunnah* mention the word conciliation about the judicial activities of the Prophet. This matter was illustrated at the beginning of the paper.

[23] The "Majalla of legal Provisions" was the first codification of *Shariah* under the Ottoman Empire. It was derived from the science of *Fiqh* relating to civil acts and the prevailing opinion of Hanafi doctrine. Article 1790 of the Majalla defines arbitration as the voluntary submission of dispute to a qualified person by two litigating parties.

[24] This is one of the four major Sunni schools of Islamic jurisprudence, and was founded in Iraq by Abu Hanifa Na'man ibn Thabit (699-767 AD).

[25] Muhammad Salam Madkur, *Al Qada fil Islam*, 131 (1964).

expropriation laws and Western forms of arbitration. As a result, these countries did not fully participate in the growing system of international arbitration.

In contrast, the third stage (1980s-present) saw the wide acceptance of international arbitration in the Middle East and the acceptance of The New York Convention.[26] This acceptance was a result of certain historical trends including mineral exports, capital exports, foreign investments, privatization, and globalization. Indeed, these forces necessitated usable and standardized arbitral systems. These systems recognized that international commercial arbitration should effectively resolve commercial disputes, should be supported through national courts, and should include a supportive relationship between national courts and arbitral tribunals. The answer to these demands came in the form of the Convention on the Settlement of Investment Disputes between States and Nationals of other States (ICSID) and The New York Convention. The former promoted arbitration within the context of investment. On the other hand, the latter obligated contracting states to encourage arbitration and eliminate discrimination between foreign and domestic arbitral awards.[27]

Section III-The Development of Arbitration in the West

In its turn, the West has attempted to describe arbitration within various context.[28] Thus, one cannot expect to find a unified definition for arbitration, because this concept is flexible, and varies from one country to another.

One of the leading arbitral organizations (World Intellectual Property Organization 'WIPO') defines arbitration as a procedure in which adispute is submitted, by agreement of the parties, to one or more arbitrators who make a binding decision on the dispute. "In choosing arbitration, the parties opt for a private dispute resolution procedure instead of going to court."[29]

From this quote, we can deduce that there are several components which constitute arbitration in the West. First, the arbitrator's mission is to resolve dispute through a hearing. Second, the consensual contract/agreement between the parties provides arbitrators with judicial powers to resolve this dispute. Third, the produced settlement must render a final/binding award.

Modern Western arbitration differs from previous historical conceptualizations. Arbitration was widely used; however, the first law to set arbitral parameters was the 1697 English Law. The notion of arbitration within a commercial context was not well-developed or endorsed as the regular mechanism for settling international trade dispute. At the beginning of the twentieth century, the development of private/formal non-judicial systems emerged as an

[26] Convention of the Recognition and Enforcement of International Arbitral Award.
[27] The New York Convention, Article III.
[28] Halsbury's Laws of England defines arbitration as the "process by which a dispute or difference between two or more parties as to their mutual legal rights and liabilities is referred to and determined judicial and with binding effect by the application of law by one or more persons." Hardinge Stanley Giffard Halsbury and Quintin Hogg Hailsham, Halsbury's Laws of England, Para. 601, 332 (4th ed., Butterworths 1991). In addition, the 1996 English Arbitration Act defined the "object of arbitration is to obtain the fair resolution of disputes by an impartial tribunal without unnecessary delay or expense [moreover] parties should be free to agree how their disputes are resolved [which is] subject only to such safeguards as are necessary in the public interest." 1996 English Arbitration Act (c. 23) Part I, Article 1 (a)(b). One of the most well-known French commentators once defined arbitration as an institution of peace. René David, Arbitration in International Trade, 29 (2d ed., Kluwer 1985).
[29] World Intellectual Property Organization (WIPO).

alternative to the public adjudication mechanism (court).[30] Hence, many countries such as France[31] and the United States[32] stared to enact arbitration laws.

Initially, arbitral procedures were held *ad hoc*,[33] however, the growth of international trade brought greater sophistication to the process. Eventually, these methods became managed by practiced, experienced, and prestigious international commercial institutions.

General Concerns Towards Arbitration

Despite the recent development of arbitration in the Middle East, this method (whether domestic or international) is viewed with caution and suspicion. In domestic arbitration, litigants often question the ability of arbitrators, rather than the validity of the arbitration method. In contrast, litigants involved in international arbitration often mistrust arbitrators and the arbitration method. Despite the fact that arbitration facilitates trans-commercial transactions, many Middle Eastern countries question whether this is a fair method of alternative dispute resolution. In addition, international arbitration remains controversial even if private parties or state entities are involved in the process. Furthermore, international arbitration conducted with Middle Easterners or within Middle Eastern territories has raised legal and political debates in the West.

Section I-Western Concerns

Western parties (public or private) often prefer not to settle dispute with Middle Easterners under their national laws or within their territory. This is because Westerners have developed certain concerns that relate to legal matters and political instability.

1. *Legal Concerns:* Parties often choose national laws to govern dispute because these laws are stable, predictable and sufficient. However, these advantages are not always presented in Middle Eastern national laws; these laws operate within localized settings that do not take into account recent technological advancements. In addition, Middle Eastern national laws tend to be deficient, favor national concerns, and are often inappropriate for international trade.

2. *Political Concerns:* In addition to these legal matters, Western companies often face volatile political situations in the Middle East, which threaten overall economic prosperity. Indeed, the political stability of any given country will facilitate economic growth and national prestige abroad. This prestige is achieved when countries work hard, honor commitments, and execute their undertakings. In the Middle East, Western companies face two major political threats including political revolutions and nationalization efforts.

The latter occurs when national governments seize control of private assets and companies. It involves the transfer of property rights from private to the public sector. Acts of

[30] Julian Lew, Loukas Mistelis, Stefan Kröll, *Comparative International Commercial Arbitration*, 18 (Kluwer 2003).
[31] In 1806, French legislators inserted arbitration laws in the Code of Civil Procedure.
[32] The first federal arbitration legislation in the United States was the Federal Arbitration Act of 1925.
[33] Bryan A. Garner, *Black's Law Dictionary*, 41 (7th ed., West 1999). *Ad hoc* means "formed for a particular purpose." *Ad hoc* arbitration takes place when the "arbitration mechanism is established specifically for the particular agreement or dispute." Julian Lew, Loukas Mistelis, and Stefan Kröl, *Comparative International Commercial Arbitration*, 32 (Kluwer 2003).

nationalization attempt to re-distribute wealth, construct new infrastructure, or provide social equality.

In addition, political revolutions (like nationalization) have harmed the socio-economical prosperity of the Middle East. Various Middle Eastern countries have experienced internal conflict that has led to the sudden downfall of regimes. Most of these conflicts are military coups, which have undermined political stability. All of these factors including legal (e.g. fluid national law) and political (e.g. nationalization) barriers have complicated the political/economical conditions of the Middle East. More importantly, they have raised serious concerns for Western companies about the validity and security of arbitral agreements/awards within Middle Eastern territories.

Section II-Middle Eastern Concerns

In the Middle East private parties and state entities share certain concerns towards trans-international commercial arbitration. These concerns can be divided into four categories which are related to questions of finances, sovereignty, governing law, and partiality. Private parties are often worried that international arbitration would prove to be a costly venture; hence they are extremely reluctant to participate in these proceedings. On the other hand, public entities are often concerned that arbitration would threaten national sovereignty. In addition, both public and private entities share similar concerns regarding partiality and the law governing arbitration.

1. *Financial Concerns:* International arbitration has flourished as a method of settling dispute in the West because it involves giant corporations that cover expenses incurred from such disputes. Thus, arbitration is seen as the ideal form of settling dispute because it balances divergent commercial interests. In contrast, Middle Eastern corporations are family-based and operated. These corporations are regionally limited, and specialize in small-scale Western products.

2. *Sovereignty Concerns:* The doctrine of sovereignty immunity is a well-recognized international law concept that protects state entities from being indicted by foreign courts/rules. Historically, state entities enjoyed total exemption from jurisdictional/executional measures undertaken by foreign courts. This type of absolute immunity was accepted and applied worldwide. In addition, this type of immunity was legally favored by Middle Eastern countries because it was used to avoid undertakings or decisions deemed non-beneficiary. However, in the late 1970s, absolute immunity was partly-replaced by the restrictive immunity doctrine.[34] This took place because state entities became involved in commercial activities as private agencies. The concept of restrictive immunity has differentiated between actions undertaken by the state whether commercial (*acta jure gestionis*) or concessional/administrative (*acta jure imperii*). The latter enjoys mandatory (jurisdictional and executional) immunity that cannot be waived unless prior-authorization is obtained from the competent authority; while the former enjoys immunity that can be waived implicitly or explicitly. This is well seen in the Middle Eastern attitudes.

3. *Law Governing Arbitration:* In addition to cultural misunderstanding and issues of sovereignty, Middle Eastern parties often face obstacles regarding the choice of governing

[34] For a list of states and general developments, see Ian Brownlie, *Principle of Public International Law*, 331 (1998).

law. In most cases, the choice of law is inserted in a clause that combines national with international law. According to this clause, when national laws prove insufficient (to resolve a dispute) then the general principles of law (such as *Lex Mercatoria*) will be applied. However, this situation is often reversed in Middle Eastern arbitral disputes.[35] Middle Easterners often fear the discretionary powers of arbitral tribunals which negate national laws and allow international law as the primary choice of law. This conduct is considered to be a clear violation of party autonomy. Moreover, Middle Easterners are convinced that transnational rules or *Lex Mercatoria* [36] favor Westerners, undermine Middle Eastern parties, and provide tribunals with wide discretionary powers.[37] These powers allow tribunals to decide cases in a vague manner that it is difficult to understand by parties especially Middle Easterners—as result suspicion is rampant about the validity of multi-legal systems.[38] This suspicion was well-demonstrated in the 1963 *Aramco* case.

4. *Partiality Towards the Middle East:* In the West, international arbitration is considered an adjudication method that settles dispute in a just and fair manner. In contrast, Middle Eastern countries often distrust arbitration—this ADR method is seen by many as a Westernized notion that protects industrialized interests and foreign investment. Middle Eastern countries also believe that international arbitration does not consider either applicable law chosen by the parties and/or legal cultural norms. This accusation of bias is well-supported by the American arbitrator Charles Molino at an arbitral conference at Oxford University (July 31, 1999). Molino "questioned whether international arbitration serves Middle Eastern interests. The answer was no."[39] According to Molino, international arbitration often serves Western interests. This view was supported by Robino Sammartano who has argued that developing countries often do not receive expected results from arbitration. This is because these countries rarely win international arbitral cases.[40]

In addition to deep-rooted suspicion towards the arbitral process, these countries often contend that Western arbitrators are culturally biased towards the Middle East. Middle Eastern parties do admit that Western arbitrators are well-knowledgeable and have high-quality legal backgrounds. However, neither the legal viewpoint nor the cultural standards of Middle Eastern parties are respected. This concern is articulated by Redfern and Hunter. These authors do not question the personal integrity of western judges; rather they question their ability to understand cultural differences. To understand these differences, arbitrators should be selected from outside the charmed circle of the industrialized nations. Western lawyers, particularly those who represent parties from less-developed countries, should be aware of this important consideration;

---

[35] See for example, British Petroleum Co. (Libya) Ltd (BP) *v* Government of the Libya Arab Republic.

[36] Academics have attempted to provide a definitive description of *Lex Mercatoria* and transnational rules. The latter is seen to cover principles based on several judicial systems. (See, David W. Rivkin, *Enforceability of Arbitral Awards Based on Lex Mercatoria*, 72 (1993)). In addition, the fundamental foundations of transnational rules encompass general principles of international trade law, international case law, and international conventions. In contrast, *Lex Mercatoria* includes international trade usage, codes of conduct, general principles of laws, customary law along with transnational rules. (See, Eric Loquin, *La realite des usages du commerce international*).The availability of such a term has created confusion. To circumvent these confusions *Lex Mercatoria* became the terminology which united all these expressions. (Filali Osman, *Les Principes Generaux de la Lex Mercatoria—Contribution a l'etude d'un ordre juridique anational*, (1992)). Indeed, *Lex Mercatoria* includes endless rules and methods.

[37] Amor Zahi, *L'Etat L'Arbitrage*, 225 (1985).

[38] Such system may "create unnecessary disputes, and may generate inconsistencies or imbalances." See Fouchard, Gaillard, and Goldman, *On International Commercial Arbitration*, 795 (Kluwer 1999).

[39] International Conference at Oxford University, July 31, 1999.

[40] Mauro Rubino-Sammartano, *Developing Countries vis-à-vis International Arbitration*, 154 (D. Thompson and J. Werner 1996).

and they should recognize the need to assist in the development of a breed of experienced arbitrators from such countries.[41]

Furthermore, European arbitrators/arbitral tribunals are often appointed to settle investment disputes between Western and Middle Eastern public/private entities. Most of these disputes are processed and arbitrated outside the Middle East, which usually takes place in European cities such as Paris, Geneva, or London. According to Robert Bryner, President of the International Chamber of Commerce, "85% of conflicts submitted to ICC had designated arbitrators that where either Europeans or Americans, while 90% of the conflicts had arbitral seats in either Europe or the US."[42] Thus, Middle Eastern lawyers have a disadvantage in representing their clients due to a language barrier and traveling expenses.

This suspicion has had practical manifestations. Indeed, some Middle Eastern countries (like Saudi Arabia) have adopted what is known as the Calvo Doctrine as a protective measure. This path undertaken by Middle Eastern countries was popularized by the Argentinean jurist Carlos Calvo in 1868. Calvo warned that arbitration exploits Latin American wealth and weakens nations. Hence, arbitration was forbidden in Latin America international investment contracts (especially concession contracts). This doctrine also allowed national courts at the place of investment the exclusive authority to resolve such contracts. This doctrine was and is widely popular in the Middle East as a response to certain socio-political events.

Mutual Benefits

Indeed, Middle Eastern and Western countries exhibit various concerns towards international commercial arbitration. These involve various historical, political, legal, and national movements taking place in both the West and the East. For the most part, the attitude by both Westerners and Easterners has alternated between fear and amity. Despite this, there is acknowledgment that collaboration—exhibited within the context of arbitration—could be beneficial for both Westerns and Easterners. This part relates the mutual benefits gained by these parties.

Section I-Western Benefits

Despite the fear of political and economical instability in the Middle East, Western corporations acknowledge that this region has potential resources. For example, 65% of worldwide oil reserve (along with other natural resources) is found in Middle East. These resources are found in Saudi Arabia, Kuwait, and Iran. In addition, Western professional workers often find job opportunities in the region; while Western manufactures often locate new markets for their goods. To realize these economical objectives, Westerners must amend their attitude towards arbitration conducted in the Middle East. As mentioned earlier, Westerners often misuse and manipulate arbitral proceedings in the Middle East. If these attitudes persist, Middle Easterners will reject arbitration and the jurisdiction of national courts will proliferate.

[41] Alan Redfern and Martin Hunter, *Law and Practice of International Commercial Arbitration*, 217 (2d ed., Sweet & Maxwell 1991).
[42] This statement was presented by the president of the arbitral court of the international chamber of commerce, Robert Braner (1998). Bulletin du Cour Internationale d'Arbitrage de la CCI Vol. 9 – n 2 – Nov. 1998.

Section II-Middle Eastern Benefits

Despite all the concerns directed towards arbitration, most Middle Eastern countries concur that commercial relationships with Western companies offer technological, industrial, and manufacturing advantages. The Middle Eastern region is considered wealthy in oil resources, however indications point to a knowledge-deficit in science and industry. The United Nations Development Program (UNDP) issued in 2003 the "Arab Human Development Report: Building a Knowledge Society" which noted that Middle Eastern countries lack updated technological knowledge. Middle Eastern countries spend less than 0.2% of their national budget on scientific research and development. This is because most Middle Eastern countries are content to import this technology and adopt a "watch-and-see" approach. All of this means that Middle Easterners need Western technology hence, a commercial relationship with the West is inevitable.

In addition, most Middle Eastern countries acknowledge the foreign companies can provide economical and educational opportunities. These companies often have multi-million plans and are expected to stay many years in the Middle East reaping investment profits. By so doing, Western companies arrive with professional employees, workers, families, schools, hospitals, entertainment centers, and other facilities that accommodate foreign needs. These facilities are also used by Middle Easterners which elevates the standard-of-living. These interactions between the West and East may lead to cultural and commercial relationships that could be beneficial for both Middle Easterners and Westerners. Recently, within these commercial relationships, arbitration has become the norm of settling international commercial dispute.

Conclusion

Arbitration as a method of resolving dispute has historically undertaken different modes and directions. In the Middle East, arbitration was known in the pre-Islamic era as a non-binding and non-organized method, but it was later integrated in new ways within *Shariah*. Despite this, the concept of arbitration as it manifested within *Shariah* was not recognized in Westernized legislations. This is especially true after the rise of international institutions which implemented modernized arbitral methodologies and regulations. Despite this, Middle Easterners have approached arbitration with caution and suspicion. This attitude persists regardless of the many advantages offered by international commercial arbitration. Middle Easterners have specific concerns regarding the validity and applicability of international arbitration within their territories. The origins of these concerns relate to the colonial and postcolonial period, which often present arbitration as a Western phenomenon that protects Western interests. These concerns—held by both private and public entities—relate to commerciality, partiality, sovereignty, and governing laws. To partially resolve these concerns, Middle Eastern national laws have implemented protectionary measures (such as prior-authorization requirements). In addition, Westerners have developed concerns towards conducting arbitration in the Middle East. They are legal (e.g. outdated national laws) and political (e.g. nationalization) concerns that make Westerners weary of arbitrating in the Middle East. Despite this, both Middle Easterners and Westerners acknowledge that arbitration offers mutual benefits (e.g. adoption of Western technologies). To fully exploit these benefits, Middle Eastern countries should take initiative

and develop arbitral laws (based on the UNCITRAL Model Law)[43] which improve the effectiveness of arbitration. On the other hand, international arbitrators (especially in the West) should "prove these days that they are multi-learned, open-minded, culturally-pluralistic, and that their judicial spirit is comparative and open to various socio-political regimes. Arbitration as a flexible means of resolving dispute becomes hindered if arbitrators are culturally limited to a one-way method of thinking."[44] Indeed, future cultural diffusion—especially within the context of arbitration—might assuage the various concerns held by both Westerners and Middle Easterners.

References

Abdul Hamid El-Ahdab, Arbitration with the Arab Countries, 11 (2d ed., Kluwer 1999).

Abdul Hamid El-Ahdab, Arbitration with the Arab Countries, 11-12 (2d ed., Kluwer 1999).

Hassan I. Hassan in, Islam: A Religious, Political, Social, and Economic Study (Beirut), for judicial systems under the Umayyad, Abbasid, and Fatimid Dynasty.

Islamic holly Book.

Abi Abdallah Mohamed Ben Kharaj Al Maliki (known as Ibn Al Talah), The Judgments of the Prophet, investigated by Mohamad Diaë Al Azmi, 676 (1978).

Ali Haidar in Durar AI Hukkam Fi Charh Medjullat Al-Ahkam. the book of the judicial organization section 4. The arbitrator in the Beni Qarnata case was Saad Ben Maad.

Emile Tyan, Histoire de L'organisation Judiciaire en pays d'Islam, 27-61 (1960).

Subhi Mahmasani, Al-Awda al-tahri 'iyya fil duwal al-'Arabiyya, 29-9 (1957).

Abu Hanifa Na'man ibn Thabit (699-767 AD).

1 Muhammad Salam Madkur, Al Qada fil Islam, 131 (1964).

1 Convention of the Recognition and Enforcement of International Arbitral Award.

1 The New York Convention, Article III.

Hardinge Stanley Giffard Halsbury and Quintin Hogg Hailsham, Halsbury's Laws of England, Para. 601, 332 (4th ed., Butterworths 1991).

1996 English Arbitration Act (c. 23) Part I, Article 1 (a)(b).

[43] "The Model Law is designed to assist States in reforming and modernizing their laws on arbitral procedure so as to take into account the particular features and needs of international commercial arbitration. It covers all stages of the arbitral process from the arbitration agreement, the composition and jurisdiction of the arbitral tribunal and the extent of court intervention through to the recognition and enforcement of the arbitral award." See http://www.uncitral.org/uncitral/en/uncitral_texts/arbitration/1985Model_arbitration.html.

[44] Pierre Lalive, "Enforcing Awards" *60 Years of ICC Arbitration — A Look at the Future*, ICC Publication No. 412, 317-350 (1984).

René David, Arbitration in International Trade, 29 (2d ed., Kluwer 1985).

World Intellectual Property Organization (WIPO).

Julian Lew, Loukas Mistelis, Stefan Kröll, Comparative International Commercial Arbitration, 18 (Kluwer 2003).

Bryan A. Garner, Black's Law Dictionary, 41 (7th ed., West 1999).

Julian Lew, Loukas Mistelis, and Stefan Kröl, Comparative International Commercial Arbitration, 32 (Kluwer 2003).

Ian Brownlie, Principle of Public International Law, 331 (1998).

British Petroleum Co. (Libya) Ltd (BP) v Government of the Libya Arab Republic.

David W. Rivkin, Enforceability of Arbitral Awards Based on Lex Mercatoria, 72 (1993

Eric Loquin, La realite des usages du commerce international

Filali Osman, Les Principes Generaux de la Lex Mercatoria—Contribution a l'etude d'un ordre juridique anational, (1992))

Amor Zahi, L'Etat L'Arbitrage, 225 (1985).

See Fouchard, Gaillard, and Goldman, On International Commercial Arbitration, 795 (Kluwer 1999).

International Conference at Oxford University, July 31, 1999.

Mauro Rubino-Sammartano, Developing Countries vis-à-vis International Arbitration, 154 (D. Thompson and J. Werner 1996).

Alan Redfern and Martin Hunter, Law and Practice of International Commercial Arbitration, 217 (2d ed., Sweet & Maxwell 1991).

Bulletin du Cour Internationale d'Arbitrage de la CCI Vol. 9 – n 2 – Nov. 1998.

http://www.uncitral.org/uncitral/en/uncitral_texts/arbitration/1985Model_arbitration.html.

Pierre Lalive, "Enforcing Awards" 60 Years of ICC Arbitration — A Look at the Future, ICC Publication No. 412, 317-350 (1984).

http://links.jstor.org/sici?sici=00030554(191211)6%3A4%3C642%3ATILACO%3E2.0.CO%3B2-N

The Judgments of the Prophet, investigated by Mohamad Diaë Al Azmi, 676 (1978).

http://en.wikipedia.org/wiki/Calvo_Doctrine

A Method to Increase Student Comprehension with Illusions

Kevin Lee Elder, Georgia Southern University
David E. Deviney, Tarleton State University
Ronald J. MacKinnon, Georgia Southern University

Abstract

Illusions or magic in the classroom is a growing trend with educators at all levels, but especially at the K-12 level. A number of websites are popping up that facilitate this movement. Some educators use illusions for pure entertainment while others use them to make a point about the material being discussed. The question that is often asked is, does the use of illusions add value to the student's learning? Additionally, there is little guidance on the proper use of illusions. We will go on to provide principles and guidance for the use of illusions in the classroom. This paper will lay out the research framework we will use to attempt to answer the question can we achieve higher comprehension levels through measuring student recall of important points from lectures that were reinforced with an illusion and placed on the midterm exam or quiz. We will also measure student end of course satisfaction and attendance rates. Measurements were performed in two undergraduate business courses over two semesters. One semester without illusions and the next semester with the use of illusions introduced.

Introduction

Illusions or magic has been a growing trend in classroom activities, especially at the K-12 grade level (Deviney, 2010). This paper will attempt to explore the benefits of using illusion in the college classroom in the twenty-first century. In addition, it will investigate current practices and principles and go on to establish a list of best practices. While the focus of this discussion is college business and information systems classes, the same best practices can apply to other disciplines.

Magic tricks or illusions have been around for centuries. The earliest know illusion was performed in Egypt around 1700 B.C. (Fact Monster, n.d.). When the social sciences crystallized in the latter part of the nineteenth century, magic was already an established concept used for more than two thousand years in the European languages. Magos and related mageia came into the Greek language in the sixth century BCE as cognates of the Persian magus, which referred to a member of the priestly caste of Persia. Magus is a suffixed form of the Indo-European root magh meaning "to be able, to have power (Sorenson, 2006)." Early anthropologists refer to the Law of Contact or Contagion when referencing Magic, built on the principle that entities once in contact will retain connection even when spatially divided (Sorenson, 2006). Illusions are certainly very popular today and this retention of the connection is something we can use to help students even after the connection in class is in the past.

David Levin and Kevin Spencer (Healing, n.d.) found that when the Occupational Therapist concentrates on specific problems resulting from a medical problem that interferes

with a client's independence and productivity they can attain improvement in many areas. The use of simple magic tricks from the HEALING OF MAGIC program can assist in:

- *Gross Motor Skills*: range of motion, strengthening, and balance in the upper and lower extremities.
- *Fine Motor Skills:* dexterity, eye-motor coordination, speed and accuracy, object manipulation.
- *Psychosocial*: self efficacy, self esteem, group interaction, interpersonal skills.
- *Attention*: concentration, task follow-through, memory.
- *Perception*: visual (form discrimination, form constancy, spatial relations, figure group, eye-hand coordination), tactile, proprioception, kinesthesia.
- *Motor Planning*: being able to plan and know what steps are necessary for a particular movement.
- *Cognitive*: following simple and complex directions, memory, planning, sequencing, organizing, problem solving.

Those are almost all things we as educators could use help with in our classrooms with our students. In January 1999 at the annual meeting of the Board of Directors, the International Brotherhood of Magicians voted to endorse and support the HEALING OF MAGIC program and encourage its 15,000 members around the world to participate in their local communities. Since that time, hundreds of magicians in more than 20 countries have requested information on how they can volunteer their time and talents working with Occupational Therapists in hospitals, rehab centers and school systems (Healing, n.d.).

A growing use of magic is in children's religious services, often called "gospel magic." It creates anticipation on the part of the learner, keeps their attention and helps illustrate abstract concepts (Linn, n.d.). A well established use of magic is to teach science and mathematics (Swan, 1998). Some of those using illusions to teach statistics see the benefits of student engagement, a focus on conceptual understanding, development of critical thinking and an opportunity to reflect upon the role of assumptions and estimates of probability (Lesser and Glickman, 2009). Dr. Benjamin Krevsky of Temple University uses illusions to teach medical students (Temple Times, n.d.) fundamentals of some bodily processes. He believes illusions reduce boredom and relax students during class.

Some studies indicate the number of visual-spatial learners in the classroom is increasing (Stokes, 2001). One study found that 63% of students were visual-spatial learners (Silverman, 02). Furthermore, we tend to retain more when lectures are both oral and visual in nature (Teach by Magic, 2009). The use of illusions can create the visual anchor for learning and, when supported by an oral explanation of the concept, connect with a larger percentage of the students.

It is this connection associated with magic that we hope to explore and relate to student's retention of material in class.

The basics: Practices, Principles and Planning

Deviney (2010) explains that illusions can be used to energize a class, get their attention or to make a point about the material being discussed. When energizing a class or getting their attention, the illusion does not have to relate to the material being presented, although it can. Simply doing the illusion will refocus students (Deubelbeiss, n.d.).

Three general categories of illusions are; close-up, stage and platform. Close-up illusions, sometimes called table magic, are performed in small groups usually no more than ten-feet from those observing or while sitting at a table (Wilson, 1988). Stage illusions are performed, as the name implies, in front of larger audiences at a distance (Hopkins, 1990). Often stage illusions are performed to large audiences which can involve elaborate props and often assistants. Parlor illusions are generally performed to smaller audience and fit somewhere between stage and close-up illusions in terms of audience size (Hollingworth, 2008).

Beginners at illusions should start with easy tricks. There are literally hundreds of self-working devices (Forgaard, n.d.). The effect is built into the device. These tricks do not generally require great skill and work with some manipulation by the performer. Most are very simple, but can be quite mysterious and astounding. However, this does not mean you don't need to practice. One of the best ways to find illusions is to visit a magic supply shop (Pogue, n.d.). Most shops have sales staff that can perform the illusions, make suggestions and train you on how to use the device. However, they will not reveal the "trick" until after you purchase the illusion.

Deviney (2010) further explains that beginners at illusions should start with easy tricks. There are literally hundreds of self-working devices (Forgaard, n.d.). The effect is built into the device. These tricks do not generally require great skill and work with some manipulation by the performer. Most are very simple, but can be quite mysterious and astounding. However, this does not mean you don't need to practice. One of the best ways to find illusions is to visit a magic supply shop (Pogue, n.d.). Most shops have sales staff that can perform the illusions, make suggestions and train you on how to use the device. However, they will not reveal the "trick" until after you purchase the illusion.

The use of illusions in the classroom should be based on the following simple principles:

1. The illusion should not overpower the lesson (Linn, n.d.) – Know what you are teaching and find a trick that will enhance the message. There is some danger here since some students will spend time trying to figure out the trick rather than listening to the discussion. You can perform an illusion prior to break or just before the end of class which will reduce this possible negative impact.

2. Practice and then practice some more (Wilson, 95) – Practicing will help you both prefect the illusion and the accompanying message (the patter). Andi Gladwin recommends practicing using a digital movie camera (Gladwin, n.d.). He goes on to recommend viewing your performance from different audience angles.

3. Never repeat a trick for the same audience (Wilson, 95) – Repeating an illusion for the same audience increases the chance they will "catch you." Additionally, often illusions are based on similar concepts and techniques (Linn, n.d.).

4. Never reveal the secret (Wilson, 95) – Revealing the "secret" is one of the cardinal mistakes that a beginning illusionist makes. It is really a disservice to your audience since it eliminates the mystery, excitement and fun of the illusion.

Deviney (2010) continues that illusions can be used for many purposes, but using them to get attention and draw the audience back and make a point about the lecture seems to be most appropriate for instruction. With the increasing use of alternative educational delivery systems such as extended meeting times (e.g., all-day Saturday classes) or compressed teaching sessions (e.g., mini-mesters), students can become bored and drift off. Instructors need to become more creative in keeping and regaining the student's attention (Gleason, n.d.). With new studies suggesting that the average attention span of college students is just ten minutes (Richardson, 2010), it is very important to re-energize the classroom. Magic can be one tool in regaining attention.

Why should we change our methods of instruction with the use of illusions you might ask? Turner and Carriveau (2010) suggest that "as we close the first decade of the twenty-first century, there are forces impacting higher education that present an alternative to business as usual that is so compelling that real change is not only possible, it is probable. These forces include low success rates in general education classes, changing student demographics, skyrocketing costs, increased understanding of learning, and a call for colleges to provide evidence of the value that they add." We believe that illusions are one tool we can use to help attack these issues.

Pilot Test

In the fall of 2010 we sought to test whether illusions could help students remember key concepts and ultimately increase satisfaction with the class. We have two sections of two classes we will be taking measurements in. One class is a freshman course in entrepreneurship. The second course is a junior level MIS course. Selecting tricks for classroom use should be done with care. Once you have decided to use a certain illusion, purchasing it can be expensive. Not all suppliers of illusions (including local magic shops) are price competitive. Here are two that are believed to be price competitive and responsive to customers:

Daytona Magic http://daytonamagic.com/
RockRidge Sales, Inc.
http://www.amazon.com/gp/shops/A39HSYH5TCDA32?ie=UTF8&*Version*=1&*entries*=0

12 illusions were selected for use in each class. Each illusion was introduced in class and was specifically designed to illustrate a key concept in lecture. For example, when reinforcing the idea in the freshman class that reading the text will lead to higher test scores we used a simple illusion that appeared to make black and white and then color pictures appear in a previously shown blank book. When illustrating contracts and/or insurance policies a

Magician's Insurance Illusion was performed. A break away fan can be used to illustrate teamwork, while there are several excellent color changing illusions to demonstrate color-blindness. Other illusions were thrown in as class ice breakers and students did not know when the illusions were coming. We have test item scores from two semesters where no illusions were performed in class for both classes. We plan to compare those two control terms with the current term where the independent variable is introduced.

We expected to see higher test item scores for the current semester, along with higher end of term satisfaction scores. We are encouraged with the higher scores halfway through the class. Not only are the students scoring higher on the test/quiz items directly tied to the illusions, the average test scores as a result are on average a grade higher. An added bonus not previously anticipated is higher attendance rates! This is especially noteworthy in the freshman class where classroom attendance is required and lack of attendance can cause failure. The illusions seem to have increased attendance where the threat of failure had not accomplished that feat.

Conclusion

In conclusion, the use of illusions in the classroom is a break from the ordinary. When used properly, they are entertaining and funny and help to get and maintain the student's attention as well as make a point. We recommend you begin with one or two simple illusions, build your confidence and skill and then move to more difficult ones. However, keep in mind that some of the most amazing illusions are very simple to perform once you know the "trick." Students seem to connect better with the instructor when illusions are used in the classroom. They come to class asking if there will be any magic today and disappointed if there is none. In our pilot study they are achieving higher scores, which equate to higher comprehension levels.

Little research has been done into the use of illusions in the classroom and more formal research should be conducted. Specifically the following questions should be explored (some of which we are addressing in this research), others are for future research.

Currently testing:

- Are illusions an effective tool in getting students attention?
- Are illusions more distracting than beneficial?
- Which course topics are enhanced by illusions?
- Do illusions enhance the relationship between the student and instructor?
- Does the use of illusions improve the student's evaluation of the course?
- Does the use of illusions improve the student's evaluation of instructors?

Future testing:

- How often should illusions be used in a semester?
- Are illusions more effective when class times are extended (3 hours and greater)?
- Can illusions be used when classes are online?

As Levin and Spencer infer (Healing, n.d.), the purpose of curriculum is to provide teachers with a visual, exciting, and motivating way to allow students to safely explore skill

levels, improve existing skills, and develop new ones. The use of illusions in the classroom may not fit everyone's instructional style. If it does, use it and most of all have fun!

References

Becker, K (n.d.). 'Magical' doctor uses illusions to reveal the wonders of medicine Retrieved from http://www.temple.edu/temple_times_archives/1999/99/1/28/krevsky.html

Deubelbeiss, D. (n.d). EFL Teaching Recipes. Retrieved from http://teachingrecipes.com/2010/01/20/magic-tricks/

Deviney, David A. "Using Illusions in the Classroom: Practices, Principles and Planning", SOBIE 2010.

Fact Monster (n.d.). Magic. Retrieved from http://www.factmonster.com/ce6/ent/A0930547.html

Forgaard R. (n.d.). Self-working magic. Retrieved from http://www.selfworking.com/

Gladwin, A. (n.d.) . Closed-Minded. Retrieved from http://www.xmission.com/~zerowc/closeminded/0210andi.html

Gleason, J (n.d.). How to create engaging lectures: Tips of getting and keeping the attention of students. Retrieved from http://writinglectures.suite101.com/article.cfm/how_to_create_engaging_lectures

Healing of Magic (n.d.). Information for the therapist. Retrieved from http://www.magictherapy.com/therapists.html#MagicandEducation

Hollingworth, Guy (2008). "Waiting For Inspiration." Genii Magazine. January 2008-December 2008.

Hopkins, Albert A. (1990). Magic: Stage Illusions, Special Effects and Trick Photography. Dover Publications.

Kawamoto, W (n.d.). Five steps for getting started in magic. Retrieved from http://magic.about.com/od/beginningmagic/a/GettingStarted.htm

Lesser, L. M., and Glickman, M. E. (2009). "Using magic in the teaching of probability and statistics" Model Assisted Statistics and Applications, 4, 265-274.

Linn, G.R. (n.d.). Why use Christian illusions? Retrieved from http://www.childrensministry.org/articles/whygospelmagic.htm

Olson, A. (2009). The Art Of Performing Magic Tricks Retrieved from http://come-and-read.com/Art/68033/330/The-Art-Of-Performing-Magic-Tricks.html

Pogue, D. (1998). Magic for dummies. New York, NY: Hungry Minds.

Richardson, H. (2010). Students only have a '10-minute attention span.' Retrieved from http://news.bbc.co.uk/2/hi/uk_news/education/8449307.stm

Sliverman, L.K. (2002). Upside down brilliance: The visual-spatial Learner. Denver: DeLeon Publishing.

Sorenson, J. (2006). A Cognitive Theory of Magic. AltaMira Press; annotated edition.

Stokes, S (2001). Visual Literacy in Teaching and Learning: A Literature Perspective. Electronic Journal for the Integration of Technology in Education. Retrieved from http://ejite.isu.edu/Volume1No1/Stokes.html .

Swan, P. (1998). Matemagic: A way of motivating mathematical learning and having some fun in mathematics. Retrieved from http://www.mansw.nsw.edu.au/members/reflections/vol24no2_99swan.htm

Teach by Magic (2009). Retrieved from http://www.teachbymagic.com/Tour.aspx

Turner, P.M. and R.S. Carriveau. (2010). Next Generation Course Redesign. Peter Lang; First printing edition.

Wilson, Mark (1988). Mark Wilson's Complete Course In Magic. Courage Books. Card Magic, pp. 17-171

Wilson, M. (1995). Mark Wilson's Encyclopedia of Magic: A complete course. Philadelphia, PA: Running Press.

SAP Graduate ERP Certification

Kevin Lee Elder, Georgia Southern University
Tom Case, Georgia Southern University
Ronald J. MacKinnon, Georgia Southern University

Abstract

SAP is fairly widely used in the undergraduate business curriculum but it is not as widely used in the business graduate curriculum. This paper describes how any university would be able to incorporate SAP into their graduate curriculum. SAP has a University Alliance program that encourages universities all over the world to cooperate in the use of SAP in the curriculum. SAP maintains an SAP University Alliance Community web page that lists major SAP applications developed by various universities and these applications are made available to all members of the SAP University Alliance. In these times of shrinking budgets and tight employment opportunities for business school graduates we feel that many universities should be considering using SAP in the graduate curriculum. Our paper will be a guidebook or framework for how to accomplish that.

Introduction

Enterprise Resource Planning (ERP) software is software that runs entire companies like Coca Cola or Home Depot and this kind of software runs most of the big companies in the world. The leading ERP company is SAP, which is the world's largest software company. SAP employs more than 51, 500 in more than 50 countries in more than 120 countries and the SAP software is available in more than 40 different languages. Because SAP is such a large company with their software widely adopted all over the world, SAP is constantly in need of additional people who know how to use SAP software.

There has been quite a bit written and published concerning introducing and using SAP in the undergraduate information systems programs (Andera, F. & Derringer, D. W., 1998; Hawking, P., Ramp, A. & Shackleton, P., 2001; Hawking, P., McCarty, B. & Stein, A., 2004; Abdinnour-Helm, S. & Chapman, B., 2006; Boyle, T., 2006; MacKinnon, R., K.L. Elder,2009; MacKinnon, R., K.L. Elder, H.J. Kung, 2010; Kung, HJ., R. Mackinnon, K.L. Elder, 2010). Since 1999 there has been an increase in articles written about expanding the use of SAP across the undergraduate business degree (Gust, D. D. & Hayen, R. L., 1999; Corbitt, G. & Mensaching, J., 2000; MacKinnon, R., 2004; Andera, F ., 2004; Andera, F. & Hayen, R., 2006A; Andera, F. & Hayen, R., 2006B). We have found no articles discussing the use of SAP in the MBA curriculum besides the one we authored last year (K.L. Elder, R. MacKinnon, H.J. Kung, 2010). We are building off that work to discuss the latest addition to our offerings at Georgia Southern, a graduate certificate in ERP.

Master of Business Administration (MBA) degree

The MBA (Master of Business Administration) is a postgraduate degree that is awarded to students who have mastered the study of business. The MBA degree is thought to be one of the most prestigious and sought after degrees in the world. Students of MBA programs study the theory and application of business and management principles. This type of study equips students with knowledge that can be applied to a variety of real world business situations.

The Masters of Business Administration (MBA) is one of the most popular graduate degrees available. Perhaps this is because of its relevance in this world of ever-increasing business opportunities, or the ways in which the skills learned in class can be applied to the larger world of business in the expanding globalized economy about which so much attention is being paid these days. Or maybe it's because the MBA degree can often lead to lucrative careers in the public and private world of business. Whatever it is, one thing remains clear: Earning an MBA degree is one of the surest ways to further your career, jump-start a new one or set yourself up for the corporate position you've always dreamed of.

Of course, there are myriad options within the world of MBA's, and the area you choose to focus on will have just as much of an impact on your professional prospects as the fact that you have earned it in the first place. Since Windsor and Tuggle (1982) there has been a myriad of papers purporting to redesign the MBA curriculum. And that is the beauty of an MBA, it will not only give you the tools you need to succeed in the business world, but it will also open doors that might have remained closed before in many different degree programs. Therefore, we propose implementing the use of SAP across the MBA curriculum.

The MBA core curriculum offered at most business schools includes combinations and variations of the following courses:

- Accounting
- Business Strategy
- Economics
- Finance
- Human Resources
- Marketing Management
- Manufacturing and Production
- Operations Management
- Statistics
- Technology and Information Systems

While there will certainly be some variation in the programming from school to school, and while there will certainly be some courses that are offered in one place but not another, the general course of study will encompass similar topics and classes. The goal, after all, is to prepare students for the world of high-end business which they will likely enter following graduation from their MBA program.

SAP University Alliance (SAPUA)

In order to have a continuing supply of educated university graduates knowledgeable about SAP software, SAP created an association with universities called the SAP University Alliance (SAPUA). SAP Education Alliances are designed to:

- Develop graduate and undergraduate learning programs that enable teaching and understanding of integrated business processes
- Encourage technically sophisticated graduates who can apply SAP solutions and technology to pursue careers in real-world business environments
- Create a network of university researchers who contribute to the body of knowledge and innovative applications of SAP solutions
- Provide the needed resources to help ensure a successful integration of SAP into the classroom, including curriculum materials and functional experts (Source: SAP Website: http://www.sap.com/usa/company/citizenship/education/index.epx)

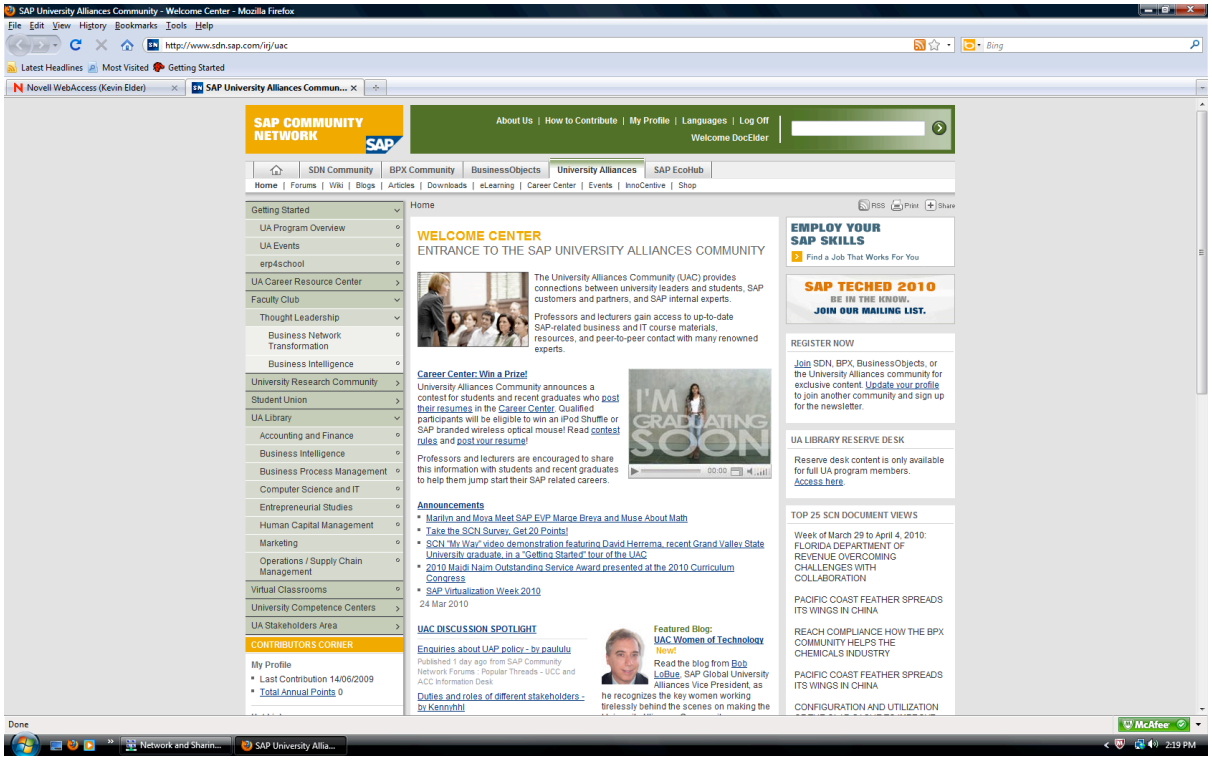


Figure 1. SAP University Alliance Welcome Page.

As you can see from Figure 1, SAPUA members benefit from access to:

- A collaborative global network
- Professional development, research, and industry collaboration
- Forums, blogs, and Wikis

- Articles
- Curricula development workshops and events
- Curriculum materials

Faculty members at SAPUA member institutions can click on the Library tab and view curriculum material from other member institutions as depicted in Figure 2 and 3. Faculty can attend SAP-sponsored workshops and SAP customer training classes at no cost. Faculty at SAPUA member schools also access to information on SAP events, research, and downloadable curriculum materials all throughout the year and as you can see it is not limited to information systems topics. You can find curriculum material right off the library page for:

- Accounting
- Business Intelligence
- Finance
- Business Process Management
- Human Capital Management
- Marketing Management
- Supply Chain Management, Manufacturing and Production
- Operations Management
- Computer Science, Technology and Information Systems

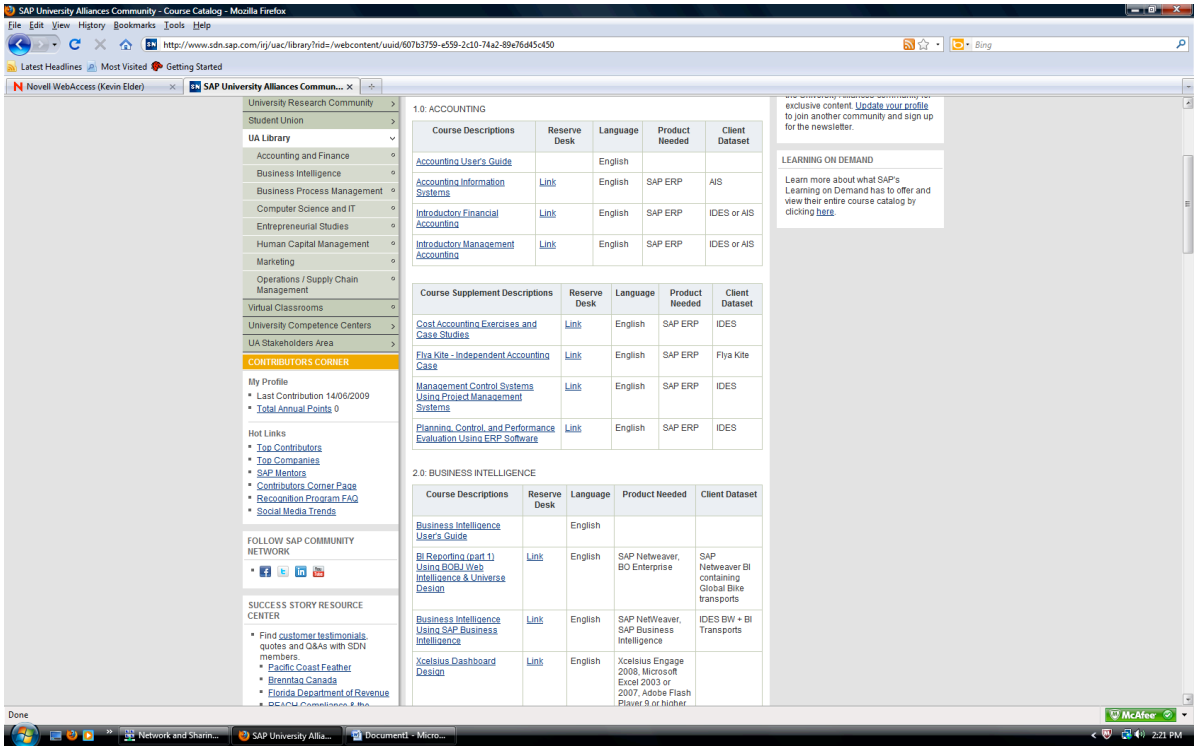


Figure 2. Accounting, Finance and Business Intelligence Curriculum Material

On this web page there are more than 59 applications in these various areas. Many of the applications that the SAP University Alliance makes available to universities are being incorporated into undergraduate business programs and could be incorporated into the MBA curriculum as well. For example, if a university wanted to incorporate an introduction to ERP in their MBA curriculum the Global Bike application includes SAP navigation, a SD (sales and distribution) case study, a MM (materials management) case study, a PP (production planning) case study, a FI (financial accounting) case study, and a CO (managerial accounting) case study. These applications are fully documented and include step-by-step instructions on how to complete the SAP application. As an added bonus, any university that has a 30% SAP content in 3 MBA courses can offer an SAP certificate to their students. Fees for annual program membership vary by country. In the U.S., the current annual SAPUA membership fee is $8,000.

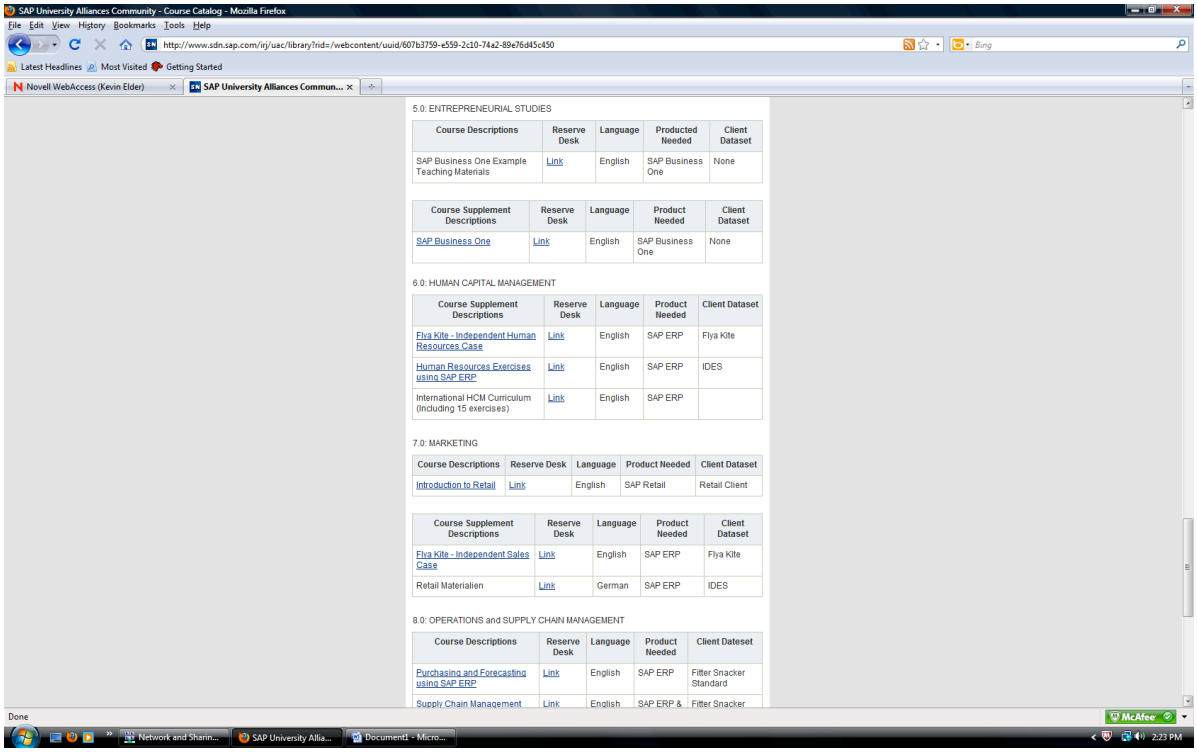


Figure 3. Entrepeneurial, Human Capitol, Marketing Curriculum Material

SAPUA membership can be a focal point for university program differentiation and distinction. It has the potential to improve student recruiting, to enhance the university's reputation, and to improve the marketability of its graduates. It may also assist in attracting educators whose primary interests lie in enterprise systems and integrated business process solutions (MacKinnon, R., K.L. Elder,2009; K.L. Elder, R. MacKinnon, H.J. Kung, 2010).

For students, SAP's University Program provides a vehicle for gaining hands-on experience with SAP solutions. Those that graduate with UA certification increase their chances of finding employment with SAP user organizations via clicking on the student union tab from

the welcome page (Figure 1), they will be taken to Figure 4. From this site they can post their resumes, view open SAP positions, learn more about further SAP education and training opportunities and more. The SAP certification is rapidly becoming one of the most useful certifications and students can earn one from your university by taking a minimum of three SAP courses at an SAP University Alliance member institution. These courses are not limited to information systems courses and as you can see from the few examples shown here, almost all of your MBA courses could be SAP courses.

From Figure 1 you can see that there is so much more that the SAP program has to offer your faculty, from articles, to forums, to research opportunities too numerous to mention in this paper. Simply go to the SAPUA site for much more information (www.sdn.sap.com/irj/uac).

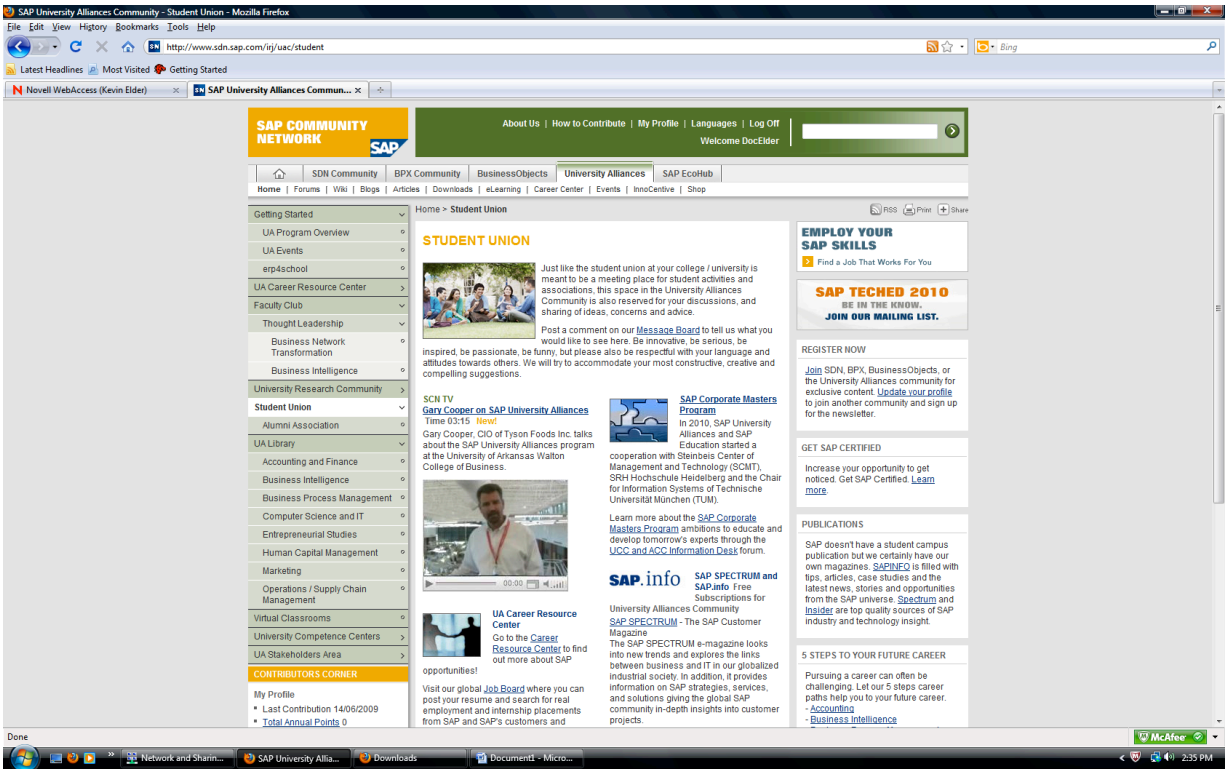


Figure 4. Student Union Page for students

Another benefit of the SAP University Alliance program is the fact that they provide University Competence Centers (UCC). These UCCs not only host the SAP software for the member institutions, they also provide technical support. While Information Systems faculty may not need this support very often, the non-technical oriented faculty in other disciplines will find this a valuable resource bundles in with their membership. This makes the entire program more accessible to other disciplines as we outlined for a typical MBA program.

A recent article (Feb., 2007) in NetworkWorld, titled "SAP Workers in High Demand ," states: "A shortage of skilled SAP workers is making it difficult for IT departments to fill open

jobs and caused the average salary for certain high-level SAP professionals to rise 15.6% in the past year… the average base salary for directors of SAP program management rose from $115,468 to $133,500 in the calendar year that just ended. This increase of 15.6% dwarfs the typical increases in IT salaries of 3% to 5% a year, says David Foote, CEO and chief research officer."

Graduate ERP Certificate Course Requirements

The CERG will be earned by completing 15 hours, which include the following courses:

4 required 3-hour courses:

- CISM 7231: ERP Business Process Analysis using SAP
- CISM 7331: Enterprise Systems Analysis
- CISM 7335: Business Intelligence and Performance Management Systems
- CISM 7235: ERP Web Portal Customization
  OR CISM 7336: Enterprise Information Systems

1 required 3-hour course (requested course number and title is listed below):

- CISM 7339: ERP Certification

This required two-week course is taught on campus by certified SAP instructors, Monday through Friday from 8 a.m. to 5 p.m. The ERP Certification course is a capstone experience that covers in detail the core modules of SAP's ERP (Enterprise Resource Planning) application, which has been designed to support the core business operations of organizations seeking state-of-the-art business processes. The course also includes SAP ERP analytical and reporting functions. On the last day of the course, the C_TERP10_60 certification exam is administered. Students who pass the exam are added to SAP's database of certified practitioners. SAP is actively promoting the C_TERP10_60 certification as a strategy to ameliorate the SAP skills shortage that exists within the industry.

The existence of a skills gap is easily verified by job sites for IT professionals. The following table summarizes the results of recent searches for SAP jobs on major Web sites used by employers to recruit SAP talent.

Table 1. SAP Jobs Listed on Major Web Sites Used by Employers Recruiting SAP Talent

Number of Listed SAP Jobs	SAP Jobs in GA	Web Site	URL
62,192	2885	Indeed.com	http://www.indeed.com
36,053	1419	SAPJob.net	http://www.sapjob.net/
5563	313	Dice.com	http://www.dice.com
3758	145 new postings in last 30 days	CareerBuilder.com	http://www.careerbuilder.com
2478	1486	SAP Community Network Career Center	http://scncareercenter.jobtarget.com/home/index.cfm?site_id=8446

The demand for employees with SAP skills is sufficiently strong to support specialized Web sites including: SAPJob.net, SAP Community Network Career Center, SAPCareers.com, SimplySAP.com, and JustSAPJobs.com. SAP job listing also dominate sites such as erpCareer.com and ERP-Consulting.com.

SAP Certifications, such as that attained by passing the TERP10 certification exam, are sought by many employers seeking new employees. Jeffrey Word (Word, 2009), Vice President of Product Strategy for SAP AG states that "TERP10 Certification is the equivalent of $10,000 in starting salary." Based on the volume of external inquiries, current enrollments in graduate courses with SAP components, persistent SAP talent shortages among employers, and salary differentials associated with SAP Certification, we estimate that at least 25 students will enroll in the ERP Certificate program each year.

The addition of this certificate program is likely to increase student interest in the university's MBA, MAcc, and MS in Applied Engineering (IT Emphasis) programs. Prospective students are likely to perceive the ERP Certificate as an attractive add-on for these degrees. It may also increase student interest in the WebMBA program. For some students, the ERP Graduate Certificate program is likely to serve as a stepping stone to the university's MBA, MAcc, and MS in Applied Engineering (IT Emphasis) programs. A student enrolled in the ERP Certificate program who earns a B in each of the courses taken could use multiple courses toward each of these degrees.

Conclusion

A university looking for something new to offer that could attract new students should seriously investigate the SAP University Alliance and offering at least some of the courses mentioned above. The SAP curriculum resources made available through the University Alliance program could and should be used in the graduate program as well. Companies are constantly looking for new hires with SAP experience, combine that with your MBA degree and you have a lethal combination. Given the high demand among SAP user and consulting organizations for TERP10 certified employees, we anticipate that the creation of this program will have minimal impact on enrollments in these existing programs. Similarly, we do not expect these existing programs to have a detrimental impact on our Graduate ERP Certificate program. Online delivery of this certificate program with asynchronous courses will improve accessibility to quality graduate education for Georgians across the state as well as to students across the nation and around the world. The two-week ERP Certification course will be the only component of the ERP Graduate Certificate that will not be delivered online. For universities just considering the implementation of SAP in their curriculum, we hope this paper can be used as a guide for how to proceed.

References

Abdinnour-Helm, S. & Chapman, B. "A Usability Study of SAP R/3 in a Course on Enterprise Resource Planning", Proceedings SAP Curriculum Congress '06, 2006, 25.

Andera, F . "Salary Comparison of Central Michigan's College of Business Administration Graduates Who Have and Have Not Taken SAP R/3 Supported Classes", Issues in Information Systems, 2004, V 1, 8-14.

Andera, F. & Derringer, D. W. "SAP: Implications for Computer Information Systems", Journal of Computer Information Systems, 1998, 19(1), 72-75.

Andera, F. & Hayen, R. "Moving a College of Business Core Curriculum to the Next Level in SAP Enterprise Software Curriculum Integration", Proceedings SAP Curriculum Congress '06, 2006A, 14

Andera, F. & Hayen, R. "Directions in SAP Enterprise Software Integration in Business Curricula", Proceedings SAP Curriculum Congress '06, 2006B, 23

Antonucci, Y. L. Corbitt, G. Stewart, G. & Harris, A. L. (2004). "Enterprise Systems Education: Where Are We Going?", Journal of Information Systems Education, 2004, 15(3), 227-234.

Boyle, T. "An Enterprise Resource Planning Major for Computing and Information Systems Students", Proceedings SAP Curriculum Congress '06, 2006, 22.

Corbitt, G. & Mensaching, J. "Integrating SAP R/3 into a College of Business Curriculum: Lessons Learned." Information Technology and Management, 2000, I(4), 247-258.

Elder, Kevin Lee, MacKinnon, R., & H.J. Kung, "SAP in the MBA Curriculum", SOBIE, 2010.

Gust, D. D. & Hayen, R. L. "Including SAP Enterprise Software In the Introductory Business Computer Course", Proceedings, ISECON, October 1999.

Hawking, P., Ramp, A. & Shackleton, P." IS '97 Model Curriculum and ERP Systems", Business Process Management Journal, 2001, 7(3), 225-233.

Hawking, P., McCarty, B. & Stein, A. "Second Wave ERP Education", Journal of Information Systems Education, 2004, 15(3), 327-332.

Kung, H.J., MacKinnon, R., & K.L. Elder. "ERP Simulations", SOBIE, 2010.

MacKinnon, R. "Integration of ERP in the Business Curriculum", Issues in Information Systems, 2004, 413-419.

MacKinnon, Ronald, Kevin Lee Elder, "Innovations for Business Schools and IS Depts", SOBIE, 2009.

MacKinnon, Ronald, Kevin Lee Elder, H.J. Kung, "SAP Certifications", SOBIE, 2010.

Networkworld, "SAP Workers in High Demand", http://www.networkworld.com/news/2007/021207-sap-workers.html, 2007.

SAP Americas: Our Role in the World's Largest Software Company, http://www.sap.com/usa/about/index.epx

Word, Jeffrey, VP of Product Strategy, SAP AG, December 14, 2009.

The Effects of Clock Rule and Kickoff Rule Changes in NCAA Football

Dr. Kenneth Linna, Auburn University at Montgomery
Dr. Evan Moore, Auburn University at Montgomery

Abstract

Clock rule changes were introduced in the 2006 season with the goal of reducing the average duration of the game; these changes were reversed in 2007. The kickoff rule was changed in the 2007 season to create, "…more opportunities for what the committee feels is one of the most exciting plays in a game, and we're not really sure, but it may increase scoring, too." This paper presents results using data from the 2005, 2006, and 2007 seasons concerning the effects of these rule changes on total scoring, scoring margin, and "competitiveness" of the games. These results are then compared to the preseason predictions of the rules committee, other officials, and a variety of coaches.

Introduction

Rules changes in sport are usually undertaken in an effort to improve the game. Each year the NCAA Football Rules Committee meets to propose rule changes for college football games. Two significant changes were undertaken in the 2006 and 2007 seasons.

Prior to the start of the 2006 college football season, the NCAA Football Rules Committee made "recommendations concerning the length of the game" in an attempt to shorten the duration of football games. (NCAA Press Release, 2006) The recommendations included:
(1) starting the clock on kickoffs when the foot touches the ball, not the returning team;
(2) starting the clock when the ball is ready for play on a change of possession; and
(3) shorten the halftime allowance from 20 to 15 minutes.

According to NCAA Football Rules Committee chair and football coach at Pittsburg State Charles Broyles, "We looked at quite a few proposals to shorten the game…Starting the clock on the change of possession is probably our biggest change. We think this is a good change and that this will help reach our goals in this area." (NCAA Press Release, 2006). Coach Broyles was correct; Steve Wieberg wrote, "College football's rules makers got what they wanted: a faster, shorter game." He reports, of the opening week games, that in 2006 31 of the 72 games were completed in 3 hours or less, with 4 lasting as long as 3.5 hours. In 2005 only 5 of 52 games completed in 3 hours or less; 13 went 3.5 hours or longer. (Wieberg, 2006)

Coaches noticed that these changes had an impact on play. Then West Virginia coach Rich Rodriguez stated, "Normally, in most games, you have 12 or 13 possessions. We had 10 on offense." He went on to say, "So you've really got to make things happen offensively." In a similar vein, Similarly, South Florida coach Jim Leavitt noted, "People are very aware of the speed of the game right now." (Wieberg, 2006)

However, early in the season there did not appear to be many coaches viewing the changes as particularly problematic to game management. Texas Tech coach Mike Leach noted, "I don't think they're too hard to work around." However, he also added, "I just think it's dumb to shorten these games that have been a perfectly good length for years and years." (Wieberg, 2006)

Coach Leach's assessment was ultimately shared by other coaches. According to Steve Wieberg (2007), "Coaches hated the moves (the clock rule changes)." The NCAA rules oversight panel voted to eliminate the clock rule changes "… used last year that helped shave 14 minutes off of game times." (NCAA Press Release, 2007) Additionally, the panel decided to change the kickoff from the 35 yard line to the 30 yard line beginning with the 2007 season. According to the football rules committee spokesman, Ty Halpin, the proposed justifications for changing the kickoff rule in NCAA football include creating "…more opportunities for what the committee feels is one of the most exciting plays in a game, and we're not really sure, but it may increase scoring, too." (Associated Press, 2007) This was mirrored by Dave Parry, national coordinator of NCAA football officiating, who stated, "It will create a little more excitement, and we'll get a little more movement of the ball." (Brunt, 2007)

The excitement theme and the impact of the rule change are mentioned by a variety of coaches. Minnesota coach Tim Brewster stated, "I like it, because it puts one of the more exciting plays back in college football." (May, 2007) And Missouri Tigers coach Gary Pinkel said, "When it's all said and done, this could have a huge impact." (Kerkhoff, 2007)

A number of coaches have commented regarding this rule change on scoring. According to Kentucky head coach Rich Brooks, "It's going to be one of the most significant rule changes to come around in a decade…. You're going to see scoring averages go up because of this rule change." Auburn head coach Tommy Tubberville stated, "It will add more points to the scoreboard." (Hood, 2007) Mark Nelson, Louisville's special teams coach, made the following prediction: "Add about seven points to the total score of every game." (Dodd, 2007)

This paper presents results concerning the effects of these rule changes on total scoring, scoring margin, and "competitiveness" of the games. These results are then compared to the preseason predictions of the rules committee, the officials, and a variety of coaches. The next section describes the data used in the analysis. Section 3 provides analyses of the data and findings. Section 4 concludes.

The Data

The data used in this study consists of the final scores from NCAA Division I football games in the 2005, 2006 and 2007 seasons. This includes all 2,308 games involving at least one Division I Football Bowl Subdivision (FBS) team. The complete data set will be used in the overview provided in the next section. However, 364 matchups, totaling 1,092 games, were played in each of the three seasons. To avoid dependence issues, most of the analysis was conducted using difference scores for these repeat matchups.

Summary Statistics, Analysis and Results

Table 1 presents summary statistics for the scores of the three seasons in four categories of games. In all of the four categories the total scoring decreased from 2005 to 2006 then increased with the 2007 season to a higher mean than that of the 2005 season. The exception was BCS bowl games as scoring in 2007 did not exceed that of the 2005 season.

Table 1. Summary Scoring Statistics for 2005-2007 Seasons. Entries are means with standard deviations in parentheses.

All games	**2005**	**2006**	**2007**
Total score	52.60(17.20)	47.53(16.12)	55.41(18.69)
Winning score	35.11(12.14)	32.51(11.46)	36.46(12.32)
Losing score	17.49(9.852)	15.02(9.448)	18.95(10.99)
Margin of victory	17.62(13.90)	17.49(13.47)	17.51(14.00)
N	718	792	798
Non-conference games (reg. season)			
Total score	52.13(16.92)	47.88(15.37)	54.20(18.05)
Winning score	36.97(13.33)	34.76(12.19)	38.05(13.28)
Losing score	15.16(9.484)	13.13(9.381)	16.15(10.56)
Margin of victory	21.80(15.77)	21.63(15.39)	21.91(15.81)
N	239	303	316
Conference games (reg. season)			
Total score	52.61(17.18)	47.03(16.57)	56.09(18.97)
Winning score	34.22(11.48)	31.06(10.89)	35.40(11.43)
Losing score	18.39(9.661)	15.97(9.186)	20.69(10.89)
Margin of victory	15.83(12.46)	15.08(11.47)	14.71(11.78)
N	451	457	450
Bowl games			
Total score	56.61(19.80)	51.44(16.54)	57.69(20.63)
Winning score	33.75(10.32)	32.09(8.917)	35.56(13.06)
Losing score	22.86(11.73)	19.34(10.54)	22.12(11.00)
Margin of victory	10.89(9.814)	12.75(10.37)	13.44(12.55)
N	28	32	32

Table 2. Scoring statistics for BCS auto-bid conferences. Entries are means with standard deviations in parentheses.

		2005	2006	2007
ACC	Total score	46.64(15.05)	40.98(16.82)	47.71(13.93)
	Winning score	30.56(11.21)	27.13(10.36)	30.22(9.150)
	Losing score	16.09(7.940)	13.84(10.02)	17.49(7.959)
	Margin	14.47(12.29)	13.29(11.51)	12.73(10.01)
	N	45	45	45
Big 12	Total score	54.35(16.74)	52.02(17.26)	62.18(19.28)
	Winning score	37.10(13.47)	33.02(10.61)	41.00(12.51)
	Losing score	17.24(9.013)	19.00(9.314)	21.18(11.13)
	Margin	19.86(15.65)	14.02(10.03)	19.82(13.75)
	N	49	49	49
Big East	Total score	49.54(16.05)	49.21(17.57)	53.36(18.46)
	Winning score	34.39(10.21)	31.68(9.813)	33.89(12.64)
	Losing score	15.14(9.679)	17.54(9.879)	19.46(9.693)
	Margin	19.25(11.76)	14.14(8.902)	14.43(12.92)
	N	28	28	28
Big Ten	Total score	56.14(13.78)	46.50(17.59)	52.64(17.97)
	Winning score	37.05(9.838)	31.68(11.67)	33.30(10.43)
	Losing score	19.09(9.215)	14.82(9.848)	19.34(10.27)
	Margin	17.95(13.18)	16.86(12.53)	13.95(10.28)
	N	44	44	44
PAC-10	Total score	59.25(16.82)	44.84(13.52)	53.47(17.16)
	Winning score	37.85(12.20)	30.80(9.236)	33.98(10.96)
	Losing score	21.40(9.139)	14.04(8.116)	19.49(9.134)
	Margin	16.45(13.48)	16.76(10.93)	14.49(10.62)
	N	40	45	45
SEC	Total score	43.88(17.60)	42.20(13.58)	53.90(20.25)
	Winning score	28.92(11.18)	26.71(9.115)	33.27(11.93)
	Losing score	14.96(9.460)	15.49(7.901)	20.63(10.81)
	Margin	13.96(10.93)	11.22(10.32)	12.63(10.40)
	N	49	49	49

.

Table 3. Tests of significance for changes in scoring across the 2005-2007 seasons.

	t-statistic	df	p-value	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
'06-'05 total score	-3.858	363	0.000	-4.659	-7.03	-2.28
'06-'05 winning score	-3.274	363	0.001	-2.571	-4.12	-1.03
'06-'05 losing score	-3.036	363	0.003	-2.088	-3.44	-0.74
'06-'05 margin	-0.569	363	0.570	-0.484	-2.15	1.19
'07-'05 total score	2.253	363	0.025	2.934	0.37	5.49
'07-'05 winning score	1.421	363	0.156	1.168	-0.45	2.78
'07-'05 losing score	2.391	363	0.017	1.766	0.31	3.22
'07-'05 margin	-0.693	363	0.489	-0.599	-2.30	1.10

Table 4. Analyses of Variance for scoring differences by conference.

		ANOVA				
		SS	**df**	**MS**	**F**	**p-value**
06-05total	Between Groups	5127.123	6	854.52	1.627	0.139
	Within Groups	187556.635	357	525.369		
	Total	192683.758	363			
06-05winning	Between Groups	1101.053	6	183.509	0.815	0.559
	Within Groups	80426.089	357	225.283		
	Total	81527.143	363			
06-05losing	Between Groups	2137.137	6	356.19	2.106	0.052
	Within Groups	60374.049	357	169.115		
	Total	62511.187	363			
06-05margin	Between Groups	1349.259	6	224.876	0.854	0.529
	Within Groups	94043.642	357	263.428		
	Total	95392.901	363			
07-05total	Between Groups	8580.559	6	1430.093	2.37	0.029
	Within Groups	215455.859	357	603.518		
	Total	224036.418	363			
07-05winning	Between Groups	3830.083	6	638.347	2.669	0.015
	Within Groups	85388.694	357	239.184		
	Total	89218.777	363			
07-05losing	Between Groups	1420.567	6	236.761	1.196	0.308
	Within Groups	70696.584	357	198.03		
	Total	72117.151	363			
07-05margin	Between Groups	1920.742	6	320.124	1.182	0.315
	Within Groups	96714.698	357	270.91		
	Total	98635.44	363			

The margin of victory was relatively stable for non-conference games over the period while the margin decreased in conference games. It was also relatively stable for non-BCS bowl games in both the 2006 and 2007 seasons. However, note that the margin of the BCS bowl games increased from 5.5 points in 2005 to 16 points in 2006, and then to 20 points in 2007. (An interesting side note: a decline in average BCS bowl game TV ratings coincided with the increased margins, from 13.98 in 2005-2006 to 9.52 in 2007-2008.) This coincides with the winning teams increasing scoring and the losers decreasing scoring in these games, on average.

Table 2 presents summary statistics for each of the BCS automatic bid conferences. This summary information reveals that the margin of victory decreased for these conferences between the 2005 and 2007 seasons. In 5 of the 6 conferences this is driven by increases in the losers' scores.

Table 3 presents the results of two-tailed t-tests for the mean differences in each category from zero. The results from the repeated matchups are used in this analysis. The total, winning, and losing scores are all significantly lower at less than the 1 percent level in the 2006 season compared to the values for 2005. The total score decreased by 4.66 points per game. However, the margin of victory did not change significantly. This suggests that the implementation of the clock rule changes led to decreased scoring but did not have any statistically significant effect on the margin of victory. A comparison of the 2007 and 2005 seasons reveals that the kickoff rule changes led to total scoring increasing by 2.93 points per game, with this being driven primarily by increases in the losers' score by 1.77 points. This supports the results discussed in regard to table 2. These results are statistically significant at the 5 percent level.

Table 4 provides a one-way ANOVA analyses of the scoring differences by conference; the factor levels include the 6 automatic bid conferences and a category for the remaining conference matchups. This analysis reveals that the kickoff rule change in the 2007 season had a significantly different effect across conferences on the average total scores and average winning scores. This may reflect significant differences in play styles among the conferences.

Conclusion

The results reveal that the clock rule changes instituted in the 2006 season and the kickoff rule change that began with the 2007 season have had an effect on scoring in Division I Football Bowl Subdivision (FBS) games. Using 2005 as the base year, we found that the clock rule changes of 2006 decreased total scoring by 4.66 points per game, with the winners' scores decreased by 2.57 points and the losers' scores decreased by 2.09 points on average. These results are statistically significant at the 5 percent level or lower. The elimination of the clock rule changes for the 2007 season allowed us to compare the effects of the kick rule change against the scoring of the 2005 season. We found that total scoring increased by 2.93 points per game, with the losers' scores earning the bulk of the increase, receiving 1.77 points on average. Nevertheless, neither rule change had a statistically significant effect, at any generally accepted level, on the margins of victory during these seasons. It is not clear from the results that the games are more competitive on average. This suggests that other rule changes may be necessary to reduce the margin.

The predictions of the kick rule change by various coaches were generally correct; scoring averages increased with this rule. However, statements by coaches that it may have a "huge impact" or be one the "most significant" rule changes appear a bit strong, at least in regard to scoring. Our results suggest that the timing rule changes had a much stronger impact on scoring in these games.

It is also possible to frame the games as more "exciting" in terms of points. If the fans view scoring itself as more exciting then it is straightforward to claim that the clock rule changes decreased excitement while the kickoff rule change led to increased levels of excitement. If excitement is measured in terms of variability in scoring, then once again the clock rule change lead to decreased levels of excitement while the kickoff rule change increased levels of excitement. The standard deviation in scoring (total, winner, and loser) for all games is lower in 2006 than in the 2007 season when compared to 2005.

References

Associated Press. "Kickoff, change of possession rule changes made." http://sports.espn.go.com/ncf/news/story?id=2835266, April 2007.

Brunt, Cliff. "College Football Changes Kickoff Rule." http://www.washingtonpost.com/wp-dyn/content/article/2007/08/16/AR2007081601365.html, August 2007.

Dodd, Dennis. "Kick back and enjoy as returns grow more intriguing." http://www.sportsline.com/collegefootball/story/10323027, August 2007.

Hood, Scott. "New Kickoff Rule gets special (teams) attention." http://sports.yahoo.com/ncaaf/news?slug=rivals-146383&prov=rivlas&typs=lgns, August 2007.

Kerkhoff, Blair. "NCAA adds some kick to kickoff returns." http://www.kansascity.com/sports/v-print/story/248534.html, August 2007.

May, Tim. "College football: New kickoff rule may place Big Ten on collision course." The Columbus Dispatch. August 2007.

NCAA Press Release. "Instant replay approved by committee." Football.Refs.Org. February 2006.

NCAA Press Release. "NCAA Football Rules Committee Votes to Restore Plays While Attempting to Maintain Shorter Overall Game Time." Football.Refs.Org. February 2007.

Wieberg, Steve. "Teams get adjusted to rules shortening game." USA Today. September 2006.

Wieberg, Steve. "NCAA rules committee proposes reworking football time-saving rules." USA Today. February 2007.

Teaching Online: A Principled-Based Look at Lessons Learned

Dr. David Deviney, Tarleton State University
Elizabeth Ball, Tarleton State University
Dr. Tony Vrba, Tarleton State University

Abstract

The first online degree program started in 1986 by Connect-Ed (New School of Social Research) and was followed closely by the University of Phoenix in 1989 (Harasim, 2000). Research by the Sloan Consortium indicated that universities started online programs to improve access for students (Gray, n.d.). With the invention and proliferation of the World Wide Web, online education has grown exponentially. While the quality and effectiveness of online education will continue to be argued, most will agree that the trend toward more online courses will continue. As with most new and innovative products and services there will be an ongoing learning curve. This paper explores and summarizes the lessons learned and good practices in online teaching from the faculty member's point-of-view. It goes on to identify certain principles for teaching online. While an extensive review of the literature was conducted, the paper includes the authors' experiences of what works and does not work for students seeking undergraduate and graduate business degrees.

Background

The first online degree program started in 1986 by Connect-Ed (New School of Social Research) and was followed closely by the University of Phoenix in 1989 (Harasim, 2000). Research by the Sloan Consortium indicated that universities started online programs to improve access for students (Gray, n.d.). With the invention and proliferation of the World Wide Web, online education has grown exponentially. There is a growing acceptance of online degrees by universities and employers. It is estimated that there are approximately three million students enrolled in online education classes with a growth rate of 41 percent per year (Hsu, 2009). While there are still some reservations about online degrees (Carnevale, 2007), a 2005 study by Vault.com indicated that 83% of companies suggested that online degrees are more acceptable than five years ago.

The U.S. Department of Education released a study *Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies* (2010) which concluded that "students who took all or part of their classes online performed better than those taking the same course through traditional face-to-face instruction." Angiello (2010) reviews the findings and states that a combination of face-to-face and online learning gives students an advantage. The study also deemed that subject matter did not affect the outcomes, though pedagogy or having a "good teacher," regardless of face-to-face or online, would have better results than a lesser prepared teacher.

While the quality and effectiveness of online education will continue to be argued, the majority of educators will agree that the trend toward more online courses will continue. As

with most new and innovative products and service there will be an ongoing learning curve. No doubt, one will find a number of helpful and useful "how to" articles and papers, including this one. What follows is a sample of the literature about online teaching.

Literature Review

Palloff and Pratt (2000) suggest that the technology used must be simple to operate, user-friendly, visually appealing and easy to navigate. Continuing, they suggest that expectations must be clear. This includes the time students will spend on course work and being available to students. Rourke, Anderson, Garrison, and Archer (2001) developed a Community of Inquiry Model. They defined their opinion of the model as "A critical community of learners, from an educational perspective, is composed of teachers and students transacting with the specific purposes of facilitating, constructing, and validating understanding, and of developing capabilities that will lead to further learning. Such a community encourages cognitive independence and social interdependence simultaneously." (Garrison & Anderson, 2003 p. 23)

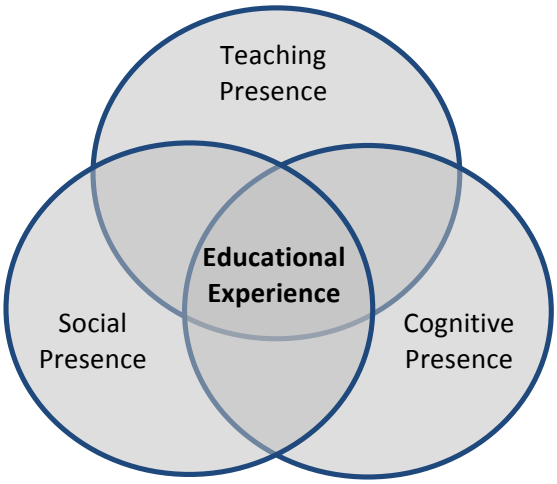


Figure 1 – Community of Inquiry

Figure 1 represents the Community of Inquiry Model developed by Rourke, et al. Below is a brief definition of the major components.

Social presence is "the ability of participants to identify with the community (e.g., course of study), communicate purposefully in a trusting environment, and develop inter-personal relationships by way of projecting their individual personalities." (Garrison, Anderson & Archer, 2001)

Teaching Presence is the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes (Anderson, Rourke, Garrison, & Archer, 2001).

Cognitive Presence is the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse (Garrison, Anderson & Archer, 2004).

It is the convergence of the social, teaching and cognitive presences that creates the educational experience for students.

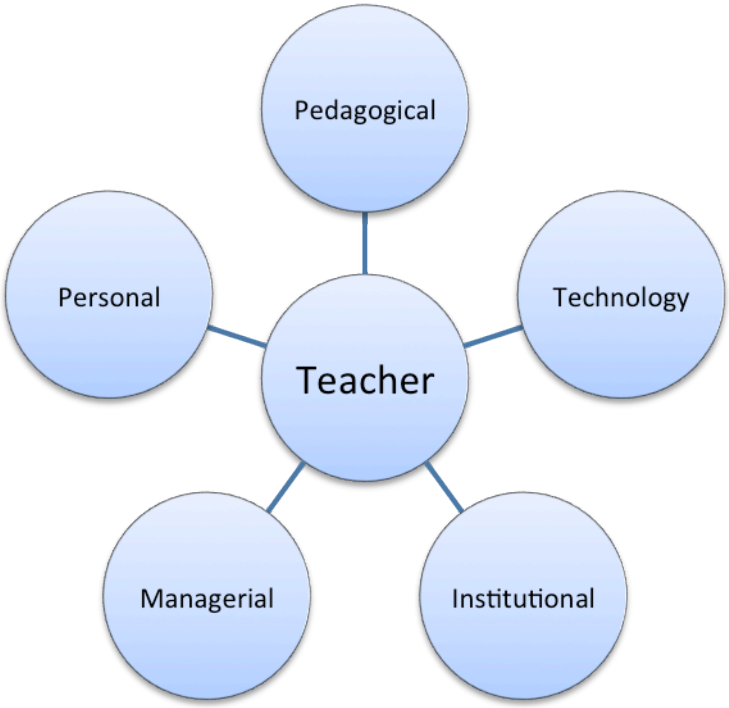


Figure 2. Spider Map Concept

Meloncon (2007) constructed a "spider map" and identified five landscape categories as indicated in *Figure 2: Spider Map Concept*. She proposed a series of questions to analyze the instructor's readiness for online education.

- Pedagogical – questions involve the suitability of the course, student and instructor for online leaning.
- Technological – questions involve the instructor's proficiency with the online technology and willingness to use it.
- Institutional – questions involve the instructional support for online learning and support for the instructor.
- Managerial – questions involve the instructor's willingness to manage the complexities of online course management and the amount of time needed.
- Person – questions involve the instructor's personal willingness to change (e.g., invest more time, change teaching style, isolation from students) and attitude toward online teaching.

The model appears to provide a good framework for conducting an institution-instructor-course-student-technology fit assessment.

The role of the online instructor and/or learning facilitator has many facets. According to Merrill (2003) this facilitator role and faculty expertise includes:

1. Content and resource expertise which encompasses:
    - Serving as content consultant
    - Maintaining a learner-centered focus
    - Providing clear and useful feedback
    - Engaging students with other students.

2. Online social process expertise that provides the richness and depth of social interaction which encompasses:
    - Creating a safe and engaging climate for collaboration
    - Designing interactive group discussions and tasks
    - Empowering learners by encouraging self-directedness
    - Posting critical, reflective questions
    - Share course organization and responsibility for learning with students.

3. Manager of the structure and process which encompasses:
    - Providing clear structure and course organization
    - Providing clear directions to appropriate resources
    - Developing clear guidelines and format templates for assignments
    - Maintaining appropriate pacing for tasks in course schedule to avoid task or information overload
    - Being flexible to make adjustments when necessary during the course.

4. Demonstrate technical competence with information communication technology which encompasses:
    - Providing section on frequently ask questions (FAQs)
    - Providing guidance to "Help" resources
    - Providing a supportive climate where learners are comfortable asking basic questions.
    - Assisting learners to become comfortable with tools and features of a course management system
    - Modeling a variety of media (text, graphics, video, audio)
    - Modeling effective communication techniques and network etiquette

Karen Swan's (2001) empirical investigation into factors affecting student satisfaction and perceived learning from online educations would suggest support for the above discussion. She found ten factors that are believed to support effective design of Web-based instruction. These are:

- Instructors acting as facilitators
- Use of a variety of presentation styles
- Multiple exercises
- Hands-on problems
- Learner control of pacing

- Frequent testing
- Clear feedback
- Consistent layout
- Clear navigation
- Available help screens

In March 1987, the American Association for Higher Education Bulletin first published "Seven Principles for Good Practice in Undergraduate Education. (Chickering & Gamson, 1987)." It has been used since to help faculty members improve his or her teaching techniques and approaches (Johnson Foundation, "Faculty," 1989). The seven practices are as follows:

1. Good practice encourages student-faculty contact.
2. Good practice encourages cooperation among students.
3. Good practice encourages active learning.
4. Good practice gives prompt feedback.
5. Good practice emphasizes time on task.
6. Good practice communicates high expectations.
7. Good practice respects diverse talents and ways of learning.

A group of evaluators from Indiana University's Center for Research on Learning and Technology used the seven principles to evaluate online courses at a Midwestern university and came to the following conclusion (Graham, Cagiltay, Lim, Craner & Duffy 2001). The conclusion was that the seven principles were a good structure to gain insight into the effectiveness of online courses (Graham, et. al (2000).

Dykman and Davis (2008) believe the teaching situation must be addressed. The researchers indicated that class size, clear objectives and well-articulated expectations will help the learner and the instructor. They go on to suggest the following must be present:

1. Standard look and feel – ideally the university should have a common look and feel. At a minimum, the instructor should create their own in absence of a university one.
2. Discussion questions – instructors should provide quick feedback to students engaging in "discussion postings."
3. Feedback and grading – students should be given essay questions and feedback provided by the instructor.
4. Course Content – online courses should be comparable to the face-to-face version.
5. Basis for grading – instructors must have a well thought out assessment and grading schema. This must also be communicated early in the course.
6. Formal objectives – the course must contain clear objectives. Objectives should drive the course design.
7. Effective collaboration – Dykman and David (2008), point out that learning is a human process and instructors must engage the students. They must connect with the student though feedback and support.
8. Formal statement of expectations – instructor expectations of student behavior must be clearly delineated and reinforced. Early detection and resolution of any problems is required.

9. Time commitment – instructors must make a time commitment that matches the course content and number of students. Worley and Tesdell (2009) found that teaching online requires 20% more time than face-to-face.

Kunz (2007), in her lessons from the trenches, identified ten considerations for teaching online.

1. Plan your course carefully and early.
2. Develop a standardized backup plan should the technology fail.
3. Post everything you anticipate that will help the student (e.g., expectations, teaching style and assignments).
4. Develop a frequently asked questions (FAQ) document.
5. Do not lower your expectations.
6. Be vigilant for plagiarism and academic dishonesty.
7. Set aside time for you to focus on the class (e.g., development, grading, providing feedback).
8. Save often and backup your files.
9. Be a real person by letting students know something about you including what you choose to share about your personal life.
10. Consider the virtual environment. Post office hours and make yourself available to students.

Principled Base Approach

This article so far has covered a sample of the literature concerning online education and is believed to be credible and insightful, yet prescriptive. We did not find much discussion and especially research in a *principled* based approach to teaching online. While principles were imbedded within some of the prescriptive literature, it appeared to be more related to "how to" than "why." The following discussion details the authors' observations and lessons learned from teaching business courses in an online environment for over twenty years. Our approach here is to provide a set of "principles" for consideration. It attempts to underscore the "why" behind the more prescriptive approaches. We do not represent this to be all inclusive in terms of a principled based approach to teaching online. We do offer it for thought and further discussion.

Principle #1 – Reduce the Hassle Factor - No Surprises

Surprises come in all forms including unclear expectations, difficult navigation, missing resources, changes mid-course, broken links, inadequate technical support (help desk) and grading without feedback. Levin (1981) states that education objectives are most effective when clearly stated prior to instruction. Expectations must be defined from the beginning of the course and the course content complete. Students then have the chance to either accept them or drop the course. Changing course requirements and activities mid-stream is unfair to the student and ineffective in terms of reaching student learning objectives. Making students miserable or upset does nothing to progress learning. A course with no surprises will not motivate a student, but having a course with surprises will certainly de-motivate them.

This does not mean the course is stagnant. In designing the online class, it is appropriate to set it up with some level of flexibility within the original framework. For example – a certain percentage of the student's grade can be based on discussions. That should stay the same and the amount of time one anticipates the student will spend on these discussions – posting comments, commenting on other student postings, etc., should remain constant throughout the course. But the discussion topics themselves can change, per instructor discretion, as necessary, to accommodate new events, fresh ideas and appropriate responses. The framework itself should remain constant throughout, leaving the student with no surprises in work load expectation. This tends to reduce the frustration factor for the student, limit complaints overall and enrich the overall experience for both instructor and students.

Principle #2 - Inspire passion and involve the student

We never know what might ignite a student's passion in a particular course. It's our job as instructors to be enthusiastic about the material taught and our zeal should be contagious. There are ways to encourage the student to fully engage in the material so they will maximize that opportunity (Galbreath, 1998). Hopefully this engagement will lead them to appreciate and even enjoy what they are learning! We can help make this happen by the way we direct their research and the types of information we ask them to explore. We can provide flexibility in some assignments to explore areas related to their interest. For example, exploring organizational culture could include an exercise where they conduct an analysis of that student's work environment, an organization to which they belong or even the course culture.

It is no surprise that students' use of the Internet is increasing (Odell, et al, 2000). Taking advantage of this trend lets them learn concepts we want them to learn in the way they appreciate. Of course, that requires more creativity on the part of the instructor. The instructor can direct them to do online research to supplement the text and assigned readings. This allows them to interact with the material in a way they are comfortable with and even enjoy. However, there must be a road map to guide them toward valid sources. This can be done within the framework of technology, rather than being locked into a limited set of traditional textbooks and learning materials. A good example of this is YouTube. There are hundreds of thousands of video clips that have the potential to be included as links in an online course. Some of the videos may or may not be relevant, though can be viewed with the intent of exploring concepts and evaluation of the content.

Instructors can give students ownership of and involvement with the material they are asked to investigate. Give them a context, but let them make choices within that context. Initiating a questioning process can lead to retention of more information (Rosenshine, 1976) Encouraging them to link the choice of material to academic and/or career goals can help them learn how the information will be important to them as they move beyond a particular course.

The instructor's social presence along the way will ensure they are headed in the right direction. The way they get there is a collaborative effort between the student and instructor. We may hold the reins, but allowing their own creativity and inspiration to blossom results in a far superior final product.

Principle #3 - Be there

Instructors must provide feedback to students. Think about face-to-face classes. Students have a chance to interact with the instructor before, during and after the class period. Faces are seen, voices are heard and body language observed. While online video capture technology is emerging, it currently is either not available or not widely utilized. Instructors must be there for our students to handle the logistics of our courses and answer questions about schedules, tests, projects and assignments. Course E-mail should be answered quickly (we believe within twelve hours of being sent). This helps reduce the number of surprises and indicates that the instructor "is there when I need help." Think of how annoyed you get waiting in the queue at the Customer Service counter of your favorite retailer.

The Instructor's "presence" is accomplished by encouraging students to expand their thinking, provide specifics and details and think about issues in new and different ways. When instructors respond to their student's thoughts with our own reflections, and provide direction for further thinking and research, students understand that we do care that they learn this material. They see that learning what is being taught will make a difference in their own lives and the lives of those they will work with in the future. They perceive it will make a difference in their ability to be successful in their chosen careers. This fosters a positive learning environment, one where students are inspired to continue to pursue the learning process. This happens because we have gone beyond answering questions about the mechanics of the course and offered a personal response; we have been present to address our students' needs.

Principle #4 - Provide GPS (Guidance, Pointers, Support) Feedback

Feedback is one of the key elements in quality teaching in higher education (Chickering & Gamson, 1991; Chickering & Ehrmann, 2009). Providing guidance for individual learners can improve overall learning (Angiello, 2010). Giving frequent and detailed feedback informs the student what is expected concerning content, format and understanding relations or processes. Prompt feedback is critical to continued successful learning (LeClercq, 1999).

Feedback from instructors and learning with peers is a key to collaborative learning (Benbunan-Fich, Hiltz, & Harasim, 2005). Assigning research article reviews is a way for students to reflect on current studies in a discipline. Peer-review, a type of 360-degree feedback, enables the learner and peer to further reflect on the content of the study. The instructor must provide feedback on content, analysis, and presentation of the topic. Espansa and Menesses (2010) concluded that the "presence of feedback is associated with improved levels of performance and higher levels of satisfaction" (p.277) for those involved in online learning. Thus, giving "pointers" or suggestions for improvement, even on good papers, enriches the learning experience.

When possible, we believe students should receive assignment feedback no later than one week from the due date. Detailed feedback, both positive and guidance in nature, should be given and the expectation communicated that the student should improve in the next assignment. Proper feedback, encouragement and support allow our responses to have significant impact when we give students opportunities to expand the way they think about any given topic. Oftentimes, support in the form of suggested resource material, web links, publication, authors,

and research can move a student quickly in the right direction and indicate to the student that you are engaged as an instructor.

So we know that feedback is important and it is one way we can be present and respond appropriately to the student – but it must be a continual presentation of the roadmap we provided from the beginning. Our society has benefitted from GPS systems in recent years. Instructors are the GPS system for students. Feedback is in the form of Guidance, Pointers and Support.

Principle #5 - Academic kinesiology – set stretch goals.

Set goals beyond what the students think they can reach. To get better, students must step outside their comfort zone. Some will step out through encouragement and some must be coaxed out. Not much learning takes place giving them direction to a comfortable path. We also must guard against giving students "impossible" goals. If they believe the goal is impossible they simply will not put forth much effort and may just drop the course or not complete the assignment. Sometimes the instructor must become the coach and even an enthusiastic cheerleader.

In the online teaching environment, the instructor is the trainer who encourages students to go beyond what they believe they are capable of accomplishing. We must use academic kinesiology to push them to set stretch goals, reach for them and go as far toward them as possible. Les Brown said "Shoot for the moon. Even if you miss it you will land among the stars" (Friedman, 2002). Good words to remember in the online teaching environment and in life in general.

Principle #6 - Recognize Excellent Work

When students excel or make strides in that direction, it is important to acknowledge and applaud their efforts (Dev, 1997). We must appreciate quality work. We must catch our students doing things right so they will be encouraged to continue. Recognizing and encouraging excellence is key to building confidence in students that they are doing the right things. This will help them to want to continue so they will ultimately achieve the learning objectives of the course and their own goals in terms of their academic and professional careers. Espansa and Menesses (2010) concluded that the "presence of feedback is associated with improved levels of performance and higher levels of satisfaction" (p.277) for those involved in online learning.

Conclusion

Many instructors will not choose to use online technology over the classroom lecture (Keller, 2005). Classrooms are still being built to facilitate the instructor lecturing at the front of the room. However, the use of technology will become more prevalent in the years to come. Some instructors will make the change to include iPods, Kindles and the like into the learning experience (Blankenship, 2010) which will open new doors to facilitate learning. How the instructor manages technology can be a useful instructional process. The continuing application and use of technology must be built upon a set of learning principles.

As stated earlier, we do not represent these to be all inclusive. They should be viewed as a starting point and other online learning principles added. The principles identified in this paper go well beyond just the online learning environment and should be considered as applicable to most learning settings.

References

Anderson, T., Rourke, L., Garrison, D. R., Archer, W. (2001). Assessing teaching presence in a computer conference environment. Journal of Asynchronous Learning Networks. Retrieved October 18, 2010 from http://www.communitiesofinquiry.com/files/Teaching%20Presence.pdf

Angiello, R. (2010) Study looks at online learning vs. traditional instruction. Education Digest. 76(2) p. 56-59

Benbunan-Fich, R., Hiltz, S., & Harasim, l. (2005) The online interaction learning model: An integrated theoretical framework for learning networks. In S. Hiltz & R. Goldman (Eds.), Learning together online: Research on asynchronous learning networks (p. 19-38) Mahwah, NJ: Erlbaum.

Bennett, J (2003). Best practices in teaching an online course. Proceedings from Marketing Management Association 8th Annual Educator's Conference, September 11-12, 2003, Nashville, Tn. Retrieved November 1, 2010 from http://www.mmaglobal.org/publications/ProceedingsArchive/2003%20mma%20proceedings.pdf

Blankenship, M. (2010). Pugged in or tuned out? Education Digest, 75(5), 61-64

Carnevale, D. (2007). Employers often distrust online degrees. The Chronicle of Higher Education. Retrieved July 22, 2010 from http://chronicle.com/article/Employers-Often-Distrust/34334.

Chickering, A., & Ehrmann, S. C. (2008) Implement the seven principles: Technology as lever. The TLT Group: http://www.tltgroup.org/programs/seven.html.

Chickering, A. W., & Gamson, Z. F. (1991). Applying the seven principles to good practice in undergraduate education. San Francisco: Jossey-Bass

Chickering, A., & Gamson, Z. (1987). Seven principles of good practice in undergraduate education. AAHE Bulletin, 39, 3-7.

Dev, P.C. (1997). Intrinsic Motivation and Academic Achievement: What Does Their Relationship Imply for the Classroom Teacher? Remedial and Special Education January/February 1997 18: 12-19,

Dykman, C.A. & Davis, C.K. (2008). Part three: A quality online education experience. Journal of Information Systems Education, 19(3), 281-290.

Espasa, A., & Meneses, J. (2010). Analysing feedback processes in an online teaching and learning environment: an exploratory study. Higher Education, 59(3), 277-292. doi:10.1007/s10734-009-9247-4

Friedman, B (2002). Anne Cyr's Fingerprints. Job Safety & Health Quarterly Volume 13 Number 4 retrieved March 5, 2011 from http://www.osha.gov/Publications/JSHQ/summer2002/index.htm

Galbraith, M. W. (1998) Adult learning methods: A guide for effective instruction. Malabar, FL: Krieger Publishing Company.

Garrison, D. R., Anderson, T., & Archer, W. (2004). Critical thinking and computer conferencing: A model and tool to assess cognitive presence. Retrieved from Community of Inquiry October 18, 2010 from http://www.communitiesofinquiry.com/files/CogPres_Final.pdf

Garrison, Randy & Terry Anderson, (2003). E-Learning in the 21st Century: A Framework for Research and Practice, 2003, p. 23. Retrieved October 18, 2010 from Edutech Wiki http://edutechwiki.unige.ch/en/Community_of_inquiry_model

Graham, C., Cagiltay, K, Lim, B, Craner, J, & Duffy, T (2001). Seven principles of effective teaching: A practical lens for evaluating online courses. Retrieved November 1, 2010 from http://technologysource.org/article/seven_principles_of_effective_teaching/

Graham, C., Cagiltay, K., Craner, J., Lim, B., & Duffy, T. M. (2000). Teaching in a Web-based distance learning environment: An evaluation summary based on four courses. Center for Research on Learning and Technology Technical Report No. 13-00. Indiana University Bloomington. Retrieved September 18, 2000 November 1, 2010 from http://crlt.indiana.edu/publications/crlt00-13.pdf.

Gray, A. (n.d.). On-Campus vs. Online Degrees: Which One Is Better? Retrieved July 22, 2010, from WorldWideLearn: http://www.worldwidelearn.com/education-articles/online-vs-campus.htm

Harasim, L. (2000). Shift happens: online education as a new paradigm in learning, The Internet and Higher Education, 3(1-2). 1st Quarter-2nd Quarter 2000, Pages 41-61.

Hsu, M. K. (2009, March). Computer attidute, statiscs anxiety and self-efficacy on statistical software adoption behavior: An empirical study of online MBA learners. Retrieved July 22, 2010, from ScienceDirect: http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6VDC-4TW9WF2-1&_user=952829&_coverDate=03%2F31%2F2009&_rdoc=1&_fmt=high&_orig=search&_sort=d&_docanchor=&view=c&_searchStrId=1408952842&_rerunOrigin=scholar.google&_acct=C000049194&_version=1&_urlV

Levin, T. (1981). Effective instruction. Alexandria, VA: association for Supervision and Curriculum Development.

LeClercq, T. (1999) Principle 4: Good Practice Gives Prompt Feedback. Journal of Legal Education, 49(5).

London, M. (2005, October 19). Online degrees more acceptable in the workplace, according to new vault survey. Retrieved July 22, 2010 from http://www.istockanalyst.com/article/viewiStockNews/articleid/2395675.

Meloncon, L. (2007). Exploring Electronic Landscapes: Technical Communication, Online Learning, and Instructor Preparedness. Technical Communication Quarterly, 16(1), 31-53. doi:10.1207/s15427625tcq1601_3.

Merrill, H. (2003). Best practices for online facilitation. Adult Learning, 14(2), 13-16.151. Retrieved from Business Source Complete database.

Nkonge, B., & Gueldenzoph, L. (2006). Best Practices in Online Education: Implications for Policy and Practice. Business Education Digest, (15), 42-53. Retrieved from Business Source Complete database.

Odell, P. M., Korgen, K. O., Schumacher, P., &Delucchi, M. (2000).Internet use among female and male college students. Cyberpsychology & Behavior, 3, 855–862.

Palloff, R. N. & Pratt, K. P. (2000). Proceedings of the EDUCAUSE 2000 Making the transition: Helping teachers to teach online. Nashville, TN.

Principles for good practice in undergraduate education: Faculty inventory. (1989). Racine, WI: The Johnson Foundation, Inc.

Rosenshine, B. (1976). The psychology of teaching methods. Chicago: University of Chicago Press.

Rourke, L., Anderson, T., Archer, W., & Garrison, R. (1999). Assessing social presence in asynchronous computer conferencing transcripts. Journal of Distance Education, 14(2), 50-71.

Rourke, L., Anderson, T. Garrison, D. R., & Archer, W. (2001). Assessing social presence in asynchronous, text-based computer conferencing. Journal of Distance Education, 14(3), 51-70.

Swan, K. (2001) 'Virtual interaction: Design factors affecting student satisfaction and perceived learning in asynchronous online courses'. Distance Education, 22(2), 306 — 331

Worley, W. & Tesdell, L. (2009). Instructor Time and Effort in Online and Face-to-Face Teaching: Lessons Learned. IEEE Transactions on Professional Communication, 52(2), 138.

Are Purchase Frequency and Consumer Service Loyalty Related?

Don R. Snyder, Albany State University

Abstract

Prior research into the nature of the relationship between service loyalty and purchase frequency have had mixed results. The learning theory and cognitive theory approaches suggest different answers to this question. This study examines how the frequency of purchase of eight consumer services is correlated to self-report measures of loyalty to those services. Using Pearson's bivariate correlation, the findings suggest little association between the two.

Introduction

Many loyalty marketing programs developed by service providers and, indeed, branded goods manufacturers assume that customer loyalty can be developed by encouraging enhanced levels of purchasing, specifically increased purchase frequency. Researchers cite several plausible reasons for higher expected levels of loyalty on the part of service consumers. This study examines some aspects of the nature of purchase frequency in consumer services and the relationship between purchase frequency and the extent of consumer service loyalty.

Prior Research

An examination of existing research relating purchase frequency and brand loyalty indicates rather mixed results. Cunningham (1969) and Massey, Frank and Lodahl (1968) found little relationship between purchase quantity and brand loyalty. Kuehn (1962) and Day (1969) determined that heavy product consumers tended to be more loyal than light users. With regard to store loyalty, Carman (1970) found an inverse relationship between brand loyalty and number of stores shopped. These behavioral metrics are generally consistent with research into consumer correlates and loyalty to both branded goods and services. The Advertising Research Foundation (1964), Carman (1970) and Day (1969) found little to relate consumer correlates to brand loyalty and Snyder (1991) concluded that such correlates in consumer services were few and weak.

Loyalty Measurement

In a scholarly and extensive review of consumer loyalty, Jacoby and Chestnut (1978) categorized loyalty measures into three groups: behavioral measures reflecting repeat purchase behavior; attitudinal measures based on brand preference; and composite or extended measures, incorporating both attitudinal and behavioral components. Generally, composite measures such as those developed by Day (1969), Lutz and Winn (1974) and Towle and Martin (1976) have had success in assessing loyalty. According to Jacoby and Chestnut (1978) such measures reduce spurious loyalty and more sensitive and possess higher degrees of reliability and validity as compared to others.

Service loyalty, and thus service loyalty measurement, differs from other loyalty constructs according to Snyder (1986) for several reasons including the observation that service provider and store loyalty generally cannot be separated in most service businesses. The loyalty measure used in this research is a modified version of Day's Loyalty Index, a composite measure which is based on proportion of purchase devoted to a particular and the attitude toward that brand. Wording modification used terminology appropriate for consumer services.

Previous loyalty studies have focused on both the incidence (loyal/non-loyal) of loyalty (Stafford, 1966; Tucker, 1964) and the degree of loyalty (Day, 1969; Farley, 1964). The present study examines degree of loyalty in order to avoid subjectively assigning "loyal" and "non-loyal" labels. The metric used herein was found to have a coefficient alpha reliability measure of 0.74 and to meet the criteria for construct validity, thus it use was appropriate.

Methodology

Frequently purchased consumer services were examined because consumer recall and self-report were thought to be more accurate with these. Recognizing that self-provision is possible with many kinds of consumer services, the sample consisted to those who were actively involved with service and/or social organizations, presumably limiting their free time and making purchase more likely than self-provision. The sample size was 202. The data collection instrument was administered at meetings of the various organizations over a period of approximately one month; it was a static (one time) rather than a longitudinal measure. Several studies have provided support for the use of self-report data in this type of application (Wind and Lerner, 1969; Kirsch, Berger and Belford, 1963).

Pearson's correlation coefficient (two-tailed test) was used to assess the strength of the relationship between purchase frequency and degree of loyalty. Nonlinear relationships were tested for and found to be inconsequential or nonexistent.

Results

The consumer services examined in this study were: auto repair shops, full-service gas stations, dry cleaners, full-service car washes, hairstylists/barber shops, expensive restaurants, fast food restaurants and budget motels. As clearly indicated in Table 1, data analysis found no statistically significant relationship between purchase frequency and degree of consumer loyalty to any of the eight services studied. Thus, frequent purchasers of these consumer services are no more likely to exhibit higher degrees of loyalty than are other service consumers.

While somewhat perplexing, this finding is not inconsistent with the cognitive theory approach which suggests that loyalty is influenced by factors other than mere past purchase behavior, and particularly so with high involvement products such as services. It should be noted that although some of the correlations were negative, this means little in the presence of such weak levels of significance.

Table 1. Correlation Coefficients

Service	Pearson's r (2T)	Significance of r
Full service car wash	-0.0715	0.312
Fast food restaurant	-0.0319	0.652
Dry cleaner	0.0785	0.267
Budget motel	0.0829	0.241
Hairstylist	0.0952	0.178
Auto repair shop	-0.0923	0.191
Expensive restaurant	-0.0727	0.304
Full service gas station	0.0908	0.199

Implications

This research adds support to the notion that repeat purchase and frequent purchase alone do not have favorable impacts on strengthening the degree of loyalty to consumer services. Thus attempts by marketers to strengthen loyalty must address other issues such as customer satisfaction with service providers, competitive superiority and consistently high levels of service provision, among others.

These findings are consistent with some prior research but at odds with other studies. It may be that as with attempts to establish demographic correlates to customer loyalty, other variables, perhaps situational, intervene. Additionally, some support exists for loyalty correlates in cases of highly loyal consumers. Finally, this study focused on individual consumers. Perhaps market segments exist that exhibit higher loyalty as purchase frequency increases. Regardless of these possibilities, it is clear that service marketers must focus on the importance of each customer visit or service provision opportunity to maximize customer satisfaction and to establish a close and mutually beneficial relationship.

References

"Are There Consumer Types?" (1964), New York: Advertising Research Foundation

Carman, James M. "Correlates of Brand Loyalty: Some Positive Results", Journal of Marketing, 1970, Vol. 7, 67-76

Cunningham, Scott M. "Perceived Risk and Brand Loyalty" in Risk Taking and Information Handling in Consumer Behavior, ed. D. Cox, 1969, Boston: Harvard University Press, 507-523

Day, George S. "A Two-Dimensional Concept of Brand Loyalty", Journal of Advertising Research, 1969, Vol. 9, 29-35

Farley, John U. "Why Does Brand Loyalty Vary Over Products?", Journal of Marketing Research, 1964, Vol. 1, 9-14

Jacoby, Jacob and Robert Chestnut. Brand Loyalty: Measurement and Management, 1978, New York: John Wiley and Sons, Inc.

Kirsch, Arthur D., Philip K. Berber and R.J. Belford. "Are Reports of Brand Bought Last Reliable and Valid?", Journal of Advertising Research, 1962, Vol. 2, 34-36

Kuehn, Alfred A. "Consumer Brand Choice as a Learning Process", Journal of Advertising Research, 1962, Vol. 2, 10-17

Lutz, Richard J. and Paul R. Winn. "Developing a Bayesian Measure of Brand Loyalty: A Preliminary Report", American Marketing Association, 1974, Combined Proceedings, 104-108

Massey, William F., Ronald E. Frank and Thomas M. Lodahl. Purchasing Behavior and Personal Attributes, 1968, Philadelphia: University of Pennsylvania Press

Snyder, Don R. "Service Loyalty and It's Measurement: A Preliminary Investigation" in Creativity in Services Marketing: What's New, What Works, What's Developing, ed. M. Venkatesan, D. Schmalensee and C. Marshall, 1986, Chicago: American Marketing Association, 44-48

Snyder, Don R. "Demographic Correlates to Loyalty in Frequently Purchased Consumer Services", Journal of Professional Services Marketing, 1991, Vol. 8, 45-55

Stafford, James E. "Effect of Group Influence on Consumer Brand Preferences", Journal of Marketing Research, 1966, Vol. 3, 68-75

Towle, Jeffrey G. and Claude R. Martin, Jr. "The Elderly Consumer: One Segment or Many?", in Advances in Consumer Research, ed. B. Anderson, 1976, Vol. 3, 463-468

Tucker, W.T. "The Development of Brand Loyalty", Journal of Marketing Research, 1964, Vol. 1, 32-35

Wind, Yoram and David Lerner. "On the Measurement of Purchase Data: Surveys Versus Purchase Diaries", Journal of Marketing Research, 1979, Vol. 16, 39-47

Is Timely Billing a Determinant of Timely Payments? What Every Small Business Should Know!

Avinash Waikar, Southeastern Louisiana University
Samuel Cappel, Southeastern Louisiana University
Uday Tate, Marshall University

Abstract

Some micro (very small) businesses, due to very limited resources and personnel fail to invoice customers on a timely basis. The results of the untimely billing practices can be devastating cash flow issues. Steady cash flows are imperative to ensure smooth operation of the business, its longevity and a healthy competitive business environment. Without it, employees may not get paid on time, supplies and equipment may not get secured and growth may not occur. Certainly, businesses can do certain things to facilitate the collection of accounts receivable including setting up a credit policy for each type of sale and to communicate terms and agreements to the customers in advance so that there are no misunderstandings at the completion of services. Discounts could also be offered for quick and timely payments. However importance of billing done in a timely, disciplined and methodical manner can not be underestimated. This study examined a random sample of 150 invoices captured by pulling every ninth invoice from the billing department of a micro-business which provided a Heating and Air conditioning service to their customers ranging from residential to light and medium commercial industries. Data was collected on "Type of customer," "Number of days taken to create the invoice," "Number of days to collection," and the "Amount of Invoice." The results showed that there is a significant relationship between the variables "Number of days taken to create the invoice" and "Number of days to collection." However, number of days to collection was not significantly related to the variable amount of invoice. Every micro-business should be aware of the importance of timely billing and should be much disciplined about it for long term survival.

Introduction

The small business sector is an essential element of the US economy and continues to be a significant influence especially in times of economic certainty (Liao, et al., 2008/2009). Winrow (2010) states that small businesses account for about two thirds of all new jobs and approximately half of the private GDP. He states that with a monthly average of over half a million newly created businesses, small businesses employ more than half of the American labor force and generate two thirds of the net new jobs in America. He also quotes Efrat (2008) to report that small business owners make up 6 percent of the adults population and approximately 11 percent of working Americans."

In spite of the fact that small business activity is strong, the survival rate of small businesses is dismal. The risks associated with entrepreneurship have been well documented. Winrow (2010) reports that approximately one third of the new businesses fail within two years

of operation while half of all new businesses fail within five years. He states that it is widely understood that the majority of newly formed small businesses will eventually fail within the first seven years. Stanworth (1998) claimed that the young are more likely to fail than the old, and the very small ones are more likely to fail than their larger counterparts. He said that probably the most powerful influence on their survival is whether or not they grow within a short period after start-up. Of course, the growth is facilitated by steady cash flows and satisfied customers.

While there are numerous reasons for small business failures, one of the most common is undercapitalization (Schiff, et al., 2010). They state that a contributing factor to this problem is the failure of many small businesses to accurately estimate the minimum level of pre-tax income (cash flow) which the new business must generate. They say that those who fail for financial reasons typically experience the following chain of events. First, they discover that it takes longer for the new business to generate profits and cash flow than expected. As a result, they are forced to cover any remaining operating expenses and their personal living expenses by taking cash from their initial investment and any subsequent investments. Next, in order to obtain more working capital, the owner borrows additional funds through bank loan, line of credit, second mortgage or more credit cards. Finally, when it becomes clear that the business will not generate profits and cash flow to pay off growing financial obligations, the owner shuts it down and declares bankruptcy. We suggest that in order to guard against this unwanted, yet all-too-common outcome small businesses are advised to prepare business plans, not underestimate the minimum levels of cash flow which must be generated, and, take necessary steps to ensure steady cash flows.

More on reasons for Small Business Failures

Peterson et al. (1983) conducted a nationwide survey of 1002 very small businesses with less than 10 employees' to investigate the perceived causes of small business failure. These businesses were deemed vulnerable to failures. The major causes of very small business failures according to the owners surveyed were: Lack of Management Expertise, High Interest Rates, Recession and Economy, Undercapitalization (Overextension), Taxes, Competition, Cash Flow, Federal Regulations, High Overhead and others. They categorized these reasons cited by the survey participants into two categories (1) internal, that is, managerially controllable causes and (2) external or non-controllable causes. Surprisingly, only one third stated that external forces such as high interest rates, federal regulations, taxes and economy were the primary reasons for failure. Notice that cash flow problems was mentioned as a reason which is, at least partially, a managerially controllable cause. Relatively little empirical research appears to have been done on causes of very small (micro) business failures.

In her article on "Strategies for Learning from failures" Edmondson (2011) states that all failures are not created equal. She said there are "Preventable failures" which can be prevented with proper training and support, that is, these failures have preventable causes. Then there are "Unavoidable failures" due to causes that are not preventable. And then there are "Intelligent failures," those that provide valuable new knowledge that can help businesses leap ahead of the competition, ensure its future growth and become more competitive. Company cash flow is, at least in part, affected by managerially controllable causes. This research focuses on what a very small business owner can do about to help achieve a better cash flow for the company.

Statement of the Problem

Some micro (very small) businesses, due to very limited resources and personnel fail to invoice customers on a timely basis. The results of the untimely billing practices can be devastating cash flow issues. Steady cash flows are imperative to ensure smooth operation of the business, its longevity and a healthy competitive business environment. Without it, employees may not get paid on time, supplies and equipment may not get secured and growth may not occur. Certainly, businesses can do certain things to facilitate the collection of accounts receivable including setting up a credit policy for each type of sale and to communicate terms and agreements to the customers in advance so that there are no misunderstandings at the completion of services. Discounts could also be offered for quick and timely payments. Cash Flow problems can still occur, however importance of billing done in a timely, disciplined and methodical manner should not be underestimated.

The objective of this research was to examine if "Timely Billing" is a determinant of "Timely Payments" which may help reduce cash flow problems for very small businesses. Specifically, we wished to:

1. Check if variables "Number of days to create invoice" and "Number of days to collection" are related

2. Check if variables "Number of days to create invoice" and "Amount of Invoice" are related

3. Check if variables "Number of days to collection" and "Amount of Invoice" are related

4. Develop a Regression model for variables "Number of days to create invoice" and "Number of days to collection"

Methodology

To answer the research questions above, a random sample of 150 invoices was captured by pulling every 9th invoice from the population of invoices from the billing department of a local micro business. The micro business provided heating and A/C service to Residential customers, Light commercial industries and Medium commercial industries. Out of the 150 invoices, the company collected on 141 invoices. Nine invoices were unpaid which made the sample size n=141.

For each invoice, data was collected on the following variables: (1) Type of customer (Residential=R, Light Commercial=LC and Commercial=C), (2) Number of days to create the invoice (Billing Delay), (3) Number of days to collection, and, (4) Amount of Invoice. Billing was considered "Timely Billing" when the invoice was created within 24 hours of service completion. Following hypothesis were proposed and tested.

(1) Null Hypothesis 1: Billing Delays are uniformly distributed in four categories:

(i) 1-7 days. (ii) 8-14 days. (iii) 15-30 days. (iv) 31+ days.

That is the proportion of billing delays in the four categories is equal to 0.25

(2) Null Hypothesis 2: The variables "Number of days to create invoice" and "Number of days to collection" are independent.

(3) Null Hypothesis 3: The variables "Number of days to create invoice" and "Amount of Invoice" are independent.

(4) Null Hypothesis 4: The variables "Number of days to collection" and "Amount of Invoice" are independent.

(5) Null Hypothesis 5: Regression between variables "Number of days to create invoice" and "Number of days to collection" is significant.

Chi Square "Goodness of Fit" test was employed to test the first hypothesis. Second, third and the fourth hypothesis were tested using the Chi Square Test if Independence. The fifth hypothesis was validated using the simple linear regression.

Results

The sample included 35 residential customers, 12 light commercial customers and 94 commercial customers. Thus, the typical customers served were commercial followed by residential followed by light commercial. The invoice amounts ranged from $53 to $2975.

Null hypothesis 1 was: $p_1 = p_2 = p_3 = p_4 = 0.25$. Chi Square Goodness of Fit test conducted to see if "Billing Delays" were uniformly distributed in the four categories rejected null hypothesis 1 ($p<0.005$). Significantly more than expected delays were found in the first and the fourth categories.

Chi Square Test if Independence employed to test second, third and the fourth hypothesis yielded the following results.

(a) Null hypothesis 2 was rejected implying that the variables "Number of days to create invoice" and "Number of days to collection" are not independent ($p<0.05$).
(b) Null hypothesis 3 was not rejected implying that the variables "Number of days to create invoice" and "Amount of Invoice" are independent ($p>0.24$).
(c) Null hypothesis 4 was not rejected implying that the variables "Number of days to collection" and "Amount of Invoice" are independent ($p>0.76$).

To test the fifth hypothesis, Simple Linear Regression between variables "Number of days to create invoice" and "Number of days to collection" was attempted. Regression was found to be significant ($p<0.05$). Sample data showed that increase in "Billing delay" by one day increases the number of days to collection by 0.48 days.

Conclusions and Interpretations

It may be concluded from the results the billing delays are not uniformly distributed. The delays are either small (less than a week) or large (more than a month). However, number of

days to create the invoice (billing delay) was not related to the size of the invoice. This could mean that some of the larger invoices were created and billed late. This can certainly delay receipt of the payment from the customer, at least by the amount of billing delay, which can affect cash flow.

Since the variable "Number of days to collection" was not related to "Amount of Invoice," we could conclude that delay in receiving the payment may not be because of the size of the invoice. This will make "Billing delay" even more important in terms of its effect on cash flow. The results showed that the variables "Number of days to create invoice" and "Number of days to collection" are not independent. Therefore, we could conclude that "Added billing delay" will increase the "Time to collection" adding to cash flow problems. However, based on the regression results we can say that amount of increase in "Days to collection" with billing delay is modest (0.48 days).

Implications

As seen from Peterson et al.'s (1983) study, there are a significant number of very small businesses in the United States. Many of them are family owned and have fewer than ten employees. They have limited resources and personnel. Many times one employee may have to perform a variety of tasks and some tasks may not get the necessary attention. This could result in billing delays. However, to minimize the risk of failure and to remain competitive in this competitive business world, very small businesses will need to be aware of the importance of "Timely Billing." They should be disciplined about it because added billing delay not only adds to "Time to collection" but can even increase it, affecting the cash flows. Good news is that "Time to collection is not affected by the amount of invoice. It is possible that the days the customer takes to pay the invoice remains unchanged but cash flow will still be affected positively if days taken to invoice the customers are reduced. What should a micro business do? Just bill the customers right away to reduce cash flow problems.

References

Edmondson, A. "Strategies for Learning from Failure" Harvard Business Review, 2011, 4, 48-55

Liao, J., Welsch, H. and C. Moutray. "Start-Up Resources and Entrepreneurial Discontinuance: The Case of Nascent Entrepreneurs" Journal of Small business Strategy, 2008-09, Vol. 19, 1-15

Peterson, R., Kozmetsky, G. and N. Ridgway. "Perceived Causes of Small Business Failures: A Research note" American Journal of Small Business, 1983, Vol. 8, 15-19

Schiff, A., Hammer, S. and M. Das. " A Financial Feasibility Test for Aspiring Entrepreneurs" The Entrepreneurial Executive, 2010, Vol. 15, 33-38

Stanworth, J., Purdy, D., Price, S. and N. Zafiris. "Franchise Versus Conventional Small Business failure rates in the US and UK: More Similarities than Differences" International Small Business Journal, 1998, Vol. 16, 3, 56-69

Winrow, B. "Entrepreneur Beware" The Entrepreneurial Executive, 2010, Vol. 15, 39-46

Exchange Rate Forecasting: A Comparison of Arbitrage Pricing Theory, EViews, and Other Models

Chad E. Hargon, University of Louisiana at Monroe

Abstract

Recent research suggests that real exchange rates move in a nonlinear pattern, rather than linear as proposed before. The current study compares a Microsoft Excel forecasting model with an EViews model ability to estimate the U.S. dollar in Euros to determine if either beats the random walk. The Excel model uses Arbitrage Pricing Theory and Monte Carlo simulation to forecast the exchange rate while the EViews model uses least squares regression. The Out-of-Sample forecast will be for 31 days, February 4, 2011 – March 6, 2011, for both models and data will be collected daily to establish model accuracies. All data will be based on the ask price of the currencies. The In-Sample forecast will be tested monthly from 1 February 2010 – 1 February 2011.

Keywords: Time series analysis, Arbitrage Pricing Theory, Dollar/Euro Exchange Rate Ratio

Introduction

Since the fall of the Bretton Woods system in 1971, economists have been searching for an accurate way to forecast the floating exchange rate. Most literature on exchange rate forecasting is focused on the nominal exchange rate instead of the real exchange rate. The seminal studies of Meese and Rogoff, (1983) reported that no exchange rate model can better predict fluctuations in the exchange rate better than a random walk forecast. The primary objective of this model is to predict better forecasts than the Random-Walk Model. In addition, this study would like to identify factors to improve the accuracy of the forecasting model. The Excel based APT model used in this paper includes historical data such as real interest rates, volatility, drift, consumer price indices, and consumer confidence indices. Additional forecasting techniques were then applied to the Excel model such as exponential smoothing. The EViews model uses the same factors but forecasts based on least squares model. Once forecasted, the data will be checked against actual data to determine the forecast error. The first section in this paper is a literature review, the second section analyzes the methodology of the APT Model. The third section introduces the data obtained from the forecasts. The fourth section contains the results and comparisons between the models. The final section contains conclusions and closing remarks.

Literature Review

Subsequent studies have shown that the seminal work by Meese and Rogoff were correct for out-of-sample forecasts, but in-sample forecasts do perform better than the random walk. Baghestani's (2009) studies show that the random walk forecasts are unbiased and can accurately predict directional change. It also shows that forecast accuracy improves with a reduction in lead

time as new data becomes available, but deteriorates as the forecast is extended. Some studies have shown that a Markov switching model can better chart exchange rate behavior than the random walk also, Engle (1994), Parikakis and Merika (2009). Lam, Fung, and Yu's (2008) results suggest that a model based on the Bayesian Model as well as the Purchasing Power Parity model, Uncovered Interest Rate Parity model, and the Sticky Price model are in general able to outperform the random walk model, as well as the historical average return for the forecast of exchange rates of EUR/USD. Others, Hanias and Curtis (2008), believe that the forecasting should be done using chaos theory of various macroeconomic variables such as GNP and monetary aggregates, as well as financial variables such as exchange rates. Engle, R.F. (1982) shows us that although the mean and variance of time series models changes over time we can overcome this by using an autoregressive conditional heteroscedasticity (ARCH) model. Further studies using cointegration models, Hwang (2001), had two monetary models that defeated the random walk test at the three, six, and 12 month horizons. Studies using stochastic discount factor (SDF) framework, such as Ahn's (2004), show that the process depends not only on currency-specific interest rates but also risk premiums. Eisenberg and Rudolf (2007) found that you could build upon the SDF using the international arbitrage pricing theory (IAPT) to determine that risk premia do in fact influence exchange rate movement.

The previous literature suggests that predictive models for exchange rates can outperform the random walk theory which presents the intriguing possibility of applying International Arbitrage Pricing Theory (IAPT) as a predictive tool. It is based on the capital asset pricing model (CAPM) developed by Sharpe (1964), makes the CAPM better by adding in many other factors, such as inflation rates, consumer indices, GDP, and unemployment to name a few. The APT, developed by Ross (1976), has been further derived into the international Arbitrage Pricing Theory (IAPT) by Solnik (1983) and Ikeda (1991). The IAPT fully delves into the factors needed to be able to forecast across currencies and what the risk will be for each factor. Panigirtzoglou (2004) further proved that volatilities from foreign exchange prices can be used to estimate foreign exchange risk. Taylor, Peel, and Sarno (2001) have done work proving that there are various nonlinearities in deviations of the spot exchange rate, which shows that for a forecasting model to be accurate it must control for these nonlinearities. It must be determined how to fully incorporate the effect of these factors, such as volatility, inflation, GDP, and unemployment rates, to have an accurate model. Kilian and Taylor (2003) have also studied the effects of nonlinearities on exchange rate fluctuation using an exponential smooth threshold autoregressive model (ESTAR) which they average with a moving average model. This model is the basis of the APT model developed in this paper which includes some additional variables not included in the earlier models. Wright (2003) stated that there are sixteen variables to be used as determinants:

1. Stock price
2. Change in stock price
3. Long-term interest rate
4. Short-term interest rate
5. Term spread
6. Oil price
7. Change in oil price
8. Exchange rate return of the previous period
9. Sign of exchange rate return of the previous period

10. Seasonally adjusted real GDP
11. Change in seasonally adjusted real GDP
12. Seasonally adjusted money supply
13. Change in seasonally adjusted money supply
14. Consumer price level
15. Inflation rate
16. Ratio of current accounts to GDP

Concern over multicollinearity in the above list is why the number of variables included in the current study is reduced to seven: interest rate, oil prices, real gross domestic product, money supply, price level, confidence levels, and unemployment rates.

Methodology

The common knowledge for fundamental forecasting is based on relationships between variables and exchange rates,

$$e = f(\Delta INF, \Delta INT, \Delta INC, \Delta GC, \Delta EXP)$$

where e = percentage change in the spot rate, ΔINF = change in the differential between U.S. inflation and the foreign country's inflation, ΔINT = change in the differential between the U.S. interest rate and the foreign country's interest rate, ΔINC = change in the differential between the U.S. income level and the foreign country's income level, ΔGC = change in government controls, ΔEXP = change in expectations of future exchange rates.

From here we can form our regression analysis,

$$EU_t = b_0 + b_1 INF_{t-1} + b_2 INC_{t-1} + \mu_t$$

where EU_t is the quarterly percentage change in Euro's value, b_0 is constant, b_1 measures the sensitivity of EU_t to changes in INF_{t-1}, b_2 measures the sensitivity of EU_t to changes in INC_{t-1}, and μ_t represents the error term.

The APT being used includes the following variables: United States interest rates, real and nominal, European Central Bank Rates, gross domestic product (GDP) of both countries, consumer price indices, consumer confidence indices, unemployment rates, money supply, and oil price. The current study does not include all sixteen variables that Wright suggested due to high correlations between many of them. All variables, except oil price, are relative to their respective countries. Lam, Fung, and Yu (2008) formulated a model using Bayesian Averaging to forecast all models with their posterior probabilities, as,

$$E_t(e_{t+h}|I_t) = \sum_{r=1}^{R} E\left(e_{t+h,r}\middle|M_r, I_t\right)p(M_r|I_t)$$

where $E_t(e_{t+h,r}|M_r, I_t)$ is the predicted exchange rate at $t+h$ by model M_r with information I_t , $p(M_r|I_t)$ is the model probability for model M_r , r is the index of model 1,…, R, I_t is the information set at time t including the actual exchange rate, its determinants, and estimated error times for all times. Bates and Granger (1969) found that combined forecasts have outperformed individual forecasts, which is why I apply certain weights to five different methods, naïve, three day moving average, three day weighted moving average, exponential smoothing, and APT, to try and achieve an accurate forecast. The weights used are similar to that used by Stock and Watson (2001), in which weights are assigned based on the mean squared forecast error (MSE), the smaller the MSE the higher the weight.

Cochrane (2001)shows that there is a positive SDF that prices all assets:

$$P_{d,t} = E_t\left[\frac{M_T}{M_t} X_{d,T}\right]$$

where $P_{d,t}$ is the price of asset d at time t, E_t is the expectations operator for information available at time t, $X_{d,T}$ is the random payoff of the asset at time T, $m_{t,T} = M_T/M_t$ is the stochastic discount factor that discounts payoffs from time T and t in time 0 respectively.

The SDF has been further extended for international reasons by Backus, Foresi, and Telmer (2001). Backus et al assume that every currency has its own specific SDF, reflecting price rules that govern prices in that currency.

$$P_{f,t} = S_t \cdot E_t\left[\frac{M_T^*}{M_t^*} X_{f,T}^*\right] = E_t\left[\frac{M_T}{M_t} S_T X_{f,T}^*\right]$$

where $P_{f,t}$ is the domestic price of foreign asset f. This price can be determined by converting the foreign price of asset f, $P_{f,t}^*$, at today's exchange rate or applying future payouts of f at the future exchange rate and then discounting with the domestic discount factor. $X_{f,T}^*$ is the payoff of asset f in foreign currency, $m_{t,T}^* = M_T^*/M_t^*$ is the foreign SDF, and S_T is the exchange rate.

Eisenberg and Rudolf (2007) state that we assume that the domestic and foreign SDF follows K-dimensional Brownian motions with drift:

$$\frac{dM_t}{M_t} = -r_t dt - \sum_{k=1}^{K} \lambda_k dz_{k,t}$$

and

$$\frac{dM_t^*}{M_t^*} = -r_t^* dt - \sum_{k=1}^{K} \lambda_k^* dz_{k,t}$$

with $E\left[dz_{k,t}dz_{q,t}\right] = 0$ for $k \neq q$

where r_t and r_t^* are the domestic and foreign risk-free interest rates, $dz_{k,t}$ are the increments of K standard Brownian motions representing global risk factors, and λ_k and λ_k^* are the currency-specific volatilities of the risk factors.

Solnik's (1983) IAPT theory is the basis of my equation. His central pricing equation:

$$E_t\left[\frac{dP_{f,t}}{P_{f,t}}\right] - E_t\left[\frac{dB_{f,t}}{B_{f,t}}\right] = \mu_{f,t}^* dt + \sigma_{f,S}^* - r^* dt = \sum_{k=1}^{K} b_{f,k}^* \lambda_k dt$$

It was from this point that I decided to focus less on risk premia and more on global factors that could influence the exchange rate. The formula I used is a combination of formulas previously stated including exponential smoothing:

$$E = f(\Delta INT, \Delta OP, \Delta GDP, \Delta MS, \Delta PL, \Delta CL, \Delta UR)$$

$$E_t\left[\frac{dS_t}{S_t}\right] = -r_t^* dt + r_t dt + \sum_{k=1}^{K} \lambda_k^* dt - \sum_{k=1}^{K} \lambda_k \lambda_k^* dt$$

and

$$E_t = 0.5\left[\frac{dS_t}{S_t}\right] + 0.5\sum_{k=1}^{K} x_1 x_2 x_3 x_4 x_5 x_6 x_7$$

with

$$\acute{Y}(t+1) = \alpha\left[\left[Y(t) + (1-\alpha)Y(t-1) + \left((1-\alpha)\right]^2\right)\left[Y(t-2) + \left((1-\alpha)\right]^3\right)Y(t-3) + \cdots\right]$$

where ΔINT is the change in the differential between U.S. inflation and the foreign currency's inflation, ΔOP is the change in the differential between U.S oil prices and the foreign currency's oil prices, ΔGDP is the change in the differential between U.S. real gross domestic product and the foreign currency's real gross domestic product, ΔMS is the change in differential between U.S. money supply and the foreign currency's money supply, ΔPL is the change in the differential between U.S. price level and the foreign currency's price level, ΔCL is the change in the differential between U.S. confidence level and the foreign currency's price level, and ΔUR is the change in the differential between U.S. unemployment rates and the foreign currency's unemployment rates. The second equation is computing the expected exchange rate change using SDFs including the exchange rate process, the interest differential, and the currency specific risk premia.

Both in-sample and out-of-sample forecasting will be used to evaluate the performance of both models compared to the Random-Walk model, suggested by Meese and Rogoff (1983), specified as:

$$E_t = E_{t-1} + \mu_t$$

we can adjust this model for forecasting by rewriting at $t + f$:

$$E_{t+f} = E_{t-1} + \mu_{t+f}$$

where μ_{t+f} is error due to new data arriving between time t and time $t+f$. E_{t-1} is the most recently known rate at the time of forecast.

Table 1. Data Sources

Variables	**Sources and Details**
Exchange Rates	The rates of USD/EUR are from OANDA
Interest Rate (x_1)	The Interest rates for the US are from the Federal Reserve Bank, the rates for the EU are from the European Central Bank
Oil Price (x_2)	This data is an average of the spot petroleum price index of Dubai Fateh, UK Brent, and West Texas Intermediate
Real GDP (x_3)	This data for the US is from the US Bureau of Economic Analysis, the EU is from Eurostat
Money Supply (x_4)	The M1 of the US is from the Federal Reserve Bank, the EU is from the European Central Bank
Price Level (x_5)	The consumer price indices are from the Bureau of Labor Statistics, the EU is from the Organisation for Economic Co-operation and Development
Confidence Level (x_6)	The consumer confidence level of the US is from The Conference Board, the EU is from Europa
Unemployment Rates (x_7)	The rates for the US are from the Bureau of Labor Statistics, the EU is from Eurostat

Data

The US Dollar (USD) is compared against the Euro (EUR) in terms of EUR's. Data used for Out-of-Sample Testing is from 21 August 2010 to 3 February 2011, forecasting from 4 February 2011 to 6 March 2011. Data used for In-Sample testing is from 1 January 2010 to 1 December 2010, forecasting from 1 March 2010 – 1 January 2011, all data and sources are given above in Table 1. All differences are listed as absolute values.

Empirical Results

Out-of-Sample Testing

Table 2. Out-of-Sample Testing

DATE	ACTUAL	EXCEL FORECAST	DIFFERENCE	EVIEWS FORECAST	DIFFERENCE
4 FEB	.7345	.726676	.007824	.731786918	.00271308
5 FEB	.736	.731063	.004937	.733140728	.00285927
6 FEB	.7362	.734066	.002134	.73544866	.00075134
7 FEB	.7365	.735672	.000828	.735827352	.00067265
8 FEB	.7339	.736231	.002331	.735835106	.00193511
9 FEB	.732	.734841	.002841	.73568856	.00368856
10 FEB	.732	.733215	.001215	.73485435	.00285435
11 FEB	.7376	.732395	.005205	.733582448	.00401755
12 FEB	.7377	.7354	.0023	.734697824	.00300218
13 FEB	.7379	.736658	.001242	.735917115	.00198288
14 FEB	.7408	.737686	.003114	.734265294	.00653471
15 FEB	.7403	.739537	.000763	.732308999	.007991
16 FEB	.7393	.73994	.00064	.7327982	.0065018
17 FEB	.7364	.739717	.003317	.731582871	.00481713
18 FEB	.7344	.737732	.003332	.731429649	.00297035
19 FEB	.7306	.735754	.005154	.731905175	.00130517
20 FEB	.7304	.732575	.002175	.733067753	.00266775
21 FEB	.731	.731258	.000258	.732459024	.00145902
22 FEB	.7336	.730916	.002684	.731728959	.00187104
23 FEB	.7292	.732498	.003298	.730885867	.00168587
24 FEB	.7261	.730513	.004413	.731421386	.00532139
25 FEB	.7251	.728109	.003009	.732168824	.00706882
26 FEB	.7274	.726151	.001249	.732353154	.00495315
27 FEB	.7274	.726759	.000641	.731457684	.00405768
28 FEB	.7255	.727047	.001547	.731872083	.00637208
1 MAR	.7239	.726247	.002347	.730148912	.00624791
2 MAR	.7244	.724887	.000487	.728503067	.00410307
3 MAR	.7201	.724531	.004431	.725504186	.00540419
4 MAR	.716	.7218	.0058	.723984568	.00798457
5 MAR	.7151	.718461	.003361	.721698097	.0065981
6 MAR	.7152	.716322	.001122	.717590273	.00239027

Figure 1 shows both forecasts compared to the actual data, from here we can see that the Excel model is closer overall than EViews.

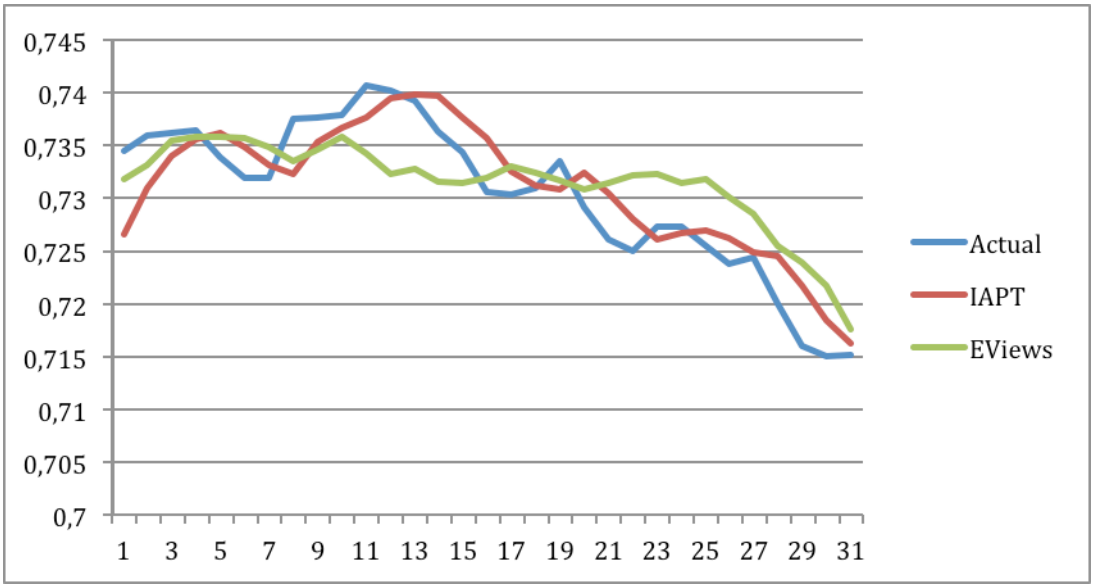


Figure 1

Four common measures suggested by Lam, Fung, and Yu(2008) will be used to assess accuracy of the forecasts against the random-walk. The first being the root mean squared error (RMSE) of each model compared to the random-walk. We are aiming for a small ratio as that will prove the accuracy of these models over the random-walk. The second is the ratio of direction of change (DoC) given by the forecasts. To get our DoC, we assign a "1" every time the models accurately forecast a change of direction and a "0" otherwise. If the proportion of "1's" to "0's" is greater than 0.5 we have beat the random-walk. The third is the t-statistic which tests the null hypothesis, an acceptance of the null is what we want. The fourth is a measure of the number of forecast errors compared to the random-walk. We will assign a "1" to the period with the smaller error, and a "0" otherwise. We then divide the smaller errors by the larger errors, the larger the ratio, the more accurate the model over random-walk. Table 3 is the analysis of the in-sample forecast.

Table 3. Out-of-Sample Forecast

	RMSE	DoC	t-statistic	Forecast Errors
IAPT Model	7.53588E-06	0.580645	-0.342925***	0.0027096**
EViews	5.6634E-06	0.516129	0.628559089***	0.0054307**
Random Walk	.05*	.5*	1*	.05*

* The normal given quantity for the random walk model
** The average of forecast errors over the month forecasted
***All statistics shown in Appendix 1

In-Sample Testing

The out-of-sample test was run on data from 1 January 2010 – 1 December 2010, with forecasting done for each month, Table 4 shows the results.

Table 4. In-Sample Forecasting

DATE	ACTUAL	IAPT	DIFFERENCE	EVIEWS	DIFFERENCE
2/1/2010	.7315	.701154	.030346	. 711961	.026711
3/1/2010	.7368	.74059	-0.00379	.716733	.027235
4/1/2010	.7444	.729282	0.015118	.722842	.028961
5/1/2010	.7949	.743776	0.051124	.729074	.08281
6/1/2010	.819	.785353	0.033647	.783182	.043734
7/1/2010	.7826	.805135	-0.02254	.801846	.024592
8/1/2010	.7754	.784605	-0.0092	.78226	.008847
9/1/2010	.7661	.784513	-0.01841	.796467	.004395
10/1/2010	.7193	.767082	-0.04778	.770409	.071053
11/1/2010	.7321	.728784	0.003316	.718131	.019081
12/1/2010	.7563	.73977	0.01653	.717455	.051362
1/1/2011	.7486	.748067	0.000533	.758176	.0127291
2/1/2011	.7326	.745667	.0130671	.756017	.031965

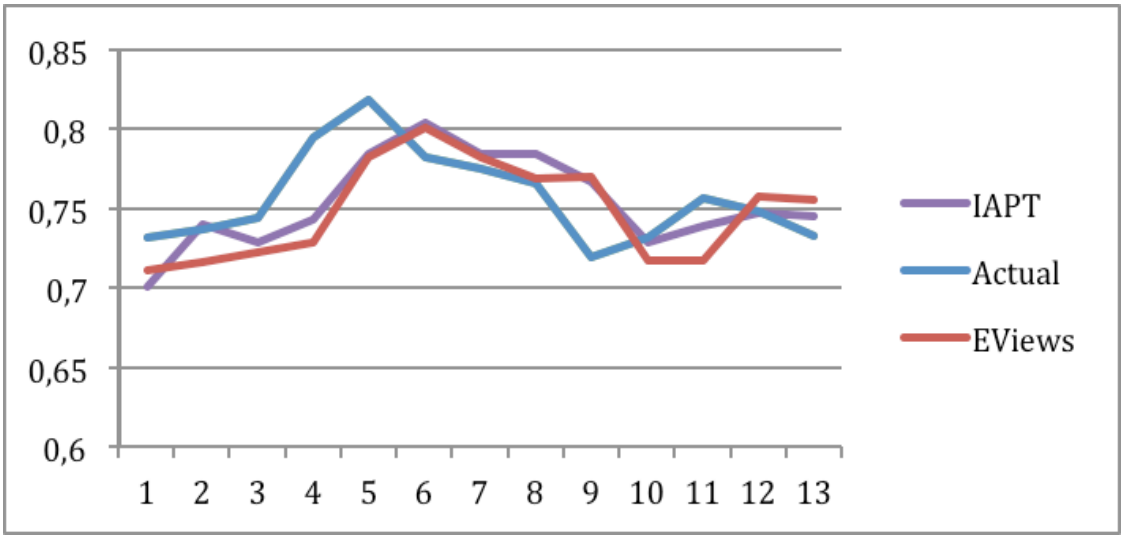


Figure 2

Table 5. In-Sample Forecast

	RMSE	DoC	t-statistic	Forecast Errors
IAPT Model	0.000611	.727273	-0.23981***	0.020412**
EViews	0.000769	.692308	0.604988***	0.031059**
Random Walk	.05*	.5*	1*	.05*

* The normal given quantity for the random walk model
** The average of forecast errors over the month forecasted
***All statistics shown in Appendix 2

Findings and Conclusions

Through extensive testing it was demonstrated that the IAPT Model and EViews can beat the Random Walk Model in both In-Sample Forecasting and Out-of-Sample Forecasting. We have compelling results that suggest that forecasting accuracy can be enhanced by including nonlinearities, as well as SDF framework. Of interesting note, is that the IAPT and EViews both outperformed other studies in the Out-of-Sample Forecast, which historically has been the hardest to accurately predict. These models predicted the exchange rate better in the Out-of-Sample than in the In-Sample in all four determination tests. Areas for future research would be to identify additional variables to increase the forecasting accuracy of the models and also apply the models to different currencies to determine how robust they are to various conditions. Also, a study on how catastrophes can influence exchange rates would be interesting due to current events.

References

2001A Comparison of Linear and Nonlinear Univariate Models for Forecasting Microeconomic Time SeriesOxfordOxford University Press

Affine Term Structure Models and the Forward Premium Anomaly2001Journal of Finance 279-304

Arbitrage Asset Pricing Under Exchange Risk1991Journal of Finance 447-55

2001Asset PricingPrincetonPrinceton University Press

Autoregressive Conditional Heteroscedasticity With Estimates of the Variance of the United Kingdom Inflation1982Econometrica 987-1008

2003Bayesian Model Averaging and Exchange Rate ForecastsBoard of Governors of the Federal Reserve System

Can the Markov Switching Model Forecast Exchange Rates?1994Journal of International Economics 151-165

Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk1964Journal of Finance 18

Common Factors and Local Factors: Implications for Term Structure and Exchange Rates2004Journal of Financial and Quantitative Analysis

2008Comparing Forecast Performance of Exchange Rate ModelsHong KongHong Kong Monetary Authority

Dynamic Forecasting of Monetary Exchange Rate Models: Evidence from Cointegration2001International Advances in Economic Research 51-64

Empirical Exchange Models of the Seventies: Do They Fit Out of Sample?1983Journal of International Economics 12

Evaluating Random Walk Forecasts of Exchange Rates2009Studies in Economics and Finance 171-181

Evaluating Volatility Dynamics and the Forecasting Ability of Markov Switching Models2009Journal of Forecasint 736-744

Exchange Rates and the Conversion of Currency-Specific Risk Premia2007European Financial Management 672-701

Implied Forward Exchange Premia2004European Financial Management 321-38

International Arbitrage Pricing Theory1983Journal of Finance 9

Nonlinear Adjustment in Real Exchange Rates: Towards a Solution to the Purchasing Power Parity Puzzles2001International Economic Review 1015-1042

The Arbitrage Theory of Capital Asset Pricing1976Journal of Economic Theory 20

Time Series Prediction of Dollar/Euro Exchange Rate Index2008International Research Journal of Finance and Economics 232-241

Why is it so Difficult to Beat the Random Walk Forecast of Exchange Rates?2003Journal of International Economics 85-107

Understanding Student Learning of Difficult Concepts in Business Statistics: A Study of Pictorial Presentation Formats for Teaching Conditional Probability

Alan F. Chow, University of South Alabama
James P. Van Haneghan, University of South Alabama

Abstract

Students in undergraduate Business Statistics courses have difficulty in understanding and transferring learning of complex concepts such as conditional probabilities. While the reasoning for its success has been debated, many studies support the idea that learning is facilitated by presenting the concepts and examples in the form of frequencies and not in the more traditional probabilistic form. More recent studies have looked further at the presentation format of these conditional probability concepts and examples.

This study continues this direction of expressing the concepts and examples through the use of pictorial formatted information. Specifically, the study presented the information to student learners in two forms: the first an iconic presentation using stick figures to represent population and shading/circling to indicate portions of the population; and the second a tree diagram representing the characteristics of the problem and the number associated with each characteristic.

Results of the study show that in short-term intervention approaches to learning, students respond more successfully to the tree diagram presentation. Additionally, students given a representative template to use in solving an associated target problem were more likely to utilize the template, and successfully complete the problem when provided the tree diagram format than the iconic stick figure format.

While this study does not attempt to determine the cognitive mechanisms which lead to the observed results, it does provide a building block for focusing the pedagogical development of undergraduate statistics courses as it pertains to the area of teaching conditional probability.

Introduction

The purpose of this study was to examine the framework under which college students learn or understand conditional probabilities. Working off of earlier studies (Van Haneghan & Chow, 2007, and Chow, 2008) which support the idea that basic level learning is better achieved when material is presented in the form of frequencies rather than in the form of probabilities, this study examines two approaches to the visual presentation of the study materials. Using a short term intervention as the learning approach of the study, subjects were presented an example problem using one of two visual displays of the material.

The goal was to compare iconic picture diagrams where cases are displayed such that they can basically be counted to frequency trees that distribute numbers of cases into their sets and subsets. Subjects were asked to answer a basic quantitative question related to the example. A similar target problem was then provided, and the subjects were asked to solve the target problem using the same methodology as the example. Along with manipulating whether they performed better using the iconic pictures or tree diagrams, we also explored whether individuals who received a blank template were more likely to use the strategies they were shown than those who did not. We hypothesized, consistent with recent work (e.g., Brase, 2009) that the students solving problems with iconic picture diagrams would perform better than the students who used tree diagrams to represent frequencies in a conditional probability context.

Literature Review

The basis of this study is centered in the concept that learners will have a better understanding of the relationships of conditional probability when those probabilities are presented in a frequency format. Recent studies published focus on the frequency format of the presented probability problem, showing that in this form learning is more conducive than when problems are presented in probabilistic form (Hoffrage, Gigerenzer, Krauss, and Martignon, 2002; Brase, 2008; Galesic, Gigerenzer, and Straubinger, 2009). Additionally, researchers have begun to look at the form in which the data are presented, including the use of pictorial type forms utilizing iconic representations as well as tree diagrams (Brase, 2009; Fuller, Dudley, and Blacktop, 2002; and Galesic, Garcia-Retamero, and Gigerenzer, 2009). In his analysis of signs, Peirce distinguished between "iconic, indexical, and symbolic representations (e.g., see Chandler, 1994). The iconic pictures tend to be more concrete iconic signs for representing the frequencies than the tree diagrams that tend to be more indexical or even symbolic in nature. Therefore, one would expect that they would be more accessible than more abstract forms of representation like tree diagrams.

This study draws on many of the outcomes from these prior published works, in order to attempt to gain some insight into which form of presentation is more appropriate for a given collection of students. The earlier studies used subjects ranging from school children to university students to health care professionals, this study utilized university student, enrolled in statistics and mathematics courses at the undergraduate level. These students were selected since the underlying driver is the discovery of which methods of teaching and presentation are best suited for this type of learner.

Methods

Participants. Participants for this study were 123 undergraduate students enrolled in business statistics and business calculus courses at a medium sized public university in the southeastern United States. Participants did not have prior exposure to conditional probability, so that they would not have brought any existing knowledge of the material into the experiment. The study was an experiment in which participants were randomly assigned to either the Iconic Stick Figure Condition (N = 61) or the tree diagram condition (N = 62). Further they were randomly assigned to either receive a blank template or no template during their solution of a target problem.

Materials. Specifically, the study focused on the visual presentation format as one independent variable, using a 10 by 10 matrix of stick figures as one method, and a tree diagram structure as the other. Below is the example problem presented, one using the iconic stick figures and one using the tree diagram.

Example with iconic display (Figure 1):

A new disease has been discovered, Disease Q, which is caused by a bacterial infection. The latest research on Disease Q shows the following information about the chances of contracting the disease and the ability of a new test to detect the disease. A person has 6 chances out of 100 of contracting the disease. The test to detect the disease is not perfect. Only 4 of the 6 chances of having the disease are associated with a positive test. Unfortunately, 16 of the 94 chances of not having the disease (healthy) will also have a positive test.

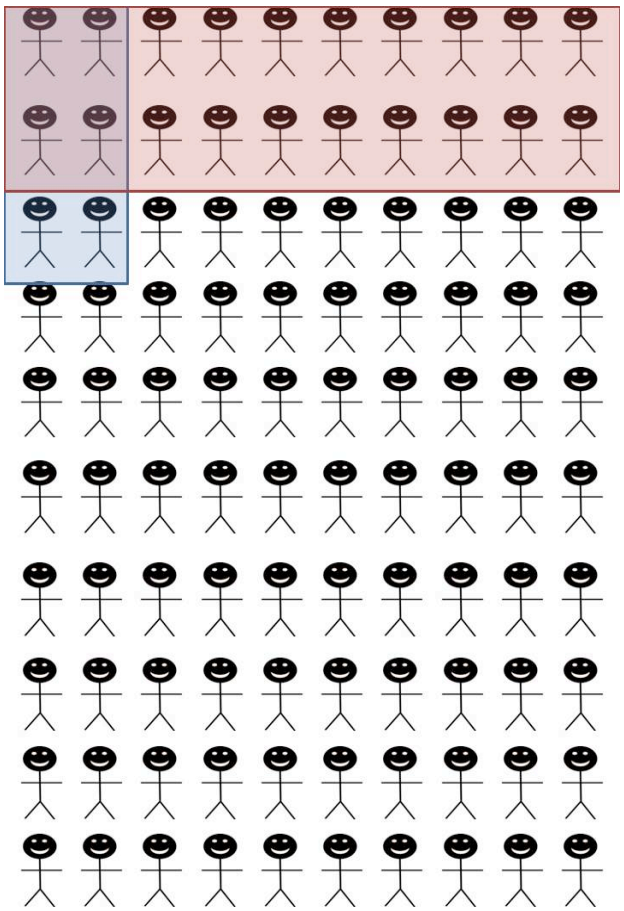


Figure 1

Now consider Joe, who is now tested for Disease Q. Joe has ___ chances of a positive test, __ of which will be associated with actually having the disease.

Example with tree diagram display (Figure 2):

A new disease has been discovered, Disease Q, which is caused by a bacterial infection. The latest research on Disease Q shows the following information about the chances of contracting the disease and the ability of a new test to detect the disease.

A person has 6 chances out of 100 of contracting the disease. The test to detect the disease is not perfect. Only 4 of the 6 chances of having the disease are associated with a positive test. Unfortunately, 16 of the 94 chances of not having the disease (healthy) will also have a positive test.

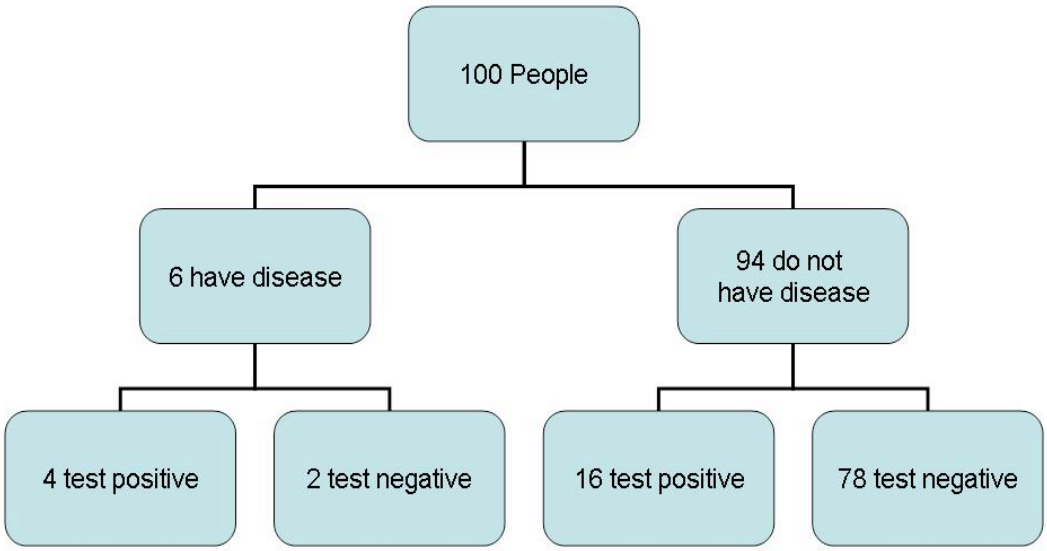


Figure 2

Now consider Jack, who is now tested for Disease Q. Jack has _____ chances of a positive test, _____of which will be associated with actually having the disease.

In addition to the study problems, the students solved similar target problems, where half of the participants were given a blank template of the stick figures or tree diagram to use in solving the target problem.

Procedure. Participants were presented with an example problem which was set up using either an iconic matrix of stick figures, or using a tree diagram. The problems were generic type problems related to a made up disease, the percent chance of someone at random testing positive to the disease, and the accuracy of the test. After seeing the example set up, the participants were asked to answer a basic question related to the chance of a person with a positive test actually having the disease. A target problem of a similar nature was presented to each

participant and the participants were asked to solve the target problem using the method presented in the example. Below is an example of the target problem presented either with or without a blank template:

> A new disease has been discovered, Disease Z, which is caused by a bacterial infection. The latest research on Disease Z shows the following information about the chances of contracting the disease and the ability of a new test to detect the disease.
>
> A person has 6 chances out of 100 of contracting the disease. The test to detect the disease is not perfect. Only 5 of the 6 chances of having the disease are associated with a positive test. Unfortunately, 40 of the 94 chances of not having the disease (healthy) will also have a positive test.
>
> Now consider John, who is now tested for Disease Z. John has _____ chances of a positive test, _____of which will be associated with actually having the disease.

The main dependent variable was whether the student solved the target problem. Additionally we were interested in how they solved the study problem and whether they actually used the diagram they had seen in the study problem to solve the target problem. Ratings on a five point rubric were used to measure whether the solution process and diagram from the target problem matched the trained methods for the study problem.

Data Sources

The dependent measures, except for the ratings of whether the solution process used the diagram used in the study problem, were dichotomies. First, we examined whether they provided correct answers to each part of the study (solved with diagram presented) problem. Next, and most important to the study, we examined whether they solved each of the two parts of the target problem. In the case of the target problem, we were also interested in whether those who had the template were more likely to use the strategy in the study problem than those who did not. Chi-square analyses were done to examine whether our hypothesis that the iconic picture diagram would lead to better performance than the tree diagram.

First, the chi-square test of independence was carried out on the iconic picture versus the tree diagram led to better performance on the two parts of the problem (the chance of a positive test) and the second (the chance of having the disease based on the results of the test). First, the chance of a positive test was found more often by the group who worked with the tree diagrams (77%) than those who received the iconic picture diagrams (41.9%), Chi-square (1, N =123) = 15.17, $p < .01$. It was also found that the tree diagram group did better (77%) than the iconic picture group (51.6%) in terms of identifying the chances of actually getting the disease, Chi-square (1, N =123) = 8.66, $p < .01$. The pattern was about the same regardless of whether the participants had the template to work with or not, although the performance improved somewhat. Finally, it was found that there was an interesting pattern of results relating whether participants used the strategy or not. Those who received the template in the iconic picture

diagram were more likely to use the strategy than those who did not; whereas those who had the tree diagram were just as likely to use it whether they had the template or not.

Results and Conclusions

While we thought that the iconic picture diagrams would lead to better performance than the tree diagrams, contrary to our theoretical position, those who received the tree diagrams within the study problems were more likely to use it and get the two parts of the target problem correct than those getting the iconic picture diagrams. At least for these basic problems, the tree diagram appeared to help the learner better segregate the information in the problem than the iconic picture diagrams.

The main contribution that this study sets out to make is in the area of improving learning related to conditional probability specifically, and quantitative decision making and problems solving more generally. This research adds to the growing body of research showing both the positive impact and limitations of different ways of representing problems. We thought the simpler more iconic representation of the problem space may have provided an easier context for answering the problem. However, it did not. These results suggest that further work needs to be done to work on ways to develop problem representations that will help students both grasp the concepts for solving conditional probability problems. It also shows that not all frequency representations are alike in facilitating performance. Hence, researchers need to do more to study both frequency and probability representations of conditional probability problems.

References

Brase, G. "Pictorial representations in statistical reasoning". *Applied Cognitive Psychology*, 2009, Vol. 23, 369-381.

Brase, G. 'Frequency interpretation of ambiguous statistical information facilitates Bayesian reasoning". *Psychonomic Bulletin & Review*, 2008, Vol. 15, 284-289.

Chow, A. "The effects of solution type and context on the transfer of solution to conditional probability problems for introductory undergraduate statistics students", Dissertation abstracts international, 2008, 69 (11A), 4225. (UMI No. 3338077).

Fuller R, Dudley N, and J. Blacktop. "How informed is consent? Understanding of pictorial and verbal probability information by medical inpatients." *Postgraduate Medical Journal*, 2002, Vol. 78, 543-4.

Hoffrage, U., Gigerenzer, G., Krauss, S., and L. Martignon. "Representation facilitates reasoning: What natural frequencies are and what they are not". *Cognition*, 2002, Vol. 84, 343 - 353.

Galesic, M., Gigerenzer, G., and N. Straubinger. " Natural frequencies help older adults and people with low numeracy to evaluate medical screening tests". *Medical Decision Making*, 2009, Vol. 29, 368-371.

Galesic, M., Garcia-Retamero, R., and G. Gigerenzer. "Using icon arrays to communicate medical risks: Overcoming low numeracy". *Health Psychology*, 2009, Vol. 28, 210 – 216.

Van Haneghan, J. and A. Chow. "Transferring frequencies solutions to conditional probability problem". Presented at the annual meeting of the American Psychological Association, 2007, San Francisco, CA.

Twitter: An Effective Channel for Business Activities?

Latrice Burston, Albany State University
Chiou-Pirng Wang, Albany State University
Cynthia Bennett, Albany State University

Abstract

Twitter has opened a channel in which people can quickly share information with each other in short "tweets." Twitter was founded in 2006, and since its inception, its user population has grown astronomically. Such growth is attributable to the spurt of businesses and commercial enterprises into this still "fresh" online medium to promote their products and services. How does the arrival of businesses impact the Twitter communities? How effective is Twitter for businesses to promote their products and services? In this research, we examine two types of tweets--gibberish and coherent. We tracked the Followers who were attracted as a result of our following 2000 randomly selected "Followings." Followers of several accounts were tracked for two months. Our preliminary results revealed that using Twitter for business activities by sending gibberish, robot-type tweets may not work effectively. The asymmetry in the correspondence of commercial-type Followers and real Followers could be an important indicator in measuring the ecology of micro-blogs.

Introduction

As the Internet expands, the world becomes increasingly smaller each day. The traditional ways of communication are quickly becoming obsolete, and society is discovering new and advanced ways to share information over the Internet. The tools by which we communicate evolve with every new generation of technology. People from across the world use emailing, instant messaging, blogging, social networking sites and others sites to reach vast amounts of people. Although, emailing and instant messaging remain popular, social networking sites have exploded onto the scene becoming some of the Internet's most visited sites in the world. Furthermore, social networking sites such as Facebook , Myspace, and Twitter introduced a new platform for people to connect. These sites enabled people from all over the world to establish relationships with individuals that they would have never encountered in their daily lives and allowed for a rapid sharing of information. Businesses have entered these social networking sites and are using the same to enhance productivity and to provide extensive services.

Twitter is a micro-blogging, social networking site founded in 2006. Twitter users share short messages of 140 characters or less called Tweets. These tweets can only include text and Hypertext links. In addition, users have the ability to follow another user which is defined as "Following" or a user can follow them, "Follower". When a user tweets a message, it is immediately delivered to their followers in a feed that appears on the followers' home page and in a search engine result. Although, Twitter is still in the early years, the site has already gained an enormous popularity among celebrities, everyday Internet users, businesses, and spammers.

While Twitter provides less social networking capabilities than its counterparts, the site continues to grow and develop ample followings. Reportedly, out of all social networking sites, Twitter is the fastest growing at over 2800% in 2009. (Opera, 2009)

Although, Twitter and other social networking sites were originally introduced as a way for people to connect with other people, businesses and other entities (such as spammers) have begun to recognize opportunities within social networking. Twitter attracts large amounts of users which presents businesses with a convenient and free way to solicit new customers and strengthen the relationship with existing ones. Spammers on the other hand, have the opportunity to post malicious links and send unsolicited messages to real users. Consequently, businesses and spammers have integrated seamlessly alongside everyday users. (Yardi, 2010) (Jansen, 2009)

As a result, the researchers of this study endeavored to see how effective Twitter has become for communication and advertising among businesses. This research will help businesses to determine the most effective online strategy for marketing their products/services via Twitter. Also, the research will aid real users in finding strategies on coherent tweet topics of interest—in order to avoid interruption or annoying spam. In essence, the aim of the research topic is to uncover the effectiveness of tweets that are sent by robots (employed by marketers). Since robots have no intelligence, they can tweet gibberish or non-human tweets. Accordingly, gibberish tweets attract more non-human users (to Twitter) than human users. Therefore, this study aims to test the following hypothesis:

Gibberish tweets attract more self-promoters, marketing/sale/spam or robot types of followers than a real twitter user.

Literature Review

Sysomos Inc., a social media analytics company, embarked on a detailed study about Twitter's growth and how people are using it. Within the study, they also explored the utilization of Twitter by social media marketer. Consequently, they found that 15% of Twitter users who follow more than 2,000 people identify themselves as social media marketers. In addition, 65.5% of social media marketers post less than an update a day, compared with 85.3% of the general Twitter population. Also, 35% tweet more than one update/day, compared with 15% for the overall Twitter population. As a result, their research suggests that social media marketers are more active than the overall twitter user and plays increasingly significant role in twitter. (Sysomos.Inc)

Nevertheless, the question remains exactly how much of a role do brands, businesses, and corporations play in the usage of Twitter? Edison Research found that amongst monthly Twitter users in the USA, 49% follow brands or companies, compared to 16% of social network users overall. Basically, twitter users are more likely to follow brands/companies than Facebook users. Not only do twitter users follow companies, they also interact with and research them as well. Edison Research found that of twitter users 42% discover information about products and services via Twitter, 41% offer opinions with reference to products/services, and 19% ask for customer support. Edison Research study results may suggest that twitter is a viable resource and outlet for businesses because of its high percentage of user openness to brands, businesses, and corporations. (Edison Research)

Not only have businesses found their place in the twitter community, but so have spammers. Extensive research has been done on twitter regarding spam. The Pear Analytics study suggests that more than 3% of messages on twitter are spam. Spam has been a growing problem with all social networking sites and especially Twitter. A study conducted by Cheng and Evans (2009) of 11.5 million twitter accounts found that 24% of all tweets were made by automated, robot-type accounts tweeting an excess of 150 tweets per day. Human twitter users unassisted by specialized software are highly unlikely to produce as many tweets.

Methodology

The researchers of this study established four twitter accounts--two for tweeting gibberish to mimic robots, and two for tweeting coherent topics. Coherent topics can be defined as topics tweeted by a human, non-marketing user--such as breaking news stories, daily activities, or questions. Gibberish topics are topics human or non-human marketers would tweet to attract interest in their particular product or service, such as sales/deals, contests, or quick-money schemes.

The first set of data collection began October 6, 2010. Two twitter accounts were established--one gibberish and one coherent account—and were operating under the usernames of GibbersT (gibberish) and TweetCo (coherent). Each day for ten days, 200 users were randomly selected to follow on both accounts. The selection process resulted in an overall total of 2000 "Followings". As "Followings" were generated, researchers tweeted on a specific topic--per respective account. For the gibberish account, topics included contests, free offers, and ways to earn quick money. Conversely, on coherent accounts, researchers tweeted about Twitter privacy, new information about Twitter, and other Twitter-related topics.

For ten days, on both accounts 20 percent of the 200 (40 users) F followings were recorded and classified into four specific categories. The categories included spam/marketers, real users, female/male, and USA/non-USA. Followers were also classified into the four categories. Each day, Followers were categorized, and as Followers increased, a new total was computed—to eliminate redundancy. Researchers also, recorded the recursive users. These are Followers that researchers followed, and in turn, they followed back to the researchers' account.

Throughout the month of October, tweets were posted daily and respective data was usually recorded at the end of the day. Although a particular period (for recording and posting) was not specified, times ranged from 12:00 pm to 11:00 pm during weekdays and weekends.

The second set of data collection began November 1, 2010 and ended November 30, 2010. Consistent with the first set of data, two new twitter accounts were established, and the user names were MicCoTx (coherent) and Gilliberry (gibberish). The same methodology used to collect and record previous (October) data was also used for this data setHowever, the tweeted topic was changed for each account. For the coherent account, the CNN Website (cnn.com) was used in order to select and tweet various news headlines. The gibberish account included tweets about sales and online deals offered by different businesses.

Analysis and Findings

In order to analyze the data, researchers used Excel spreadsheet to input and count respective Followers and Followings. Figure 1 reflects the percentage of spammers/marketers during weekdays and weekends for both gibberish and coherent accounts. During weekdays in October, the percentages of spammers/marketers were relatively higher in coherent accounts (37%) than in gibberish (28%). The gibberish account was dominant in the month of November (36%), but only during weekends. Throughout the months of October and November, both accounts averaged higher percentages of spammers/marketers during weekdays. Data also reflects that the number of unwanted tweets (spammers/marketers) did not drop below 25% on any given day or month—which might indicate that unwanted tweets are on the rise. Such findings presumably give credence to Fox News' Steven Kohler, who said that "What was once maybe one or two messages a day has now risen to around 10 percent of everything that's showing up." (Fox News)

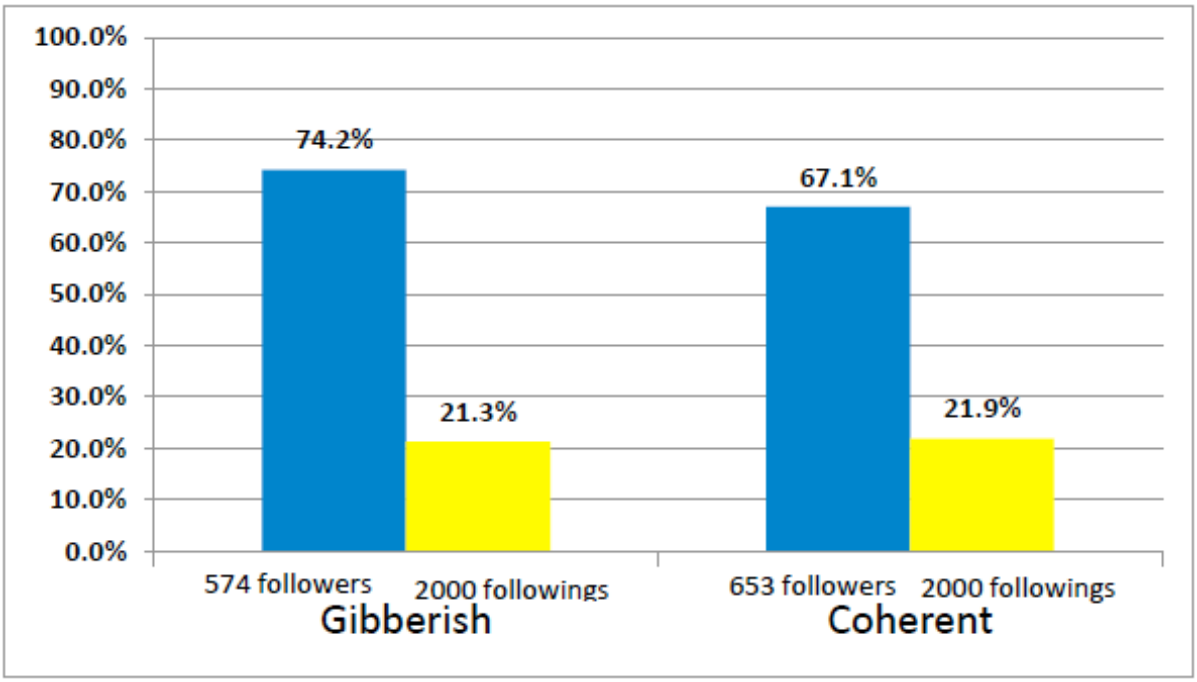


Figure 1. Recursive Users

We found that more users follow gibberish accounts. Also, Recursive users were consistently higher on gibberish accounts.

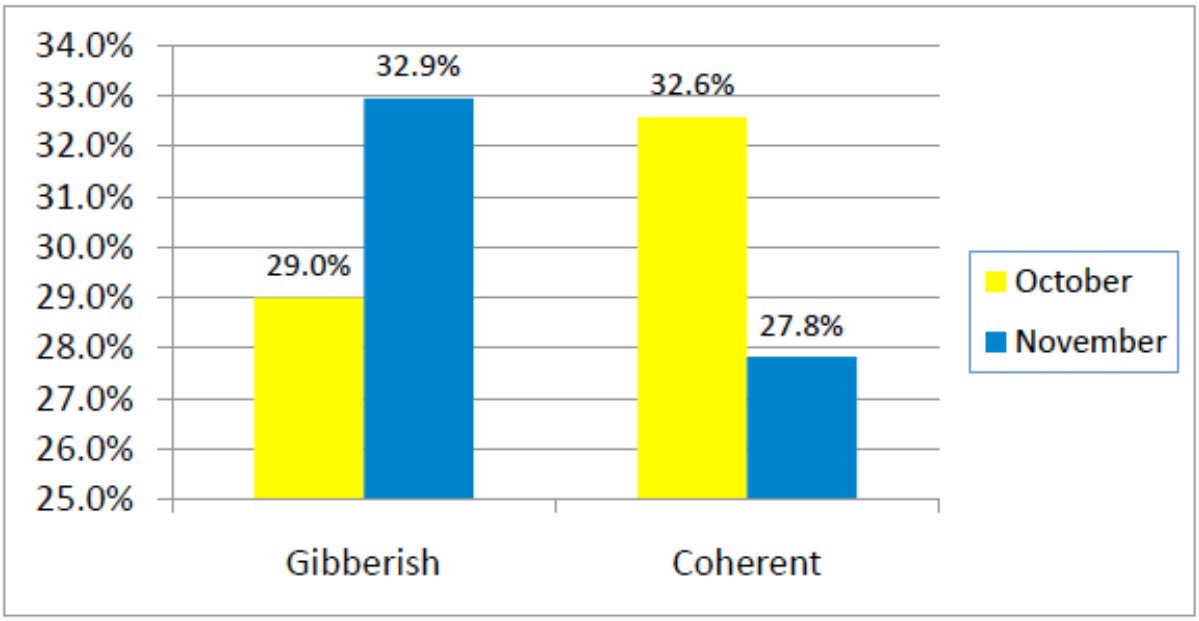


Figure 2. Percentage of Spammers/marketers in October and November

In October, the percentage of spammers/marketers in coherent accounts is higher than gibberish accounts. In contrast, November there was a higher percentage of spammers/marketers in Gibberish account.

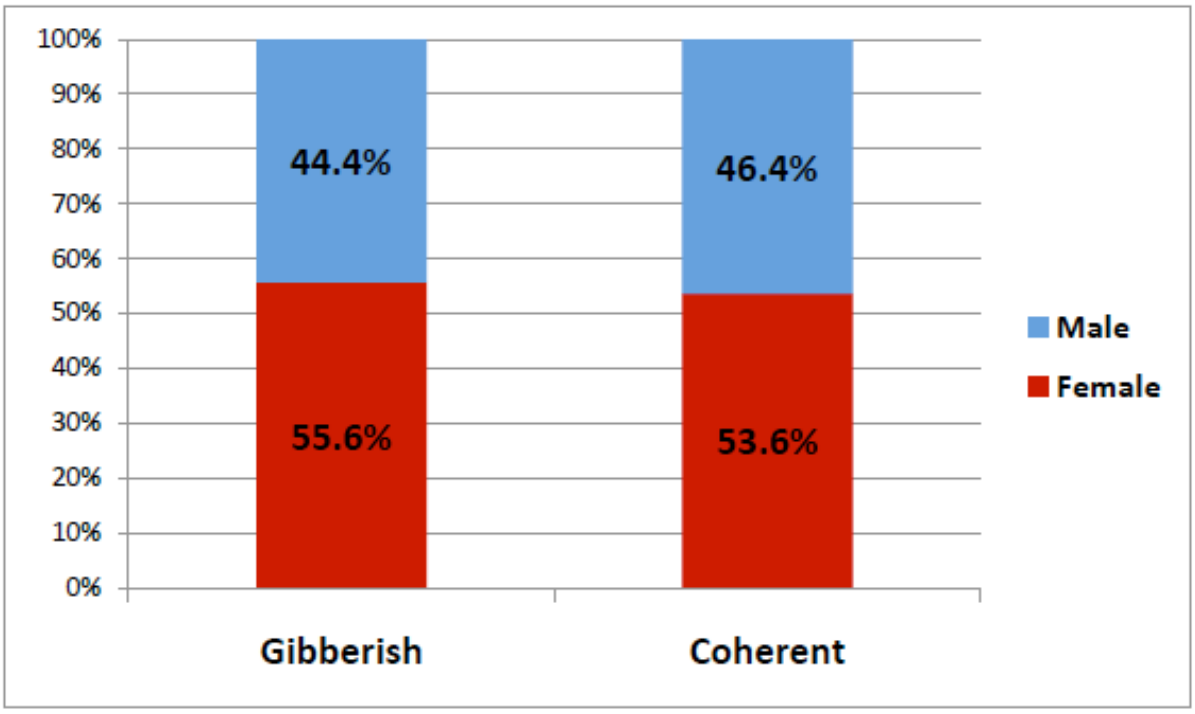


Figure 3. Female to male in Gibberish and Coherent

No significant difference between female and male users in gibberish and coherent accounts in October and November. A similar study conducted by Pear Analytics revealed that, 55% of users in Twitter are female. Consistent with Pear Analytics, this study also resulted in 55% female users—which outweighs male users but is considered not significant.

Table 1: Percentage of Spammer/Marketers in Weekend vs. Weekdays

	October		**November**	
	Gibberish	*Coherent*	*Gibberish*	*Coherent*
Weekend	26.9%	26.4%	27.3%	35.4%
Weekday	29.6%	36.0%	34.1%	25.4%

Additionally, this study revealed a trend of growth among recursive users (those who follow and follow back) from October to November for both gibberish and coherent accounts. However, the growth in coherent accounts increased by 8.8%, almost six times that of gibberish accounts (1.4%). This difference indicates that society; Internet users or real tweeters are more likely to respond to coherent or breaking news tweets than they are to gibberish, spam, or robot-type tweets.

Conclusion

This research study focused on Twitter, one of the newest and fastest growing social networking sites. Twitter, a microblogging site, has been the subject of much research since its inception in 2006. Yet, no one knows exactly how effective twitter is or could be for business marketing and advertising. Businesses are always looking for opportunities to expand and attract new customers. Therefore, many have begun to see opportunities within the social networking phenomenon. Through data collection and analysis, this study explored the relationship between spam/marketers and real users and gender. Researchers found that on the gibberish accounts, the percentage of spam/marketers was higher than that of the real users on the coherent accounts

Based on research findings, researchers determined that "*Gibberish tweets attract more self-promoters, marketing/sale/spam or robot types of followers than a real twitter user.*" Therefore, businesses who continue to use twitter as a means of advertising should first identify their target audience. If they are trying to reach real (more serious users), then businesses should find ways to generate human, coherent-type tweets. Of course, human tweets would yield fewer tweets per day than non-human, robot-type tweets. However, in an effort to expand their customer base, businesses may want to consider quality versus quantity.

References

Analytics, LP.: Twitter Study. http://www.pearanalytics.com/wp-content/uploads/2009/08/Twitter-Study-August-2009.pdf

Benevenuto, F., Magno, G., Rodrigues, T., Almeida, V., : Detecting Spammers on Twitter, http://ceas.cc/2010/papers/Paper%2021.pdf

Edison Research: Twitter usage in America 2010
http://www.edisonresearch.com/twitter_usage_2010.php

Fox News: http://www.foxnews.com/story/0,2933,524279,00.html#ixzz1KBl9EAh1

Jansen, B., and Zhang, M., Sobel, K., Chowdury, A. (2009) Twitter Power: Tweets as Electronic Word of Mouth, Journal of the American Society for Information Science and Technology, 60(11):2169-2188.

Lee, K., Caverlee, J., Webb, S., :The Social Honeypot Project: Protecting Online Communities from Spammers. http://faculty.cs.tamu.edu/caverlee/pubs/lee10www.pdf

Sysomos.Inc, Cheng, A., Evans, M., An In-Depth Look Inside the Twitter World
http://www.sysomos.com/insidetwitter/

Stringhini, G., Kruegal, C., Vigna, G., : A study on Social Networking Spam, {gianluca, chris, vigna} cs.ucsb.edu

Wang, A: Don't follow me: Spam Detection in twitter.
test.scripts.psu.edu/users/h/x/hxw164/files/SECRYPT2010_Wang.pdf

Yardi S., Romero, D., Schoenebeck G., and Boyd, D. (2010). Detecting Spam in a Twitter network. First Monday,15 (1).

How to Deal with the Passive-Aggressive Student

Dr. Pj Forrest, Alcorn State University

Introduction

One of the greatest challenges to an academic is dealing with the difficult students in the classroom. Difficult students range from the mildly annoying to the completely disruptive. They are a thorn in the side for a new professor, and a weary recurrence for the experienced. Disruptive students may be a 'sniper' waiting to pounce on any misspoken word by the professor, the 'sleeper' who steadfastly snores through every class or the 'indifferent' who stares out the window, doodles in their notebook or does anything else except pay attention to the lecture. There may be a 'talker' who can't keep quiet, a 'questioner' who constantly request everything be re-explained, a 'subject changer' who attempts to steer the class away from the lecture topics or a true 'disruptive' who finds a variety of ways to interrupt the normal functioning of a class. We all find our own ways to deal with these students. However, the most difficult of them all to handle is the 'Passive-Aggressive.'

One reason the Passive-Aggressive is so difficult to deal with is they come in a hundred different guises and are hard to recognize. Another is that the only true counter-measure for a Passive-Aggressive is to disengage – and as professors that is rarely an option for us. Passive-Aggressive's know this, and it becomes one more weapon in their arsenal. The compassion and caring which so often works with other difficult students also becomes an advantage to them.

Methodology

There was no literature in business journals which was directly on point, therefore psychological and educational journals were consulted. There was a small amount of literature on dealing with PA children, some on dealing with PA employee's and some on PA's in marital relationships but nothing about dealing with PA college students. Therefore this material, as well as general material on PA's, was examined and interpreted for an academic situation. Anecdotal experience was a factor in the interpretation.

Description of a Passive-Aggressive

There are many definitions of a PA but one of the best comes from the Urban Dictionary which describes it this way, Passive-aggression is a 'defense mechanism that allows people who aren't comfortable being openly aggressive to get what they want under the guise of still trying to please others. They want their way, but they also want everyone to still like them (2008.)' The PA attempts to control others and get what they want through passivity and withdrawal. They use procrastination, complaining behavior and failure to follow through on agreements to manipulate a situation. They believe they are more important than others, and never see that their behaviors are not acceptable (Magic Word). A PA may 'forget' or use sarcasm, and will lie or distort the truth to portray themselves as in the right.

A PA can be quite charming – on the surface. They sincerely believe they are nice people and they may put considerable effort into helping others. They often behave in a pleasant and congenial manner as a disguise (Carter.) The true passive aggressive is very slippery (Fiore) and hard to catch. They are the center of their own world (Magic Word) and have their own set of rules. They never see a reason to change their behavior because in their mind, they haven't done anything wrong The PA truly believes everything they do is in the interest of others and that they are blameless, innocent, and basically good people (McHugh.)

However, at heart PA's are angry and express the anger by using passivity and withdrawal to control others (Namka.) The PA hungers for approval and expresses extreme anger (in a passive-aggressive way) when they don't receive it (MCHugh.) Anything that endangers their positive view of themselves creates anxiety and a need to regain control. The goal of the passive-aggressive is to preserve their perceived needs at the other person's expense (Carter.) Passive-Aggression is a psychological method for handling aggression or rage in an deceitful or conniving way that is difficult for others to substantiate (Fiore.)

Along with presenting a charming face to the world and believing themselves to be good, helpful people, PA's often that think that everybody "has it in for them" and nobody wants them to be happy. The reason for their unhappiness is always due to external factors (Hagy.) For PA's, anything that goes wrong is someone else's fault and they have an arsenal of justifications and excuses with which to rationalize and defend their own behavior (Fiore.) Rather than be confrontational the PA 'forgets,' procrastinates, pretends ineptitude or fails to keep promises (Bower.) They will tell you anything you want to hear in order to end an unpleasant conversation (Carter.) PA's have little consideration of the time, emotions, values or desires of others (Namka.) They are natural martyrs and always manage to appear as the victim while getting their own way. PA's have a negative outlook towards life and people (Hagy.) They may be pessimistic even when things are going well (Dr. Phil.)

Recognizing a Passive-Aggressive Student

Being a PA student is an extension of a PA personality. The PA student will exhibit the same types of behaviors that typify a PA personality. Many students who are NOT PA's exhibit any and all of the following behaviors – they are simply students. The PA will be recognized by a constant and continued manifestation (Flora) and patterns of behavior rather than isolated incidents (Fiore). The PA student will exhibit one or more of these behaviors, usually more, on a consistent basis. These behaviors include but are not limited to:

- Repeatedly missing deadlines or failing to keep appointments
- Expecting frequent excuses to be accepted without question
- Expecting special treatment and feeling they have a right to it
- Constantly complaining about course requirements or other issues
- Is critical of other students or of you
- Having a 'victim' mentality – it is always someone else's fault
- Insist that their poor grades are because you "don't like them' or 'have it in' for them
- Taking offense easily, taking remarks personally
- Lying

- Exaggerating problems
- Trying to make you angry

Strategies to Handle the Passive Aggressive Student

- NEVER ARGUE with a PA. You will always lose! They have a lifetime of practice in making themselves seem like victims while making you look like the 'bad guy' in arguments. If they are unable to engage you, they may quit trying.
- Don't let them get to you. Passive-aggressive people often feel a sense of accomplishment when they know they have managed to aggravate or frustrate you. If you get angry, it will reward and reinforce the behavior. Be calm and rational.
- Stick to the syllabus. Keep repeating the terms and conditions outlined on the syllabus that the student has violated, or any deadlines the student has missed. Keep any emails you exchange and pull those up if necessary.
- Put any additional agreements in writing.
- Give positive feedback when earned.
- Focus on the specific behavior. Criticize the students work or behavior, not the student.
- Gently point out inconsistencies in their behavior and statements.
- Do not waste your time attempting to explain to the PA why their behavior is in error.
- Accept no excuses.
- Stick to the subject and don't let them get off track.
- Remember that PA students will see kindness and concern as an opportunity for manipulation.
- Don't trust them!

Conclusions

Many different types of students cause problems in the classroom. However the passive-aggressive student is the most difficult to identify and to deal with. One reason for this is that passive-aggressive can be charming and never feel their own behavior is in error. Taking steps to identify the PA is the first step in coping with this type of student. Avoiding arguments and sticking strictly to the syllabus requirements are two of the ways this can be accomplished. Concern and compassion will only embolden a PA, and they are never to be trusted.

This is my personal email: forrest@alcorn.edu. I would appreciate any emails identifying some of the types of problem students you have encounter.

References

Bower, Lisa (2011). How to Deal With Passive Aggressive Behavior in Your Partner (http://www.life123.com/relationships/issues/signs-bad-relationship/how-to-deal-with-passive-aggressive-behavior-in-yo.shtml

Carter, Les (2003). Dealing with the Passive-Agressive Personality. http://www.newliving.com/issues/nov_2003/articles/passive.html

McHugh, Beth (2011). Dealing with a Passive-Aggressive Manipulator (1) (http://mental-health.families.com/blog/dealing-with-a-passive-aggressive-manipulator-1)

McHugh, Beth (2011). Dealing with a Passive-Aggressive Manipulator (2) http://mental-health.families.com/blog/dealing-with-a-passive-aggressive-manipulator-2

Fiore, Tony (2005). How To Deal With Difficult People Part 3 - The Passive Aggressive http://ezinearticles.com/?How-To-Deal-With-Difficult-People-Part-3---The-Passive-Aggressive&id=120193

Dr. Phil (2011). How to Spot and Deal With Passive Aggressives. http://www.drphil.com/articles/article/319

Namka, Lynne (1998). The Boomerang Relationship: Passivity, Irresponsibility and Resulting Partner Anger. http://www.angriesout.com/couples8.htm

The impact of the Financial Global Crisis on Oil Companies' Profitability Ratios (British Petroleum, Gazprom, Royal Dutch Shell)

Anastasia Khatnyanskaya, Alcorn State University

Abstract

The situation in petroleum sector for past 5 years has changed significantly. Generally oil prices were $25/barrel (till September 2003). From 2005 to 2008 price level increased to 147.30$/barrel. After Global financial crisis (2008-2009) oil prices dropped to $60/barrel. Changes in oil prices have an effect on cost of petroleum products and on cost of customer's lives. This is like 'closed disk'. Geo-events, political acts and even human population growth may have impact on oil prices, which in this case may affect on petroleum companies' performance. In nowadays it's actual to understand all of the major factors effecting on petroleum sector companies, because our civilization is built on oil and gas, and an ever expanding supply of energy is vital to continued economic growth.

Key words: petroleum sector, financial analysis, financial crisis, international petroleum companies, national petroleum companies.

Introduction

In this research paper we will determine the main factors which have an effect on oil companies' performance. For this purposes we have chosen the financial analysis, which includes ratio analysis and regression analysis; and theoretical analysis, which will help to observe the main political, social and strategic events, which have positive/negative impact on petroleum sector. One of the main ideas of this paper is to identify how the global financial crisis affected on financial measures of oil companies.

This topic is popular as a research. Some authors have observed the development of oil industry in the world. The gas and international oil industry entered into a new stage in the end of the 1990s. This stage defined as heavy focus on production growth, cost-cutting, operational efficiency and short-term profitability (P. Osmundsen, 2006). However, the industrial dynamics of oil and gas industry made the changes in company behavior over the last years. Market liberalization and deregulation occurred, and former national oil companies were privatized all around the world. The analysis of the price level of oil has shown that from 1998 to 2008 (before the Global crisis) the price increased by 600%. Some of the previous studies have largely concentrated on US and Asian oil and gas companies (e.g. Quirin et al. 2000, Berry et al 2001, Bryant 2003). They identified the value relevance of accounting information from 2-4 years of data. The Global Financial crisis brought new challenges for petroleum sector. In several studies we may found information about the consequences of the crisis on the oil-exporting countries in the Gulf Cooperation Council (IDS Report, 2009). We also may found analysis about estimated oil demand. Data shows that demand is still coming in, but the investments in energy sector reduced sharply in 2009 (IEA, 2009).

In our paper we will analyze the main factors, including political, economical and social, which have significant impact on the oil companies' performance by using financial and analytical database. British Petroleum, Gazprom and Royal Dutch Shell works in one industry, but have a lot of differences. For example, Gazprom is owned by government (national oil company), BP is the big international oil company and Royal Dutch Shell is controlled more than 20 different oil companies all over the world. The newness of our research consists in comparison of different oil companies, which impacted by the Global Financial Crisis. We will use financial information from 7 years (2002 – 2009). The results of our research will be regression of financial performance of oil companies before the Global and after it. Moreover, we will determine the common factors, which have significant influence on oil sector.

Purpose

Purpose of this term paper is to analyze financial situation which is in petroleum sector was before crisis and now for determining which factors affect on firm's performance more than others. We have chosen three international petroleum companies, on which different factors (political, economical and social) had determinant effect: British Petroleum (the United Kingdom), Gazprom (Russian Federation) and Royal Dutch Shell (the United Kingdom and the Netherlands). Moreover, Gazprom is the national oil company, in which 50.002 percent of shares owned by the government. Royal Dutch Shell is the largest oil and gas company in the world. And British Petroleum is the third largest oil and gas company in the world.

This paper is organized into five other sections. The second section is literature review, which presents a brief review on the literature on theoretical and practical issues concerning the oil companies' financial performance, the impact of financial crisis and the performance valuation. The third section includes data and methodology, which are appropriate for our topic. The fourth section is the results (we will present identified factors, comparisons and regression). The last section is conclusion.

Literature review

Several researchers analyzed the recent performance in the oil industry. Robert Pirog determined that the increasing in the oil price from 2004 has been a major factor contributing to the record profits earned in the oil industry (R. Pirog, 2005). He based his research on profit analysis, which uses the total profits of the oil company and its profit rates. The gross and net refining factors are the key profit indicators in the refining industry. R. Pirog defined the gross profit margin as the revenue earned from petroleum product sales minus the cost of crude oil. This gross profit margin is usually expressed on a per barrel basis. He also analyzed the dividend policy of oil companies. The major oil companies (ExxonMobil, Chevron Texaco) have increased their dividends for shareholders, but in general, by less than increases in available funds. "Limited dividend payouts, coupled with a modest expansion of investment in relation to profit has left oil companies highly liquid and well positioned to take advantage of future market opportunities" (Pirog, 2008).

P. Osmundsen, F. Asche, B. Misund and K. Mohn analyze the valuation of international oil and gas companies. Their data set consists of stock price and accounting data for 14 international oil and gas companies. Oil and gas production, reserve replacement ratios, unit

production costs are the key performance indicators in the valuation of oil companies. Their result is that the effect of short-term return on capital may crowded by interdependent explanatory factors. This study also identified the relationships between market valuation and financial indicators in international oil and gas industry.

A lot of studies describe the current global financial crisis, because its influences on our lives we will feel in several years. The ESCWA (Economic and Social Commission for Western Asia) Report for 2009 observes the impact of the global financial crisis on the world oil market. In the report we have found two additional forecasts reflecting higher oil prices. These forecasts reflected possible cases as they discount the probability that a deep global recession would be avoid and that global economies would come back to high growth level.

Some of the authors analyze the impact of financial crisis on the energy industries in case of investment policy. They examine in details that energy investments will drop in 2010(Bain & Co, 2009; Ernst & Young, 2009; IEA, 2009). Moreover, supply and demand are being affected. The International Monetary Fund expected decreasing in global GDP by 7% in the end of 2009. There are three main effects on investment in energy-supply sector: tighter credit, lower profitability and less need for capacity. It may bring new ways in consumer's behavior: they will spend less on new goods, they are less able to pay the premium for more goods and they will use less their goods, which they purchased.

P. Stevens, R. Mabro, G. Heal analyze in their research papers the performance and the value of national oil and gas companies. Those studies represent the set of analytical frameworks for evaluation of national oil companies (NOCs) performance. Researchers introduce the indicator to measure NOC value creation. It can be calculated on an annual average, but they implemented a 3-years average. NOC value creation index includes operational performance (output/total assets, reserve replacement ratio, output/employees), financial performance (EBRTN/revenues, EBRTN/total assets and Capex/depreciation) and national mission performance (Share of local content, Domestic output use and Gas flared/lifted volume). A composite value creation index may be used to benchmark the value creation of different NOCs. The aggregate index consists of three sub-indices to measure the operational, financial and national mission performance of petroleum companies. This index helps to create regression model for oil companies, which we will choose.

Data and Methodology

The basic data for this paper consists of balance information of oil companies: British Petroleum, Gazprom and Royal Dutch Shell. We used the official annual accounting reports of BP, Gazprom, and Royal Dutch Shell oil companies for 2002 – 2009. We also collected some data according to the level of oil prices in 2002 – 2009. In this case we have found the oil price average (dollar/barrel) for each year (Table 1).

Table 1 The Average of Oil Prices, 2002 – 2009

Year	Price (dollar/barrel)
2002	23,47153846
2003	27,10807692
2004	34,6209434
2005	49,86711538
2006	60,31942308
2007	69,18769231
2008	95,62461538
2009	60,06596154

In our paper we used the profitability ratios: return on capital employed (ROCE) and net profit margin (NPM). Some authors suggest that ROCE is the key performance indicator for oil and gas industry (Osmundsen and Asche, 2004; and Antill and Amotl, 2000). They identified return on capital employed as an indicator which shows the relationship between the profit and the capital employed (or operating profits). ROCE indicates the percentage of return on capital employed in the business and it can be used to show the overall profitability and efficiency of the business. In other words, ROCE shows how efficiently managers use the investments and how efficiently the company earns a return on all of the capital that its employs. The formula of ROCE is Earnings Before Interest and Taxes/(Total Assets – Current Liabilities). To find ROCE for every oil company we collected data some from the Balance Sheets and Income Statements for 2002 - 2009.

Table 2. Returns on Capital Employed of Gazprom, 2002 – 2009 (%)

Year	ROCE
2002	9.06
2003	9.68
2004	9.48
2005	11.90
2006	17.71
2007	12.29
2008	20.31
2009	11.71

Table 3. Returns on Capital Employed of British Petroleum, 2002 – 2009 (%)

Year	ROCE
2002	11.11
2003	14.38
2004	19.66
2005	23.76
2006	18.19
2007	20.58
2008	22.13
2009	14.85

Table 4. Returns on Capital Employed of Royal Dutch Shell, 2002 – 2009 (%)

Year	ROCE
2002	14.80
2003	15.30
2004	19.90
2005	25.18
2006	28.96
2007	29.01
2008	29.40
2009	10.39

For regression analysis which will show the relationship between the changes in oil prices and the companies' profitability, we also used the net profit margin indicator. NPM is a profitability indicator which shows how much profit a company makes for every $1 it generates in revenue or sales. The formula of NPM is Net Profit After Taxes/Total Revenues. For calculating NPM we used the companies' Income Statements.

Table 5. Net Profit Margins of Gazprom, Royal Dutch Shell and British Petroleum, 2002 – 2009 (%)

Year	Gazprom	Royal Dutch Shell	BP
2002	17.60	4.33	1.32
2003	19.40	2.73	4.10
2004	21.40	4.68	4.82
2005	22.50	5.79	5.57
2006	28.50	7.00	4.59
2007	27.20	7.94	5.53
2008	22.60	-3.47	-5.49
2009	26.10	2.42	5.83

The last step of our methodology is the regression analysis, where we used the equation:

$$Y = kX + b,$$

where Y – ROCE or NPM, X – oil price, k – the coefficient of the regression, b – the parameter of the regression.

The regression will identify how ROCE and NPM are dependant/independent on the changes in the oil price in 2002 – 2009. We will see also how the Global Financial Crisis affected on the companies' performance.

Results

After the theoretical and profitability ratio analysis we have found that the changes in oil prices in 2002 – 2009 have an influence on Return on Capital Employed and Net Profit Margin of our oil companies. The figures 1 and 2 illustrate these relations.

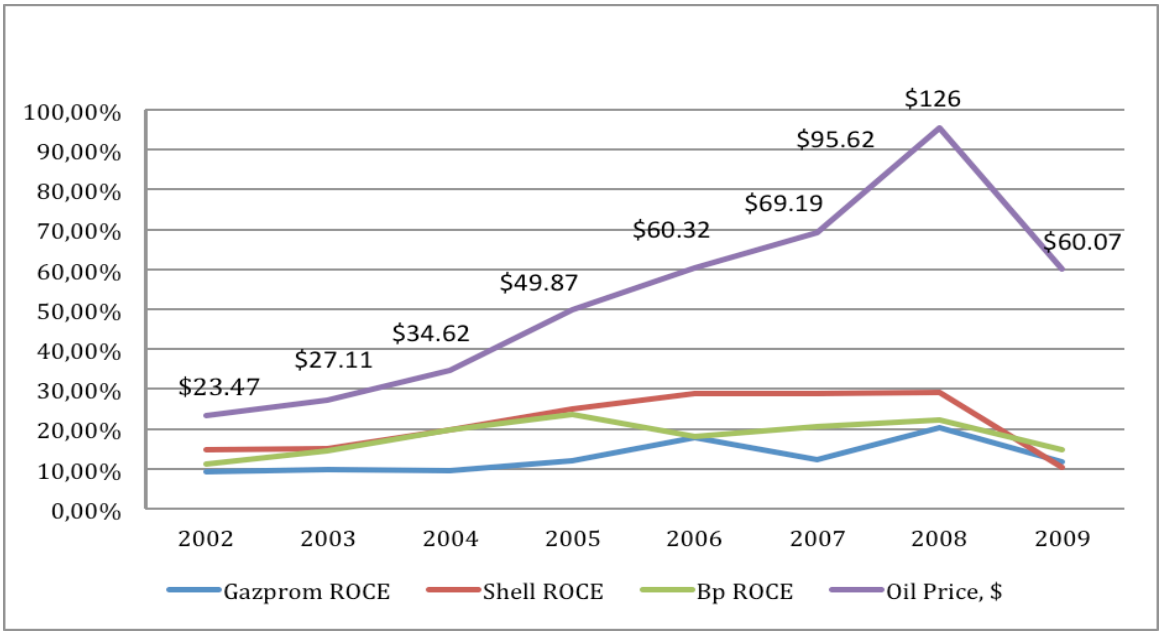


Figure 1. Oil Price Influence on ROCE

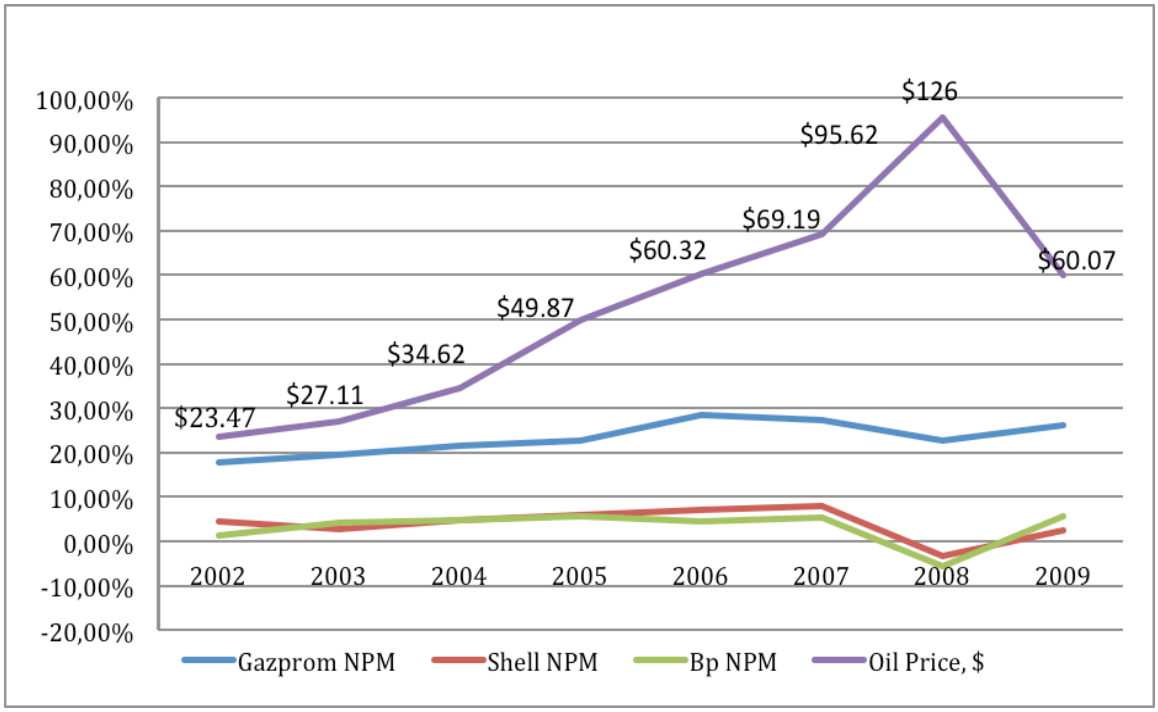


Figure 2. Oil Price Influence on NPM

According to the graphs and databases we may recognize that from 2002 to 2008 the oil prices are increased by 102.53 $ per barrel (the increasing in oil price before the Global Financial Crisis was more than 430%). ROCE indicator of Gazprom Oil Company was increased by 11.25% (from 9.06 in 2002 to 20.31% in 2009). ROCE of Shell was increased by 14.60% (from 2002 to 2008). And ROCE of British Petroleum was increased by 11.02%. In general ROCE indicators of all these three companies were changed by 100% growth before the Global Financial Crisis. From 2008 to 2009 we have observed fall in the oil prices because of slump in demand of oil and gas product. The Global Financial Crisis had a negative effect on ROCE indicator in oil industry. The prices decreased by 65.93 $/ barrel or by 100%. ROCE of Gazprom was decreased by 9%, ROCE of BP – by 8% and ROCE of Royal Dutch Shell – by 19%.
The changes in oil prices have an impact on companies' Net Profit Margin indicator. From 2002 to 2008 (before the Global Financial Crisis) NPM of Gazprom was increased by 5% (from 17.60% in 2002 to 22.60% in 2008), NPM of Shell is negative in 2008 and equal to -3.47%, but in 2009 NPM was increased by 5.89%. The same situation we may see from British Petroleum financial measures. NPM of BP was negative in 2008 (-5.49%) and in 2009 NPM was increased by more than 10%. However, the increasing in oil prices from 2002 – 2009 was the same effect on Net Profit Margin as on ROCE (the growth in prices reflected the growth in NPM).
We have identified that ROCE and NPM financial indicators have relationships with the level of oil prices. To define how these three measures are related we have used the regression analysis. From the Table 6 and 7 we can find the information about the regression equations.

Table 6. Regression indicators for ROCE – Oil Price relationship

	Gazprom	**Shell**	**BP**
k – the coefficient of the regression	0.00146	0.00199	0.00110
b – the parameter of the regression	0.051	0.112	0.123
R^2	74%	40%	37%

Table 7. Regression indicators for NPM – Oil Price relationship

	Gazprom	**Shell**	**BP**
k – the coefficient of the regression	0.00098	-0.00059	-0.00676
b – the parameter of the regression	0.181	0.071	0.073
R^2	37%	15%	27%

According our data we have six different regression equations:

For Gazprom Oil Company:

ROCE = 0.00146 * X (Price) + 0.051, where R^2 = 74%
NPM = 0.00098 * X (Price) + 0.181, where R^2 = 37%

For Royal Dutch Shell:

ROCE = 0.00199 * X (Price) + 0.112, where R^2 = 40%
NPM = -0.00059 * X (Price) + 0.071, where R^2 = 15%

For British Petroleum Oil Company:

ROCE = 0.00110 * X (Price) + 0.123, where R^2 = 37%
NPM = -0.00676 * X (Price) + 0.073, where R^2 = 27%

We can find from this analysis that the Global Financial Crisis and fall in oil prices has significant impact on Gazprom. The regression shows that about 74% of ROCE variation can be explained by price changes and 60% of NPM can be explained by other variables (by managing COGS, taxes, Liabilities and Interest).

Conclusion

Over the past 7 years, the price of oil has been increasing, volatile, and has recently attained record high levels (148 $ per barrel in August of 2008). The results of those price increases, which led to high gasoline prices, have been a weakening of the economic situation all over the world, and financial difficulty for many people in different countries who have also been buffeted by the housing slowdown, the credit crunch, rising unemployment, and other economic factors. The increasing in the oil prices from 2002 to 2009 was significant for oil industry companies. Their profit was increased by 100% (according the profitability ratio's analysis). Three different companies, Gazprom, Royal Dutch Shell, BP, earned a share of those profits. However, after the Global Financial Crisis and economy recession all over the world these companies have lost a lot in profit and in new capital investments. There are many factors which are affected on the companies' performance: in political, economical and social areas. We have chosen two three different indicators which are related between each others: ROCE, NPM and the oil prices for seven years (2002 – 2009).

In the paper was presented the methodology, which shows the relation between oil price levels and two profitability ratios: ROCE and NPM.

The regression analysis shows that Return on Capital Employed has a positive direct relationship with price (the higher price - the higher ROCE). Since for manufacturing companies it is more important to assess effectiveness of the production process the ROCE is more appropriate indicator and the constructed regression proves this fact.

NPM has two types of relationships with price:

1) a direct positive relationship (since Net Income in the nominator);
2) Inverse positive relationship (since Sales are in the denominator);

Therefore, NPM (1) assess more market strategy of the company than production effectiveness. (2) NPM included external factors like taxes and interests paid, that are not related to production process;

The equations received from the regression analysis can help investors to make the forecast about future Return on Capital Employed of the company in case of oil price changing and help them to make a right decision.

References

Antill. N. and R. Amotl (2000). "Valuing oil and gas companies". Cambridge, UK: Woodhead Publishing Ltd.

Antill, N. and R. Arnoti (2002). “Oil Company Crisis. Managing Structure, Profitability and Growth”. SP 15. Oxford Institute for Energy Studies. Oxford. UK.

Osmundsen P., Asche F., Misund B.and Mohn K. (2006), “Valuation of International Oil Companies”, The Energy Journal, Vol. 27, No. 2006 - 3. P.49 – 56, available at: http://www.entrepreneur.com/tradejournals/article/147748575.html

R. Pirog. (2008), “Oil Industry Financial Performance and the Windfall Profits Tax”, CRS Report for Congress, available at: http://assets.opencrs.com/rpts/RL34689_20080930.pdf

Bain & Co. (2009),”Davos Energy Brief”, January 2009, Bain and Company, Boston, available at: http://www.bain.be/bainweb/Publications/brief_detail.asp?id=26865&menu_url=briefs.asp

Ernst & Young. (2009), “Global Oil and Gas Transaction Review 2009”, London, available at: http://www.ey.com/Publication/vwLUAssets/Global_Oil_and_gas_transactions_review_-_2009/$FILE/Global_oil_and_gas_transactions_review_2009.pdf

IEA. (2009), “World Energy Outlook 2008”, IEA/OECD, Paris, available at: http://www.worldenergyoutlook.org/docs/weo2008/WEO2008_es_English.pdf

Global Trends in The Intangible Value

Tatiana Verzilina, Alcorn State University

Abstract

Due to the increasing importance of the intangible value in the current economy and theoretical gap in determination and valuation of intangibles on the national level, this paper focuses on the research of intangible value in global markets. It introduces the valuation technique for intangible value of the particular countries, analyses global trends in intangible value and assesses the correlation of intangibles in developed and emerging markets for the 10-year period.

Introduction

Actuality

In the current economy it is obvious that intangible component plays an important role. Based on the report of Brand Finance Inc., a consulting company in the field of identifying, valuing and managing intangible assets, the intangible value comprises of about 60% of the overall asset value of business. The increasing importance of the intangibles has established pathway for a variety of researches and studies in this field. So far, studies have shown intangible assets valuation on corporate basis. However, in the globalized framework the national and international levels of the intangible value became very important aspect for overall country's economy. Therefore, the topic of this paper is to investigate the global trends in the intangible assets value.

The literature review in the field of valuation of intangible assets on the corporate level reveals the following main scientific areas: determination and identification of the intangible assets, valuation approaches of intangibles and managerial and investor application concerning the intangible property. However, the national and international levels of intangible assets investigation are not broadly and extensively explored. For example, recently specialized consulting companies start issuing sectors' or countries' reports discovering the intangible value and its trends. However, the basic technique that is utilized in these consulting reports is investigation and assessment of the intangible value for major corporate players in the sector or in the country, and then making the reasonable conclusion about trends for the intangible value of the particular sector or country. Therefore, the scientific research did not reveal any other methods of identifying the intangible value on the national and international level. Moreover, the determination of the intangible value for the entire country will provide an opportunity to define and assess trends for intangible value for different countries and determine the correlation between countries' intangible value.

Purpose of the paper

Based on mentioned above reasons, the purpose of this paper is to develop a methodology for intangible value assessment in the entire economic region (developed, emerging and frontier markets) and apply it. This purpose includes the following intermediate steps:

1. Development and implementation of the methodology, that will measure intangible value growth for the particular economic region: developed, emerging and frontier markets;
2. Identification and analysis of the regional trends for intangible value growth rate;
3. Conduction of the basic descriptive analysis for the intangible value growth rate for the particular region;
4. Assessment of a correlation between intangible value growth rate of developed and emerging markets.

Thus, the novelty of this research is a developed methodology of intangible value assessment for the entire economic region.

Layout of the paper

This paper is organized into five different sections. The first section (introduction) states the actuality and purpose for the entire research; the second section (literature review) represent the basic studies in the field of the intangible assets on the corporate, national and international levels; in the third section (data and methodology) we identify the basic hypothesis, collected data, its resources and applied valuating and analysis methods; fourth section (results) represents the obtained results in the accordance with stated purpose and intermediate steps of this paper; finally, the fifth section (conclusion) summarized the obtained results and adjusts them to the stated purpose.

Literature review

The literature review for this paper will discover the following aspects: intangible value definition, valuation methods for the intangibles, national and international levels of intangible value.

The official definition of the intangible assets is given in the financial and accounting standards: IAS 38 “Intangible assets”, IAS 36 “Impairment” and IFRS 3 “Business Combination”. In these documents the intangible asset is an identifiable non-monetary asset without physical substance. The following are the requirements to recognize the intangible asset for financial purposes: identifiability (separable or based on contract), control (the company has a right to obtain future economic benefits), future economic benefits of intangible will flow to the company, and the cost of the assets can be measured reliably. Further, the standards determine that the internally generated goodwill – difference between the market value of an entity and the carry amount of its identifiable net assets. Since the company cannot control the internally generated goodwill it cannot value it and recognize in the financial statements. Since under the intangible value in this research (will be stated further) we will imply the internally

generated goodwill for the whole country's economy, the accounting and financial approach for defining intangible value is too narrow.

Further, the academic theory identifies the variety of intangible assets that do not accomplish the accounting and financial reporting requirements, but very important for the organization. For example, Gupta S. and Lehmann D. [2003, 2006] in the series of research papers proved the importance of customer valuation for the company. They indicated the evidence that in the current economy customers become a very valuable asset for the company, and the customer database can be recorded as an asset for the company[45]. Other intangible asset that is very valuable for the company is an internally generated goodwill. Catlett G.R. and Olsen N.O. [1968] determined the internally generated goodwill as a combination of various items such as superior management team, effective advertising, secret manufacturing process, top-flight training program for employees, favorable association with another company, strategic location, discovery of talents and resources and other features that bring additional market value to the company.

In addition, for the purpose on this term paper important to underline the following researches: Hermans R. and Kauranen I. [2005][46], Gerzema J. and Lebar E. [2009][47] and Ballester M. [2003][48]. In these papers authors interpret the internally generated goodwill (or its components) as an additional market value of the company and determine the value of internally generated goodwill for the particular economy sectors: biotechnology, high-tech, pharmaceutical, financial services etc. For example, Hermans R. and Kauranen I. [2005] examined the impact of the intellectual capital and its categories (human capital, structural capital and relational capital) to the anticipated future sales of small- and medium-sized companies within biotechnology industry[49]**.** Based on the econometric analyses results a company's intellectual capital explains two-thirds of the variance in the anticipated future sales of the sample companies. Thus, researches proved the importance of the internally generated goodwill for the companies' and sector's market performance and, consequently, its additional market value. Other research conducted by Gerzema J. and Lebar E. [2009] reveals the relationship between the brand value of the company (the component of the internally generated goodwill) and the company's overall market value. One of the main findings of this research is that brands contribute to the market value of companies by increasing not only current earnings, but the price-to-earnings (P/E) multiples that investors assign to current earnings. Thus, in this case the researches proved that the internally generated goodwill (ex. brand value) reflected a positive influence for generating

---

[45] Gupta, Sunil and Valaria Zeithaml (2006), "Customer Metrics and Their Impact on Financial Performance", Working Paper, Columbia University
Gupta, Sunil and Donald R. Lehmann (2003), "Customers as Assets", Journal of Intarective Marketing, 17 (1), February, 7-18
Blattberg, Robert, Gary Getz and Jacquelyn S. Thomas (2001), Customer Equity: Building and Managing Relationships as Valuable asset. Boston, MA. Harvard Business School Press.

[46] Hermans R. and Kauranen I. Value Creation Potential of Intellectual Capital in Biotechnology - Empirical Evidence from Finland . R&D Management, Vol. 35, No. 2, pp. 171-185, March 2005

[47] Gerzema J. , Lebar E. and Rivers A. Measuring the Contributions of Brand to Shareholder Value (and How to Maintain or Increase Them). Journal of Applied Corporate Finance, Vol. 21, No. 4, pp. 79-88, Fall 2009

[48] Ballester M., Garcia-Ayuso M. and Livnat J. The Economic Value of the R&D Intangible Asset. European Accounting Review, Vol. 12, No. 4, 2003

[49] The intellectual capital and its categories are included into the internally generated goodwill.

additional market value. In addition, the increasing importance of the internally generated goodwill caused the development of scientific suggestions to record and disclose the internally generated goodwill. In the research conducted by Bloom M. [2009][50] the author suggests to implement the Market Capitalization Statement (MCS) to reflect the market value for all intangibles and primarily for internally generated goodwill[51].

Further, the assumption of this paper states that the term "internally generated goodwill of the company" can be applied for the entire economy to determine the intangible value of the overall country's economy. Important to notice that only a few researches are devoted to the valuation of intangible value of the overall country. One of this researches is the Global Intangible Financial Tracker conducted by the Brand Finance., Inc. This research investigates the intangible value of various sectors and entire countries. Based on this research the top ten countries with high level of intangible value are: Switzerland (57%), USA (55%), France (50%), Mexico (49%), Netherlands (49%), China (49%) and others. Nevertheless, the academic search did not reveal many studies in the field of intangible value determination for the exact countries. Thus, this paper will contribute investigation of intangible value on the national level.

The other issue for the literature review is determination of intangible assets valuation methods. The analysis of basic economic concepts for intangible assets estimation reveals the following common approaches: market approach, income and cost approaches. For example, Reilly R.F. and Schweihs R. P. [1999][52] and Park Y. and Park G. [2004][53] studies determine market approach as valuing intangible assets based on the prices of other intangibles in the market. The income approach is defined as method of intangible assets valuation based on present worth of future income flow. The cost approach is identified as valuation process based on costs required to reproduce or replace the intangible property . One of the most extensive studies about the intangible assets valuation is Sveiby K.E. [2002][54] research. This study mentions a wide range of valuation methods, but finally classifies them into four groups:

a) Direct Intellectual Capital methods (DIC). The main approach of this method is evaluating the particular components of the intangible assets and then summarizing the obtained results.
b) Market Capitalization Methods (MCM). The basic technique is defining the difference between the market capitalization of the company and its book value.
c) Return on Assets methods (ROA). These methods are connected with ROA determination for the similar forms.
d) Scorecard Methods (SC). Each component of the intangible assets has its score and the composite index should be combined.

---

[50] Bloom M. Accounting For Goodwill. A Journal of Accounting, Finance and Business Studies (ABACUS), Vol. 45, No. 3, 2009.
[51] Based on author's estimation the internally generated goodwill provided more than 50% for the company's market value (Top 50 companies).
[52] Reilly, R.F. and Schweihs, R.P. (1999). Valuing Intangible Assets. McGraw-Hill, USA.
[53] Park, Y. and Park, G. (2004). A new method for technology valuation in monetary value: procedure and application. Technovation, 24: 387-394.
[54] Sveiby K.E. Methods for Measuring Intangible Assets.
King, A.M. and Henry, J.M. (1999). Valuing intangible assets through appraisal. Strategic Finance, 81:5.
Hoffman. R. and Smith, R. (2002). An introduction to valuing intellectual property. The RMA Journal, May, 84, 8:44

It is important to mention that the choice of valuation method depends on the nature of the particular intangible asset. In the framework of this paper the following question might be raised: "What valuation methods should be applied for assessment of the intangible value of the entire country?". For example, the previously mentioned study conducted by Brand Finance Inc. utilized the special approach for estimating the intangible value of the companies, global sectors and countries. In this study, the stock market value of the companies was broke down into Tangible and Intangible Assets disclosed on the company balance sheets and the additional value attributed to the market value. This residual market value was interpreted as an undisclosed intangible value of the company, sector and overall country[55]. Brand Finance Inc. based its research on the investigation more than 37,000 companies quoted on 53 national stock markets, representing 99% of total global market capitalization for the period 2000-2008 years.

The last part of the literature review discovers the national and international aspects of the intangible value, since the topic of this papers is estimation of the national level of intangibles.

For example, a variety of research papers and consulting reports investigate the brand value for the particular economic sectors and countries. Brand Finance Inc. regularly issues overviews of brand value level in the different economic sectors and countries: "Telecoms 500" - the annual report on the world's most valuable telecoms brands; "Brand Finance Banking 500" – the annual report on the world's most valuable brands; "China 100 brands" – the summary report on China's 100 most valuable brands etc[56]. There reports utilize income and market valuation methods for estimation the brand value of the sectors' and countries' business giants. For instance, in accordance with the latest study conducted by Brand Finance Inc. the intangible value is the highest in the following economic sectors: Cosmetics and Personal Care (97%), Software (95%), Aerospace (95%), Biotech (87%), Internet (85%), Healthcare (83%), Media (82%) and other sectors.

Methodology and Data

In the literature review section we determined that intangible value has several definition and practical applications. For the purpose of this research under the intangible value we will imply "the internally generated goodwill". The internally generated goodwill of the company is a difference between its market value and its book value. However, since the object of this research is the entire economic region, it is reasonable to assume that the intangible value of the economic region is the difference between a market value of the regional economy and its book value:

Intangible Value of the Economic Region =
Market Value of the Regional Economy – Book Value of the Regional Economy.

In the framework of the stated above definition of intangible value for the economic region it is important to determine the components of this concept: market and book value for the entire region. The market value of the regional economy is the combined indicator that

[55] The conclusion for sectors and entire countries were made based on the analysis of domestic companies.
[56] Brand Finance Inc. official site - http://www.brandfinance.com/knowledge_centre (Internet source)

reflects investors' expectations about the economic situation and future development in the particular region. This indicator can be a composite index, that reflects the financial performance of majority of corporate players in the regional economy and investors expectations. The main requirement for this composite index is its wide scale. It should cover not only country or several countries, but the overall region

Another component that is needed to determine the intangible value of the economic region is a book value of the overall regional economy. The question what indicator can be considered as a measure of the book value for the region is very controversial. In this research we assume that the Gross Domestic Product (GDP) of the particular region can reflect the book value of the economy. The Gross Domestic Product (GDP) is the market value of all final goods and services made within the borders of a country in a year. Even if GDP is a market value of the all produced goods and services in the country it does not reflect investors' expectations about the regional economic situation.

As a result, the methodology to determine the intangible value of the region is the following:

Intangible value of the region =
Market Performance Index of the regional economy – GDP of the regional economy

Further, it is important to determine data sources for this research. We assume that the index measure for the overall regional economy is a MSCI Market Performance Index constructed and provided by the MSCI company[57]. The MSCI Market Performance Index is a "float-adjusted market capitalization weighted index that is designed to measure the equity market performance". This MSCI Global Index is represented by three regional indexes: MSCI World Index, MSCI Emerging Markets Index and MSCI Frontier Markets Index. The MSCI World Index consisted of 24 developed market country indices[58]; the MSCI Emerging Markets Index is consisted of 21 emerging market country indices[59]; and the MSCI Frontier Markets Index consisted of 26 frontier market country indices[60]. However, these indexes reflect market performance in a relative value (points), but not in absolute value (US dollars). Therefore, application of these indexes to the stated methodology will not provide us an opportunity to estimate the intangible value in US dollar measure. In this case, it is more reasonable to find and apply a relative measure of the regional market performance - it's the growth rate.

The GDP component for intangible value assessment for each region is an arithmetic average of GDP in each country in the particular region. For example, the GDP of the overall

[57] "MSCI is a leading provider of investment decision support tools to investors globally, including asset managers, banks, hedge funds and pension funds" - www.mscibarra.com.
[58] **The MSCI World Index**: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom, and the United States.
[59] **The MSCI Emerging Markets Index**: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Morocco, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, and Turkey
[60] **The MSCI Frontier Markets Index**: Argentina, Bahrain, Bangladesh, Bulgaria, Croatia, Estonia, Jordan, Kenya, Kuwait, Lebanon, Lithuania, Kazakhstan, Mauritius, Nigeria, Oman, Pakistan, Qatar, Romania, Serbia, Slovenia, Sri Lanka, Tunisia, Trinidad & Tobago, Ukraine, United Arab Emirates, and Vietnam.

developed market is the arithmetic average of the GDP in 24 countries. In consistence with the relative value of the market performance the GDP for the region should be taken as a growth rate. The data source for the average GDP growth rate is derived from the International Monetary Fund (IMF) official database.

Based on the particular data sources provided above the formula for the intangible value assessment is the following:

Regional Intangible Value Growth (%) =
Regional Market Performance Growth (%) – GDP Growth Rate (%)

Therefore, this formula provides an opportunity to assess the growth of intangible value for the particular regional market: developed, emerging and frontier.

After the methodology and data are determined it is reasonable to describe the particular algorithm for this research. First, the annual growth rate of the intangible value for the developed and emerging markets will be determined for the period 1988-2009 years. Second, the descriptive statistics analysis will be conducted to determine trends of the intangible value growth for developed and emerging markets. Third, the correlation matrix of the intangible value growth for the developed and emerging markets will be presented to define the relation between intangible value in developed and emerging regions. Forth, overview for the intangible value growth in the frontier markets will be identified for the period of 2002-2009 years. Finally, this research will be completed by providing reasonable conclusions.

The additional information sources are: US Census Bureau (www.census.gov), Organization of Economic Cooperation and Development (www.oecd.org), International Monetary Fund (www.imf.org), United Nations Conference on Trade and Development: (www.unctad.org).

Results

Based on the described earlier algorithm we determine the intangible value growth for developed and emerging markets for the period 1988-2009 year. The graphical representation of the annual market growth, annual GDP growth and annual intangible value growth is given in the Figure 1, 2.

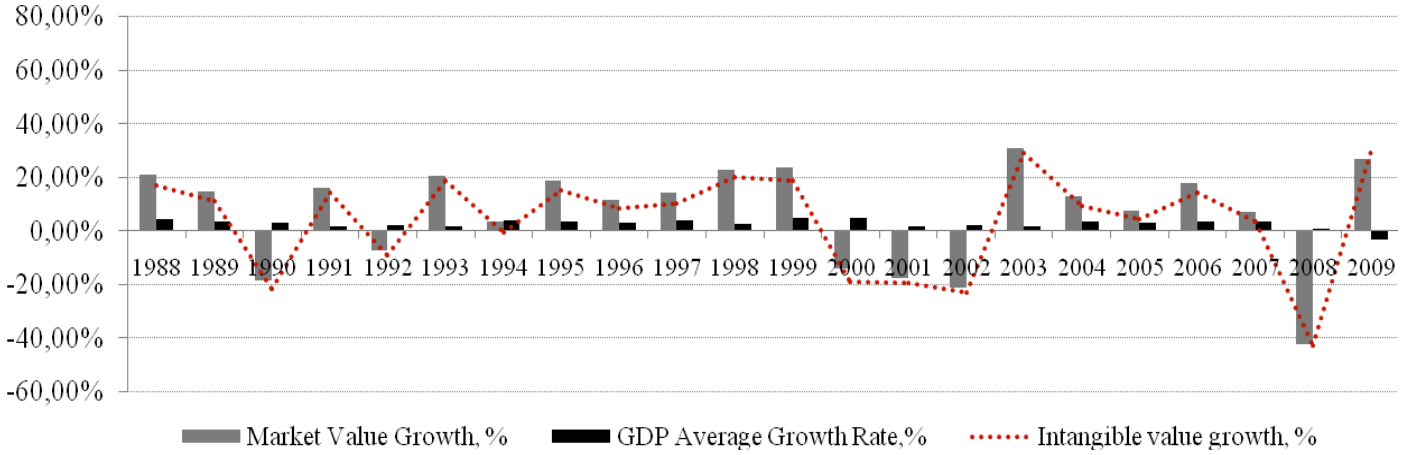


Figure 1. The overall trend for intangible value growth rate in the developed markets, 1988-2009

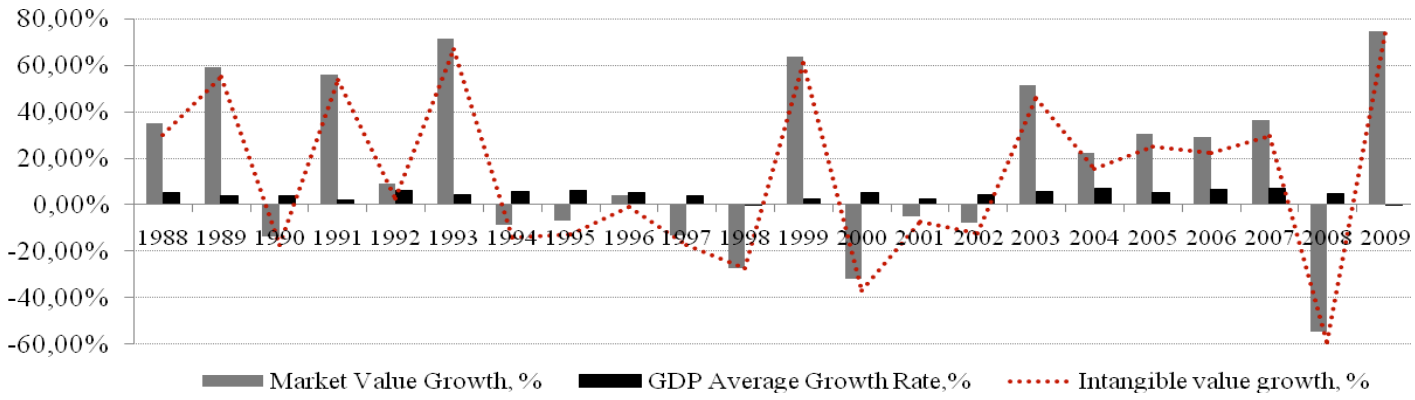


Figure 2. The overall trend for intangible value growth rate in the emerging markets,1988 -2009

From the first sight it is possible to underline the main trend. The growth of the intangible value repeats the changes on the regional market. For example, for developed markets the growth of the intangible value is negative in the years of the economic downturns: 1990 year, 2000-2002 years (the .com crisis) and 2008 year (the current financial crisis in the world). For the emerging markets the trend for the intangible value growth is almost the same, except the fact that in the period of mid-90s the wave of financial crisis occurred in many emerging countries (the Asian currency crisis, the Argentine peso crisis, the Mexico peso crises, etc.), what causes the loss in the intangible value growth as well. This trend can be explained by the fact that the growth of the intangible value in this research is determined as a difference of overall market growth in the region and GDP growth in this region. Thus, the intangible value growth can be determined as changes in investors' expectations about the overall regional market. This statement proves our methodological approach to the intangible value for the entire region as "an internally generated goodwill" of the market.

Further, from the presented figures it is obvious that the intangible value growth in the developed markets is considerably low comparable to the emerging markets. In the same time, a volatility of the intangible value growth is higher for the emerging markets and lower for the developed markets. This trend for intangible value growth is also prescribed by the market laws (risk-return relationship). However, it is important to determine exact measures for intangible value growth in the developed and emerging markets and compare them. For this purpose, the descriptive statistical analysis is conducted (Table 1).

Table 1. The descriptive statistical analysis of the intangible value growth for the developed and emerging markets in the period of 1988-2009 years

Discriptive Statistics	Intangible value growth in Developed Markets for the period 1988-2009 years	Intangible value growth in Emerging Markets for the period 1988-2009 years
Mean	4.04%	12.58%
Standard Error	4.03%	7.83%
Median	9.75%	9.22%

Standard Deviation	18.89%	36.71%
Kurtosis	0.24	-0.87
Skewness	-0.90	0.04
Range	72.92%	133.57%
Minimum	-42.75%	-59.26%
Maximum	30.17%	74.31%
Sum	88.99%	276.65%
Count	22	22

The presented data proves the mentioned above trend. The average annual growth rate of the intangible value is 4.0% for developed markets and 12.6% for the emerging markets for the last 22 years. In other words, the investors' expectations about the emerging markets taken as intangible value were growing 3 times faster than for the developed markets. However, the risk (deviation) that these "intangible" investors' expectation will go up or down is two times higher in the emerging markets (36.7%) than in developed markets (18.9%). Moreover, the distribution indicators such as skewness and kurtosis indicate that the growth rate of intangible value in developed countries has fewer negative values, but the growth rate of intangible value for emerging countries indicate opposite trend (more negative values). The graphical representation of the growth rate distribution of the intangible value is given on the Figure 3. Finally, range and minimum and maximum values of the intangible value growth rate proves the same fact: the volatility of the intangible value growth rate is higher for the emerging markets in comparison with the developed markets.

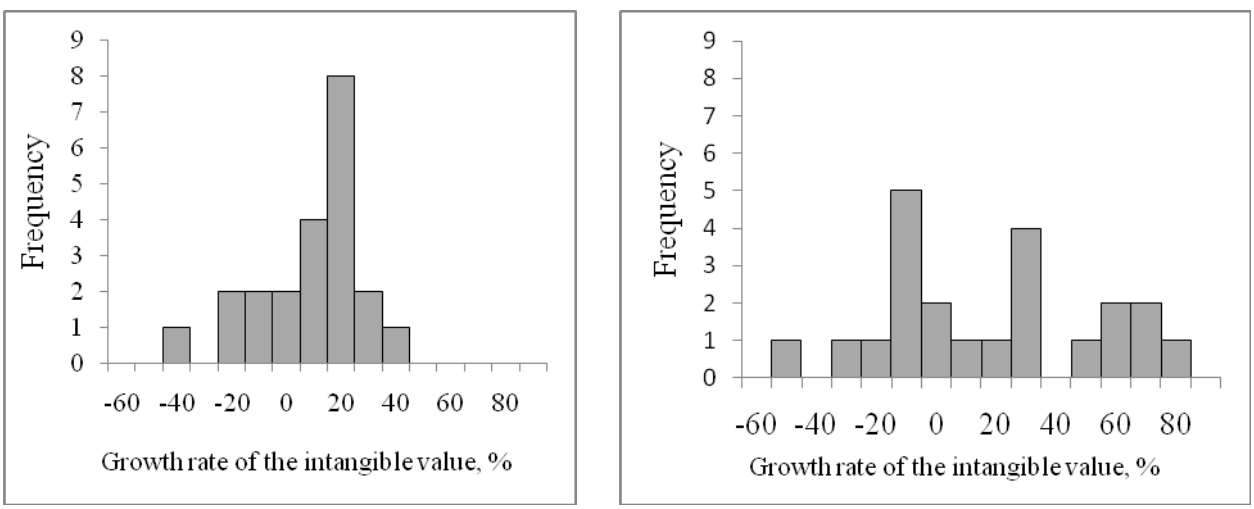


Figure 3. The distribution of the intangible value growth rate for developed and emerging markets

After providing basic and statistical description of trends for intangible value growth rate in developed and emerging markets it is reasonable to determine the correlation between these growth rates for both markets. The correlation matrix is presented in the Table 2.

Table 2. Correlation matrix of intangible value growth rate
for developed and emerging markets

1988-2009		
Indicators	Developed Markets	Emerging Markets
Developed Markets	1	
Emerging Markets	0.72	1
1988-1996		
	Developed Markets	Emerging Markets
Developed Markets	1	
Emerging Markets	0.63	1
1997-2009		
	Developed Markets	Emerging Markets
Developed Markets	1	
Emerging Markets	0.76	1

The stated data represents high positive correlation between intangible value growth rate for developed and emerging markets – 0.72. Moreover, it is interesting to underline that after 1996 year the correlation demonstrates "stronger" results (the coefficient of correlation is 0.76) in comparison with 1988-1996 years period (the coefficient of correlation is 0.63). This fact can be explained by globalization trends in the international economy.

For frontier markets it is possible to obtain overall Market Performance Index data only for the period starting from 2003 year. Therefore, further we will provide only overview for the intangible value growth for frontier markets. In the Figure 3 the overall trend for the intangible value growth is presented. This trend again follows the markets trends: downturn in 2006 and 2008 years.

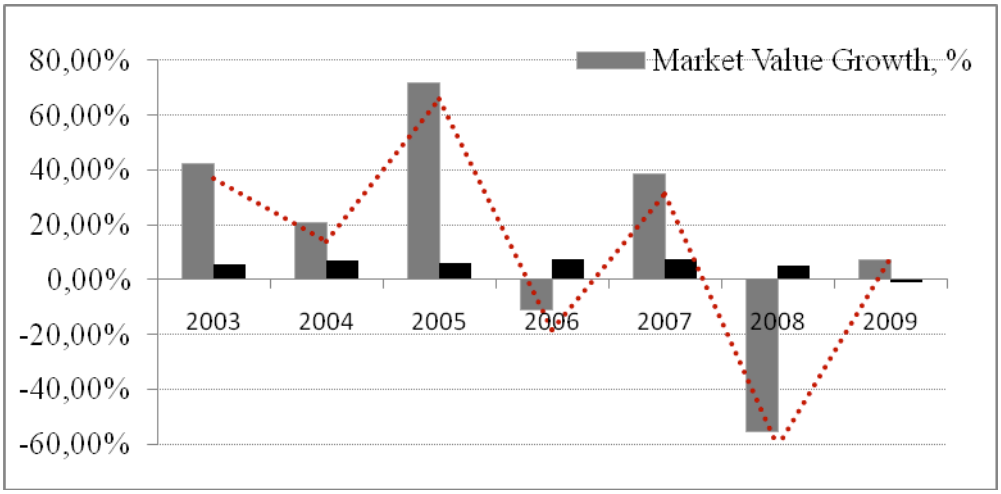


Figure 4. The descriptive statistical analysis of the intangible value growth
for the frontier markets in the period of 2003-2009 years.

The descriptive statistic analysis indicates average 10.9% annual growth rate of the intangible value for the 7-year period. However, in the same time the risk of the intangible value growth is very high – 40.99%. This high risk can be explained by the fact that the period of 2003-2007 years is the period of unstable global economy and current financial crisis.

Table 3. The descriptive statistical analysis of the intangible value growth in the frontier markets in the period of 2003-2009 years

Indicator	Measure
Mean	10.94%
Standard Error	15.49%
Median	14.05%
Standard Deviation	40.99%
Kurtosis	0.67
Skewness	-0.69
Range	126.45%
Minimum	-60.69%
Maximum	65.76%
Sum	76.61%
Count	7.00

Summarizing all stated above, it is reasonable to conclude that the estimated growth rate of the intangible value for the developed and emerging markets mirrors overall markets trends in these regions. This tendency can be explained by the developed and applied methodology for intangible assets assessment. Further, the basic statistical analysis of the intangible value growth accurately describes its trends in the developed and emerging markets: the average intangible value growth rate in emerging markets is three times higher and 2 times more volatile in comparison with the developed markets. Finally, the correlation matrix indicates high positive relation between the intangible value growth rates in the developed and emerging markets (0.72).

Conclusion

This research is devoted to the increasing importance of the intangible value in the global economy. In particularly, the purpose of this paper is to assess the level of intangible value in the different economic regions.

The preliminary literature review in the field of intangible value estimations reveals the informational gap for intangible value estimation on the national or international level. The official and research literature identify primarily the intangible value on the corporate level for financial or managerial purposes. Also numerous regulations and academic papers develop different valuation approaches for the intangible value assessment. However, only few agency reports identify the intangible value on the national and international level and reveal utilized methodology[61]. In these reports the intangible value of the overall national economy is assumed as the difference between market value of a majority of corporate players and its balance value. Based on this methodology the Brand Finance Consulting Company in 2009 year ranked the top

[61] An annual report by Brand Finance PLC: "Global Intangible Finance Tracker, 2009" (www.brandfinance.com).

countries with high intangible value: Switzerland (57%), USA (55%), France (50%), Mexico (49%), Netherlands (49%), China (49%), United Kingdom (48%) and others. However, this methodology is time-consuming and requires a large set of data. Moreover, this approach does not reveal the intangible value for the overall economic region (i.e., developed, emerging or frontier markets). Therefore, this paper states a goal to identify and assess the intangible value for the entire economic region (developed, emerging and frontier markets regions).

In the framework of this research the intangible value of the region is identified as a difference between the market value of the entire regional economy and economy's book value. In this case, the market value of the regional economy is presented by MSCI Performance Index, and a book value of the regional economy is GDP measure[62]. Since the MSCI Performance index is the relative measure, in this paper we investigated the intangible value growth rate for the particular economic region: The Intangible Value Growth Rate = The MSCI Performance Index Change – GDP Growth Rate.

The obtained results revealed that the intangible value growth rate reflects the overall regional market fluctuations. For example, the intangible value growth rate in the developed markets is negative in 1990 year, 2000-2002 years (the .com crisis) and 2008 year (the current financial crisis in the world). For the emerging markets the intangible value growth in also negative in the period of 1994-1998 years, it is the period of various national crises: the Asian currency crisis, the Argentine peso crisis, the Mexico peso crisis, Russia crisis and others. Further, the basic statistical analysis of the intangible value growth accurately describes its trends in the developed and emerging markets: the average intangible value growth rate in emerging markets is three times higher (12% for the EM vs. 4% for the DM) and 2 times more volatile (36% for the EM and 18% for the DM) in comparison with the developed markets. Finally, the correlation matrix indicates high positive relation between the intangible value growth rates in the developed and emerging markets (0.72).This correlation becomes more significant after 1996 year due to the globalization trends in the overall global economy.

Also, the intangible value growth for frontier markets is investigated for the period of 2003-2009 years. The descriptive statistic analysis indicates average 11% annual growth rate of the intangible value for the 7-year period. However, in the same time the risk of the intangible value growth is very high – 41%.

As a result, this research aims to contribute the field of intangible value assessment on the national and international levels. The general methodology for intangible value estimation is developed and applied for the developed, emerging and frontier markets data. Finally, the reasonable and meaningful data is obtained.

References

Ballester M., Garcia-Ayuso M. and Livnat J. (2003), "The Economic Value of the R&D Intangible Asset", *European Accounting Review*, Vol. 12, No. 4.

Blattberg R., Gary G. and Jacquelyn T. (2001), "Customer Equity: Building and Managing Relationships as Valuable asset". Boston, MA. *Harvard Business School Press.*

[62] www.mscibarra.com, www.imf.org

Bloom M. (2009), "Accounting For Goodwill", *Journal of Accounting, Finance and Business Studies* (ABACUS), Vol. 45, No. 3.

Gerzema J., Lebar E. and Rivers A. (2008) "Measuring the Contributions of Brand to Shareholder Value (and How to Maintain or Increase Them)", *Journal of Applied Corporate Finance*, Vol. 21, No. 4, p. 79-88.

Gupta S. , Valaria Z. (2006), "Customer Metrics and Their Impact on Financial Performance", *Working Paper, Columbia University.*

Gupta S., Lehmann D. (2003), "Customers as Assets", *Journal of Interactive Marketing*, 17 (1), February, p.7-18.

Hermans R., Kauranen I. (2008) "Value Creation Potential of Intellectual Capital in Biotechnology - Empirical Evidence from Finland", *R&D Management*, Vol. 35, No. 2, p. 171-185.

Hoffman. R. and Smith, R. (2002), "An introduction to valuing intellectual property", *The RMA Journal*, May, 84, 8:44

King A.M., Henry, J.M. (1999), "Valuing intangible assets through appraisal", *Strategic Finance*, Vol. 81:5.

Park Y., Park G. (2004), "A new method for technology valuation in monetary value: procedure and application", *Technovation*, Vol. 24, p. 387-394.

Reilly R.F., Schweihs R.P. (1999), Valuing Intangible Assets. McGraw-Hill, USA.

Sveiby K.E. Methods for Measuring Intangible Assets, *www.sveiby.com/articles/IntangibleMethods.htm*

Internet sources:

Brand Finance Plc. (brand valuation consultancy): www.brandfinance.com

International Monetary Fund (International Financial Statistics): www.imf.org

Organization of Economic Cooperation and Development: www.oecd.org

United Nations Conference on Trade and Development: www.unctad.org

US Census Bureau: www.census.gov

Comprehensive Analysis of FDI Impact on the Russian Economy

Svetlana Verzilina, Alcorn State University
Anastasia Khatnyanskaya, Alcorn State University

Abstract

In this paper we explore the relation between Foreign Direct Investments (FDI) in Russia and its' economic growth. To achieve this purpose we (1) defined what the economic growth is and (2) estimated how FDI affect economic growth of the country. Then, we (3) compared global and Russian trends in FDI to define which particular economic indicators are affected by FDI. Finally, we (4) implemented obtaining result to estimate the degree FDI actually influence Russians' economy.

Keywords: Foreign Direct Investments (FDI), Russian economy, International Finance, GDP, Productivity Index, Export, Import, Level of Unemployment, Income per Capita.

Introduction

All countries are, to a higher or lower degree, involved in the integration process. One of the obvious facts of this process is rapid growth of Foreign Direct Investments (FDI). During the last twenty years the global FDI inflow increased from $329 billion in 1980 up to $1,205 billion in 2010. FDI balance – difference between FDI outflow and FDI inflow – increased from $123 billion to $270 billion for the same period. Moreover, the global inflows are expected to rise further to $1.3–1.5 trillion in 2011, and head towards $1.6–2 trillion in 2012.

For some countries FDI became even more important than trade of goods and services on the foreign markets. That takes place because FDI positively affect productivity level, increase level of management, and stimulate technologies' creation. FDI do not just provide money to receive particular good or service, these investments are accumulated and stimulate economic growth of receiving country.

In 2009 developing and transition economies absorbed almost 50% of worldwide FDI inflows. For today the biggest six receivers of FDI are China, India, United States, Russia, United Kingdom and France. With respect to other emerging markets Russia has attracted a modest amount of FDI at the level of $75 billion in 2008 and $37 billion in 2009 because of recession. However, according to Alexei Kudrin (Minister of Finance, Russia), Russia could see a pre-economic crisis level of FDI of $60 billion to $70 billion by 2013[63].

FDI still remains far too low for a country of Russia's size and its' potential. The country enjoys indeed a huge domestic market, an impressive natural resources endowments and the

[63] Nikolsky, Alexei (2010), "Foreign direct investment in Russia 'to hit $60-70 bln by 2013", RIA Novosti (http://en.rian.ru/russia/20100203/157758923.html) (Retrieved 04.04.2011)

presence of a skilled and relatively cheap labor force. Russia briefly became the largest consumer market in the summer of 2008. Even in the recession, when demand fell dramatically all over the world, Russian market remained extremely profitable.

However a broadly recognized refrain of foreign investors is the institutional environment, which has been characterized by the fragility of property rights, the arbitrariness of fiscal policy the unpredictability of the trade policies and high business costs. Renaissance Capital points out that the ease of doing business in Russia remains low while the cost of doing business remains high, while the country continues to score badly on the World Bank's "ease of doing business" ranking and Transparency International's corruption index[64].

Comparing all pros and cons foreign investors continue to come, because if they can make their business work the margins remain very high. They realize market potential and interested in future gain. As a result, we can assume that the FDI into Russia will have a constant growth in the close future.

The purpose of this paper is to explore the relation between Foreign Direct Investments (FDI) in Russia and its' economic growth. To achieve this purpose we will define which particular economic indicators are mostly affected by FDI. Find the relation between each of this factor and number of FDI. Summarize FDI influence on total economic growth of the country.

Literature Review

Business society is interested in the questions of worldwide economic growth and development of particular country. Literature review demonstrates the existing scientific studies.

Gregory Brock in his article "Growth and Foreign Direct Investment in American States 1997 – 2001" estimates the relation between FDI and economical growth of states. He analyzes FDI in the US using a stochastic production function with FDI as an input. FDI is found to have a low but significant impact on regional economic growth.

Miao Wang and M. C. Sunny Wong in the article "Foreign Direct Investment and Economic Growth: The Growth Accounting Perspective" describe a positive relationship between FDI and economic growth under two economic conditions has been estimated: a sufficient level of human capital and well-developed financial markets. However, these two conditions can be fundamentally different catalysts for FDI to promote economic growth in the perspective of growth accounting. Using data from 69 countries over 1970–1989, authors found that FDI promotes productivity growth only when the host country reaches a threshold level of human capital. Moreover they proved that FDI promotes capital growth only when a certain level of financial development is achieved.

Tullio Buccellato and Francesco Santangelo in their paper "Foreign Direct Investments Distribution in the Russian Federation: Do Spatial Effects Matter?" explore the hypothesis of spatial effects in the distribution of FDI across Russian regions. They implement a model, which

[64] Aris, Ben (2010), "Russia 2010: Slow build over first half to boom in 2011", (http://www.bne.eu/story1919/RUSSIA_2010_Slow_build_over_first_half_to_boom_in_2011) (Retrieved 04.04.2011)

describes FDI inflows as resulting from an agglomeration effect (the level of FDI in a given region depends positively on the level of FDI received by the regions in its neighborhood) and remoteness effect (the distance of each Russian region from the most important outflows countries). Considering a panel of 68 Russian regions over the period 2000-2004 they found the effects, which play a significant role in determining FDI inflows towards Russia.

Konstantin D. Kashin in his article "Welfare Impact of Foreign Direct Investment in Russia: Do the Poor Benefit?" summarizes global and Russian trends of FDI. The author examines the conceptual mechanisms through which FDI could influence companies' performance in Russia and tests the effect of foreign direct investment inflows on the poverty rate using panel data across 71 Russian regions for 1998-2008. The main finding of the paper is that foreign direct investment reduces poverty in Russia. Notably, the results suggest that the net direct effect of FDI on poverty is still significant when controlling for potential growth -mediated channels.

Gabor Hunya, Mario Holzner and Julia Worz in the paper "How to Assess the Impact of FDI on an Economy" show how statistical resources can be used to support economic policy and government decision-making. The policy area under discussion is the impact of FDI on a host economy. They summarize FDI statistics provided by national banks, foreign investment enterprises and companies. Than base on the quantities analysis they explain the impact of FDI on economic growth, GDP, exports, productivity and employment. They include sources from two main areas of FDI research: international economics and international business. These sources refer to the impact of FDI on economic growth, the absorption capacity of host countries, and export-oriented vs. local market-oriented FDI. Finally, they examine the current stage of empirical research concerning FDI's impact on a host economy.

Mello, De, L. R. in the paper "Foreign direct investment-led growth: Evidence from time series and panel data" combines the official data of FDI for the past 30 years and presents the result about constant and stable growth of this economic indicator. Moreover, he presents percentage growth and growth tendency for different countries and regions and ties these changes with social, economic and political events. Finally, he makes a conclusion about significant FDI growth in particular regions like BRIC countries.

Levine, R. and D. Renelt in the article "A Sensitivity Analysis of Cross-Country Growth Regressions" demonstrate two important relations. The first is the relation between FDI inflow and internal country's growth. To prove this relation authors implement such statistical methods like regression and correlation analysis. The second relation is a Cross-Country Growth". Authors demonstrate that FDI in a country have a positive effect on country's partners.

Barro, R. and X. Sala-i-Martin in the paper "Economic Growth" underline the main characteristics of the economic growth. In other words they present a base set of economic indicators of economic growth. This set includes such indicators like GDP, Productivity Index, Export, Import, Level of Unemployment and Income per Capita.

Discussed reviews help us to choose the research question and six factors that should be estimated: GDP, Productivity Index, Export, Import, Level of Unemployment and Income per Capita.

Hypothesis

The purpose of this paper is to identify the impact of FDI on the Russian Economy. To achieve our goal, we select six parameters of economic growth for our research and underline next hypotheses.

Hypothesis 1: The inward FDI have positive and significant influence on the country's GDP. GDP is a combined result of all business activities. That is why GDP is the most important characteristic of economic growth and probably should have the most significant relation with FDI.

Hypothesis 2: The inward FDI have positive influence on Productivity Index. This index is a combined figure of companies' performance and defines two types of relation. The first one is a relation between amounts of FDI in particular company and its performance. The second dependence is between FDI in manufacturing and total improving of companies' performance.

Hypothesis 3: The inward FDI have positive influence on Export. The FDI increase the productivity level in the country. Thus, the number of goods, produced on the country's territory and sold to foreign partners is growing.

Hypothesis 4: The inward FDI have positive influence on Import. The import can grow in a result of two factors: (1) production growth, (2) GDP. Growing production demands more raw materials and supplements, which imported in the country. Growing GDP (Hypothesis 1) allow to import more for country needs.

Hypothesis 5: The inward FDI help to reduce the Level of Unemployment. Inward FDI create new work place. In most cases these vacancies is for local work force. Thus, as many opening will be created, as less the unemployment level will be.

Hypothesis 6: The inward FDI proportionally increase Income per Capita.

Data and Methodology

Firstly, the object for this study is Russian Federation.

Secondly, the official data about Foreign Direct Investment was retrieved from the World Bank web site (http://data.worldbank.org) and Russian government site of official statistics (http://www.gks.ru). The data for six chosen parameters GDP, Productivity Index, Export, Import, Level of Unemployment and Income per Capita was obtained from the Russian government site of official statistics also. All data was collected for eighteen age period from 1992 to 2009 years.

To estimate dependence between the Foreign Direct Investments and countries' economic growth, we evaluated a relation among FDI in the country and each of six parameters. For this purposes regression analysis was done.

The regression analysis helps us to understand how the typical value of GDP, Productivity Index, Export, Import, Level of Unemployment and Income per Capita (dependent

variable) changes when the Foreign Direct Investment is varied (independent variable), while the other independent variables are held fixed. Using the regression analysis we estimated (Alpha) and (Beta).

$$Y = k\,X + b,$$

where Y – GDP; Productivity Index; Export; Import; Level of Unemployment; Income per Capita of the country in the particular year;
X – amount of FDI inward in the country for particular year;
k – the coefficient of the regression;
b – the parameter of the regression.

Finally, based on the results of the regression analysis and the FDI tendency, we will implement obtaining results and show the particular positive results, which FDI influence have on each factor: GDP, Productivity Index, Export, Import, Level of Unemployment and Income per Capita.

Results

First relation is influence of FDI on the countries' GDP. We analyzed the GDP and FDI data for the past 18 years (1992 – 2009). Then we made a regression analysis to understand the degree of relation between changes in GDP and amount of FDI.

Table 1. The tendency of GDP and FDI inward changes, 1992 – 2009.

Year	GDP, millions, $	FDI, millions $
1992	460,205	1,161
1993	435,060	1,211
1994	395,087	0.690
1995	395,528	2,065
1996	391,721	2,579
1997	404,927	4,865
1998	270,953	2,761
1999	195,906	3,309
2000	259,708	2,714
2001	306,603	2,748
2002	345,470	3,461
2003	431,487	7,958
2004	591,742	15,444
2005	764,531	12,886
2006	989,426	29,701
2007	1,300,120	55,073
2008	1,667,600	75,002
2009	1,230,730	37,134

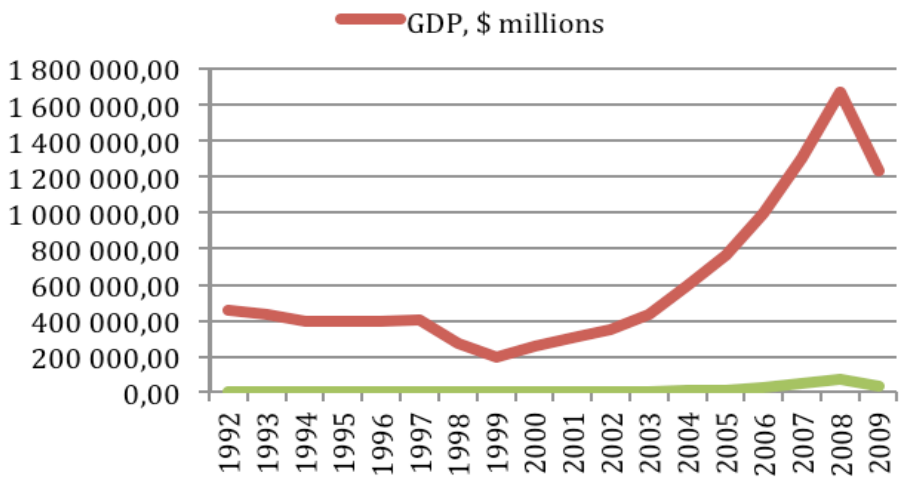


Figure 1. The tendency of FDI inward in the Russian and GDP, 1992 – 2009.

$$GDP = 19{,}04 * FDI + 326230 \quad (1)$$

Based on the results of regression analysis (1), we can see that FDI accumulate GDP at 19 times. That means, each $1 invested in the country will add more than $19 to the GDP.

Second relation is influence of FDI on the countries' Export. We analyzed the amount of Export and FDI data for the past 18 years (1992 – 2009). Then we made a regression analysis to understand the degree of relation between changes in Export and amount of FDI.

Table 2. The tendency of Export and FDI inward changes, 1992 – 2009.

Year	GDP, millions $	FDI, millions $
1992	286811	1161
1993	166213	1211
1994	109670	690
1995	115848	2065
1996	102135	2579
1997	100138	4865
1998	84596	2761
1999	84671	3309
2000	114429	2714
2001	113116	2748
2002	121649	3461
2003	151698	7958
2004	203415	15444
2005	268952	12886
2006	333908	29701
2007	392595	55073
2008	516761	75,002
2009	373031	37,134

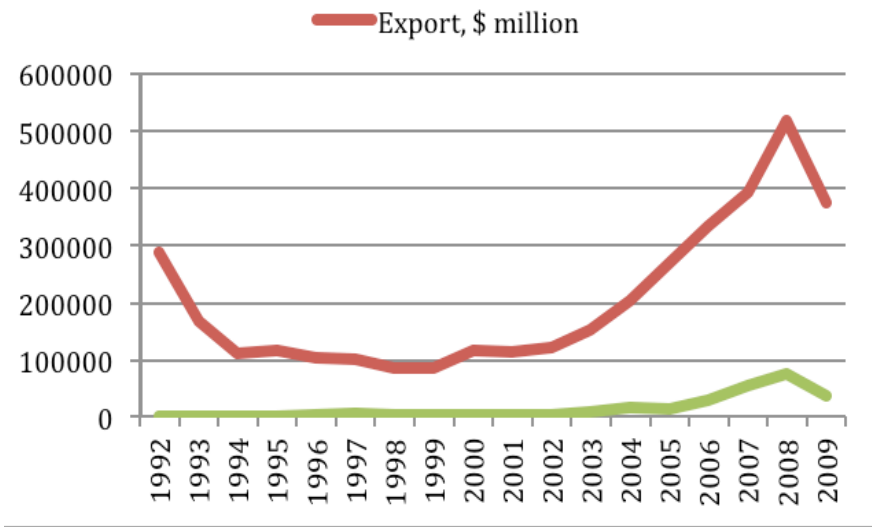


Figure 2. The tendency of FDI inward in the Russian and Export, 1992 – 2009.

$$GDP = 5{,}5 * FDI + 122371 \quad (2)$$

Based on the regression results (2), we can see that FDI accumulates Export at more than 5 times. That means, each $1 invested in the country will add more than $5 in Export.

Third relation is influence of FDI on the countries' Import. We analyzed the amount of Import and FDI data for the past 16 years (1994 – 2009). Then we will make a regression analysis to understand the degree of relation between changes in Import and amount of FDI.

Table 3. The tendency of Import and FDI inward changes, 1994 – 2009.

Year	GDP, millions $	FDI, millions $
1994	50 520	690
1995	60 945	2065
1996	68 830	2579
1997	73 615	4865
1998	58 015	2761
1999	39 537	3309
2000	44 659	2714
2001	53 764	2748
2002	60 966	3461
2003	76 070	7958
2004	97 382	15444
2005	125 434	12886
2006	164 281	29701
2007	223 486	55073
2008	291 861	75002
2009	191 868	37134

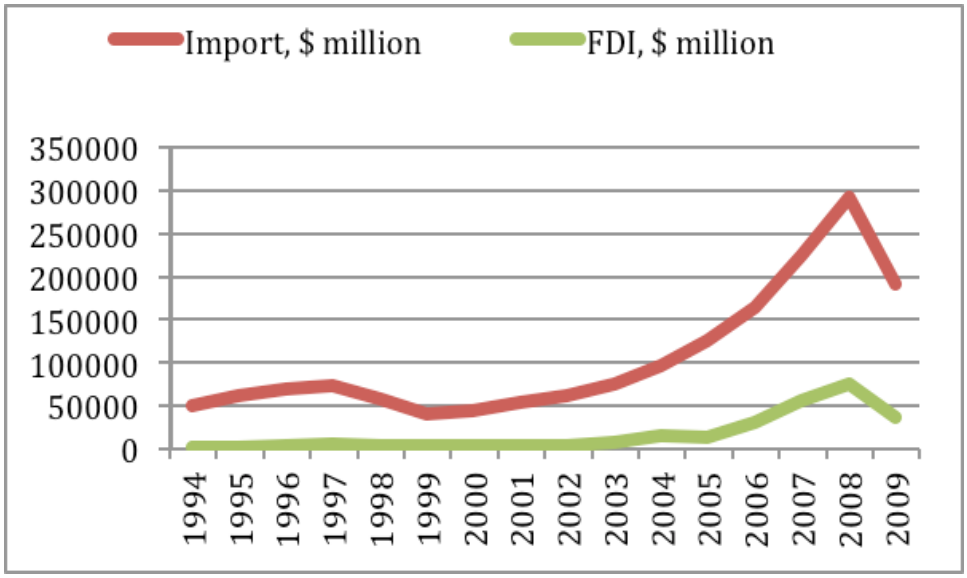


Figure 3. The tendency of FDI inward in the Russian and Import, 1992 – 2009.

$$GDP = 3{,}3 * FDI + 51405 \quad (3)$$

Based on the regression results (3), we can see that FDI accumulates Import at more than 3 times. That means, each $1 invested in the country will add more than $3 in Import.

Forth relation is influence of FDI on the countries' Productivity Index. We analyzed the Productivity Index and FDI data for the past 8 years (2002 – 2009). Then we made a regression analysis to understand the degree of relation between changes in Productivity Index and amount of FDI.

Table 4. The tendency of Productivity Index and FDI inward changes, 2002–2009.

Year	**GDP, millions $**	**FDI, millions $**
2002	632 456	3461
2003	775 770	7958
2004	983 021	15444
2005	1 234 020	12886
2006	1 540 796	29701
2007	1 925 071	55073
2008	2 386 984	75002
2009	2 304 352	37134

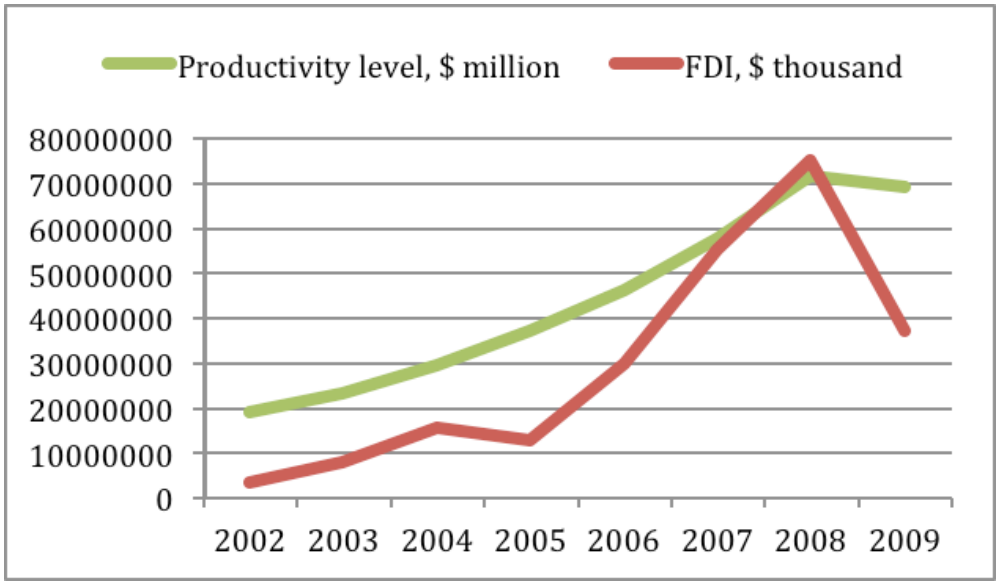


Figure 4. The tendency of FDI inward in the Russian and Productivity Index, 1992 – 2009.

$$GDP = 24{,}4 * FDI + 751311 \quad (4)$$

Based on the regression results, we can see that FDI accumulates Productivity Index at more than 24 times. That means, each $1 invested in the country will add more than $24 in Import.

Fifth relation is influence of FDI on the countries' Income per Capita. We analyzed amount of Income per Capita and FDI data for the past 12 years (1998 – 2009). Then we made a regression analysis to understand the degree of relation between changes in Productivity Index and amount of FDI.

Table 5. The tendency of Income per Capita and FDI inward changes, 1998–2009.

Year	GDP, millions $	FDI, millions $
1998	12122	2761
1999	19907	3309
2000	27373	2714
2001	36744	2748
2002	47366	3461
2003	62045	7958
2004	76924	15444
2005	97343	12886
2006	122352	29701
2007	151232	55073
2008	179314	75002
2009	202638	37134

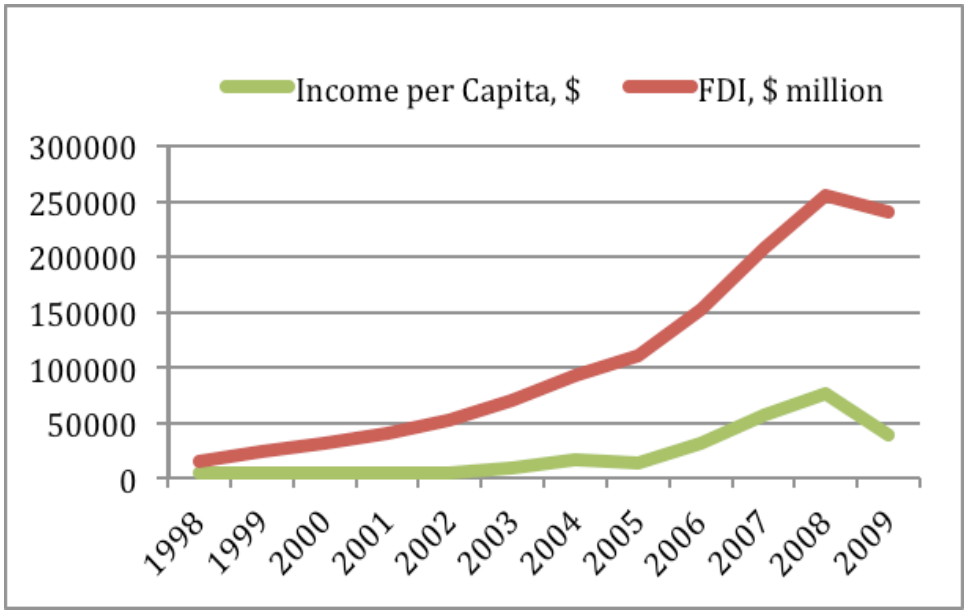


Figure 5. The tendency of FDI inward in the Russian and Income per Capita, 1992 – 2009.

$$GDP = 2{,}4 * FDI + 37369 \quad (5)$$

Based on the regression analysis (5), we see that FDI accumulates Income per Capita at more than 2 times. That means, each $1 invested in the country will add more than $2 in Import.

Sixth relation is influence of FDI on the countries' Unemployment rate. We analyzed amount of Unemployment and FDI data for the past 8 years (2002 – 2009). Then we made a regression analysis to understand the degree of relation between changes in Productivity Index and amount of FDI.

Table 6. The tendency of Unemployment and FDI inward changes, 1998–2009.

Year	GDP, millions $	FDI, millions $
1998	8 533 534	2761
1999	8 655 373	3309
2000	6 322 630	2714
2001	5 783 232	2748
2002	5 180 311	3461
2003	5 410 291	7958
2004	5 179 759	15444
2005	4 808 998	12886
2006	4 836 531	29701
2007	4 149 173	55073
2008	4 245 361	75002
2009	8 533 534	37134

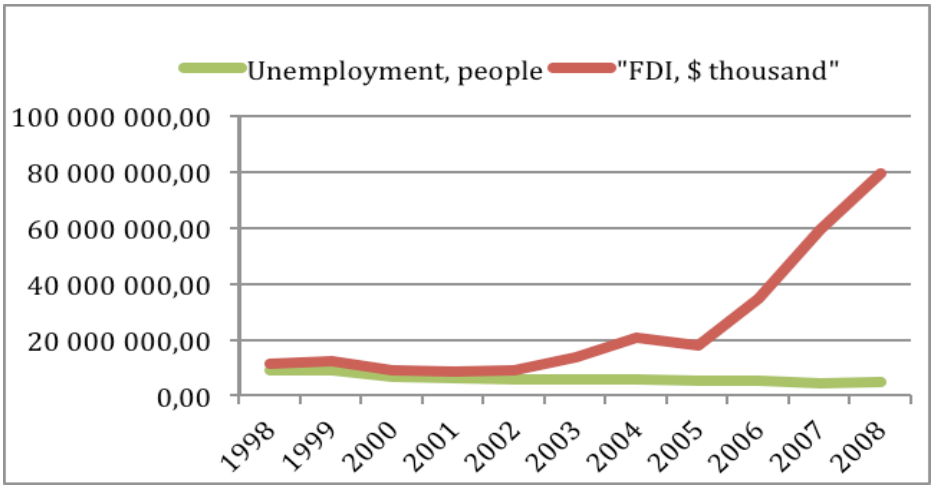


Figure 6. The tendency of FDI inward in the Russian and Income per Capita, 1992 – 2009.

$$GDP = -38{,}6 * FDI + 6478298 \quad (6)$$

Based on the regression results, we can see that FDI decrease Unemployment rate at more than 38 times. That means, each million invested in the country will create 38 vacancies.

Conclusion

To make result practical and easy for understanding, we will present the influence of $1 million Foreign Direct Investments (FDI) in Russia on each on six chosen parameters. Obtained results presented in the Table 7 below. Thus, the regression analysis shows that FDI have a positive effect on the total economic growth of the country.

In this case, Russia should seek ways to increase its share of FDI at least for three reasons. First of all, FDI have significant effect on such economic factors as GDP growth, corporate output, export and import by leading to innovation in production and management processes. Russia will need to turn to FDI to plug the gap in economic growth after the recession. Secondly, FDI assist the social stabilization in the country by reducing the unemployment rate and increasing personal income. Finally, increased FDI is an indicator of openness and integration of the country in the international economic environment.

Table 7. Influence of $1 million Foreign Direct Investments in Russia on each on six chosen parameters

FDI Influence		**R^2**	**Significance of equation**
Brings **$19.03 million** to the **GDP**	*Every $1,000,000 of FDI in Russia*	93%	0.000
Increase the **Export** on **$5.51 million**		82%	0.000
Increase the **Import** on **$3.32 million**		97%	0.000
Adds **$24.39 million** to the **Corporate Sales**		81%	0.002
Increase the **Personal Income** on **8 cents**		77%	0.002
Provides **39** additional **Vacancies**		38%	0.040

References

Ahrend R., (2000) "Foreign Direct Investment into Russia: Pain Without Gain?", in Russian Economic Trends.

Aizenman J., (2003) "Volatility, employment and the patterns of FDI in emerging markets", Journal of Development Economics, vol. 72, p. 585-601.

Anselin L., (1988), "Spatial Econometrics: Methods and Models", Dordrecht, Kluwer Academic Publishers.

Anselin L., Bera A., (1998) "Spatial Dependence in Linear Regression Models with an application to Spatial

Anselin L., Griffith D., (1988), "Do spatial effects really matter in regression analysis?", Papers in Regional Science, vol. 65, p. 11-34.

Blonigen B. A., Davies R. B., Waddell G. R., Naughton H. T., (2007) "FDI in space: Spatial autoregressive relationships in foreign direct investment", European Economic Review, vol. 51, p. 1303-1325.

Bradshaw M., (2002) "The Changing Geography of Foreign Investment in the Russian Federation", Russian Economic Trends, vol. 11, pp. 33-41.

Bradshaw M., Swain A., (2003) "Foreign Investment and Regional Development", in Bradshaw M., Stenning A., (eds.), "East Central Europe and the Former Soviet Union: The Post-Socialist States", Harlow, Pearson.

Broadman H. G., Recanatini F., (2001) "Where Does All the Foreign Direct Investment Go In Russia?", World Bank Policy Research Working Paper, World Bank, Washington DC.

Brock G., (1998) "Foreign Direct Investment in Russia's Regions 1993-95. Why So Little and Where Has it Gone?" Economics of Transition, vol. 4, p. 349-360.

Fabry N., Zeghni S. (2002) "Foreign direct investment in Russia: how the investment climate matters", Communist and Post-Communist Studies, vol. 35, p. 289-303.

Hosseini H., (2005) "An economic theory of FDI: A behavioural economics and historical approach", The Journal of Socio-Economics, vol. 34, p. 528-541.

Ledyaeva S., Linden M., (2006a) "Foreign direct investment and economic growth: Empirical evidence from Russian regions", BOFIT Discussion Papers, no. 17.

Markusen J. R., Venables A. J., (1999). "Foreign direct investment as a catalyst for industrial

Development", European Economic Review, vol. 43, p. 335-356.

Tax Burden Differentiation in the United States

Svetlana Verzilina, Alcorn State University
Tatiana Verzilina, Alcorn State University

Abstract

Tax burden has a significant influence on the overall economic development. The tax burden should harmonize the contradictory relationship between (1) an administrators' desire to increase the state tax burden in order to obtain high tax revenues and (2) a taxpayers' intention to pay lower taxes. The purpose of this paper is to identify the most appropriate and effective tax policy among the US states from the standpoint of both sides (state and local governments and taxpayers). The subject of this research is a current tax burden in the US. To achieve our goal we selected a representative group of U.S. states, based on the highest level of state tax collections. Then we (1) analyzed a historic trend of the tax growth rates in these states in comparison with average US level, (2) estimated tax burden in each state and conducted its descriptive analysis and, finally, (3) analyzed the tax revenue structure in every of representative states. Based on these analysis states with the most favorable and the most unfavorable tax policies have been determined.

Introduction

Taxes are a foundation for the system of public revenues. The largest amount of public revenues is collected by applying tax and similar forms of collection for the needs of public consumption. Thus, from the economic standpoint, the importance of the tax burden is obvious and cannot be challenged. The ***tax burden*** indicates an adjustment of the taxpayers' income through taxes, and degree to which the state budget gathers revenues through a tax levy. Viewed in this context, the tax burden should harmonize the contradictory relationship between the desire to increase the state tax burden in order to obtain high income needed to carry out its functions and duties of taxpayers to pay high taxes.

The level of tax burden can generate both economic effects and social nature. An important aspect of tax burden is reflected in the revenue remaining after tax payments to the taxpayers, since it influences their ability to satisfy further needs. Thus, an increased tax burden is reflected in the reduction of aggregate demand for private property and vice versa. Therefore, the purpose of the US and local governments is to find and apply the most appropriate and effective tax burden through modification of the current tax policies.

The USA is the most colorful example, where each part of the country (each state) has a lot of differences of domestic product, social factors, financial opportunities, production specialization, perspective trends and taxation requirements. Moreover, each state has a two-level of the tax burden: (1) federal and (2) state and local. The federal government has the main authority for each state – income tax. The total federal tax burden of state depends on state's population and residents' income level. Meanwhile, state and local tax burdens directly depends

on state policy and preferences. As a result, some states bring greater tax burden comparing to others.

This paper will be specified particularly on the state policy, because in most cases state policy causes a significant difference of tax burden among states. The determination of the optimal state tax policy is important, because it influence taxpayers' standard of living, needs' satisfaction and state tax revenue. Thus, the purpose of this paper is to identify the most appropriate and effective tax policy among the US states. The subject of this research is a current tax burden in the US. To obtain desirable results, in the first part (Part #1) of the paper we have chosen the representative group of states for further analyses based on the level of overall tax collection in the economic region. In the second part (Part #2) we have analyzed a tax growth rates in the representative states in comparison with average US level. In the third part of the paper (Part #3) we determined the level of tax burden in chosen states and conducted its descriptive analysis. In addition, the tax revenue structure was identified and analyzed for each of representative states, similar tax structures were revealed. Finally, the we made a conclusion about the most favorable and effective and the most unfavorable and ineffective state and local tax policies.

Representative Group of States

Based on the history, traditions, economy, climate, and geographical location the US Census Bureau grouped all states in 4 regions (Northeast, Midwest, South, West) and 9 divisions (New England, Mid-Atlantic, East North Central, South Atlantic, East South Central, West South Central, Mountain and Pacific). From each division we chose a "leader" state based on the highest level of the state tax collection. As a result the representative group consist of the following states: Massachusetts, New York, Illinois, Minnesota, Florida, Tennessee, Texas, Arizona and California. It is important to notice, that these states are leaders in their particular group, not in the overall country.

Table 1. State representatives for the state tax burden analysis in the US

Economic region	State	Amount of the state taxes paid in 2009, thousands, $	Rank
Northeast (New England)	Massachusetts	19 482 884	6
Northeast (Mid-Atlantic)	New York	65 029 871	2
Midwest (East North Central)	Illinois	29 268 349	5
Midwest (West North Central)	Minnesota	17 171 299	7
South (South Atlantic)	Florida	31 956 841	4
South (East South Central)	Tennessee	10 442 552	9
South (West South Central)	Texas	40 786 857	3
West (Mountain)	Arizona	11 249 830	8
West (Pacific)	California	101 007 459	1

Thus, we assumed that presented above selection is an approximate representation of the all states in the USA.

Tax Burden

Determination of the Tax Burden

The tax burden should reconcile two diametrically opposite trends: the state governments' intentions to increase tax revenue and taxpayers' desire to increase their actual income by paying lower taxes. In this research we assumed that the tax burden can also be described as an indicator of the state tax policy, which balances interests between tax authorities and taxpayers. In the following analysis, we define the Tax Burden variable as a ratio of state tax revenues over personal income:

$$\text{Tax Burden} = \text{Tax Revenue} / \text{Personal Income} \quad (1)$$

In general, this formula indicates the part (percentage) of the personal income that is collected as taxes and, consequently, by this part (percentage) the actual personal income is decreased.

Tax Revenue category includes direct and indirect taxes such as income tax, payroll and income taxes, property taxes, other direct taxes, contributions for additional pension for the disabled, value added tax, excise customs duties and other indirect taxes. An analysis of the tax revenue structure indicates a decline in the level of direct taxes and an increase in the indirect taxes.

Personal Income indicator is a measure of individual income collected over the calendar year. This type is income is calculated as the sum of wage and salary disbursements, supplements to wages and salaries, proprietors' income with inventory valuation adjustment and private capital consumption adjustment, rental income of persons, personal dividend income, personal interest income, and personal current transfer receipts, less contributions for government social insurance.

Tax Burden Historical Trend

The historic trend of the state and local tax burden in the US for the last 30 years is presented on the following graph. This graph represents the growth rates of the state and local tax burden for the period of 1978-2008 years.

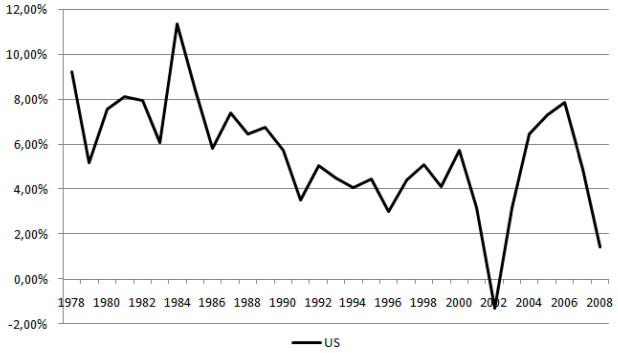
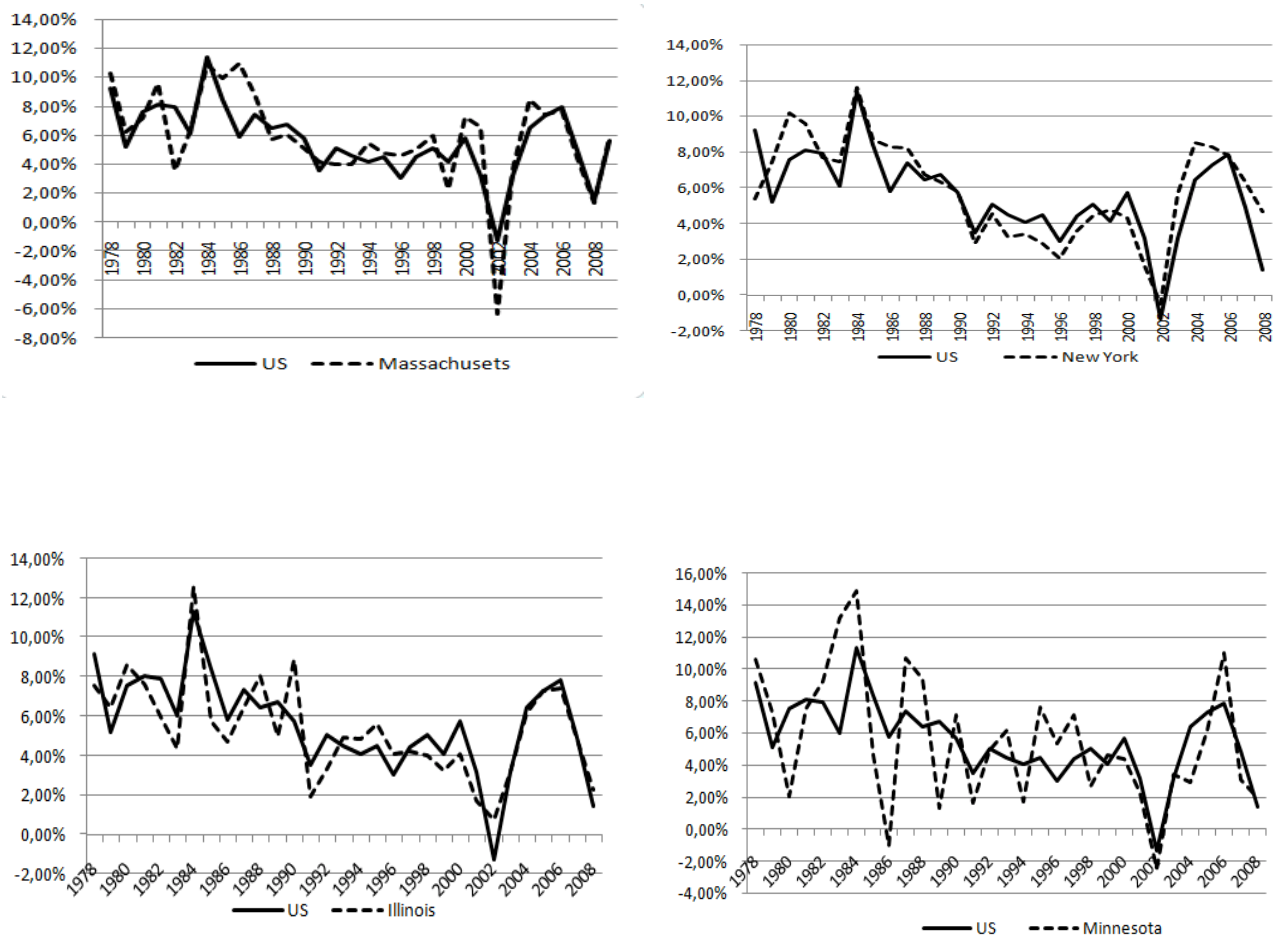


Figure 1. Trend of the state and local tax burden growth rate in the US, 1978-2008 years

The presented trend indicates that for the last 30 years state and local taxes were growing. The average annual growth rate is 5.58%. However, it is evident that there are some peaks and lowering of the tax burden growth rates. These trends are related to the overall federal tax policy. For example, the highest state and local tax increase up to 11% was in the period of 1984-1985 years. For the next 10 years the growth rate decreases from 7% till 3%, and in 1996-2000 years it increases again up to 6%. However, 2002 year was a very inconsistent year within the described trend. The growth rate of the state and local tax burden was negative. In other words, state and local authorities provided short-term policy of the tax cuts. Nevertheless, in the further years states again increased taxes up to 6-8% annually. Finally, in 2007-2008 years second significant tax cut took place, and the growth rate of the state and local taxes was at a level of 1,5%. In 2009 year the amount of state and local taxes collected in the US reached $715 millions.

Further, based on the states' selection presented above in the Part #1 we compared the overall US tendency with each state tax growth rate (Figure 2).



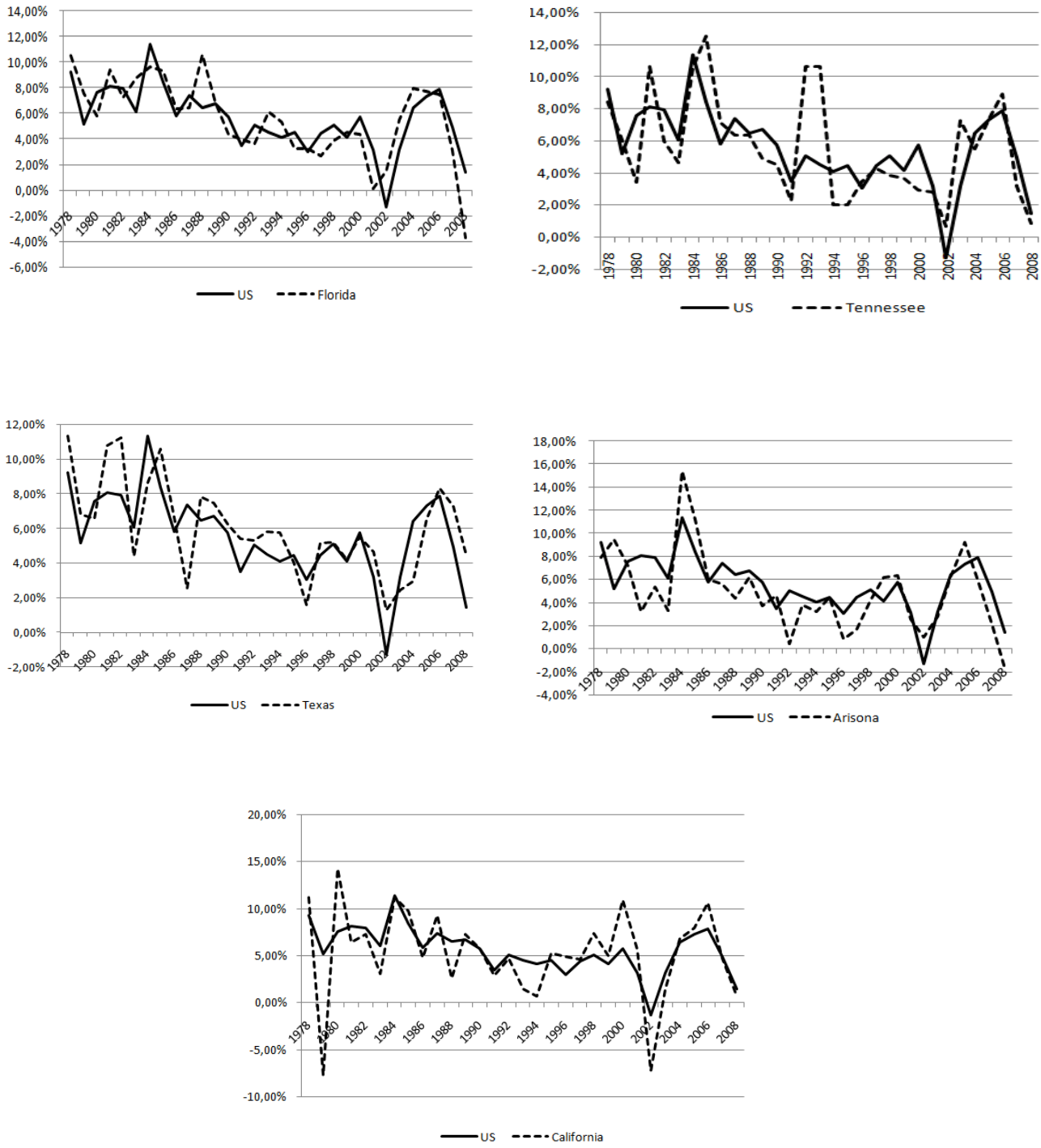


Figure 2. Tax growth rate trend for all representative states, 1978-2008 years.

Massachusetts (Northeast (New England) region) has an average annual state and local tax burden growth rate at a level of 5.83% (higher than the average US level – 5.58%). The trend indicated that state tax policy is consistent with overall US trend. Possible to notice only two

exceptions: in 1986 year state increased its taxes in comparison with US trend, and in 2002 year state considerably decreased the tax burden (-6%).

New York (Northeast (Mid-Atlantic) region) has an average tax burden growth rate at the level of 5.88% (higher than the average US level). The trend is also very consistent with the overall country's level.

Illinois (Midwest (East North Central) region) presents lower state and local tax burden growth rate in comparison with US average (5.36%). Illinois trend for the tax growth rate indicates moderate policy. State's government in most of the cases decreased growth rate in a higher degree than the average US state.

Minnesota (Midwest (West North Central) region) demonstrates very inconsistent state and local tax policy in comparison with average US level: the variation of the annual tax burden changes is very high (based on the presented graph). However, finally the average state and local tax burden growth rate is approximately on the US average level.

Florida (South (South Atlantic) region) is consistent with US average state and local tax burden growth level - 5.59% annual growth. During the period of 30 years the state authority provided average state tax policy without significant deviations.

Tennessee (South (East South Central) region) demonstrates higher state and local tax burden growth level in comparison with US average – 5.60%. For the analyzed period the state tax authority is consistent with US trend. However, in 1992-1993 years the state authority significantly increased state and local tax level (up to 10.5%). This is an example of how the state can influence on the overall tax burden within its jurisdiction.

Texas (South (West South Central) region) pursues a policy of higher state and local taxes. The average annual state and local growth rate is considerably higher than the average US level – 6.03%. Moreover, Taxes in some periods represents inconsistent tax policy with the average US level. For example, for state's needs the state and local tax burden was increased by 11% in 1982 year. However, in 2002 year the state increased the overall state and local tax burden by 2% (in comparison with US trend – 1% tax burden drop).

Arizona (West (Mountain) region) provides state and local tax policy with lower tax growth rates. The average annual state and local tax burden growth rate is 4.91% (in comparison with US average 5.58%).

California (West (Pacific) region) demonstrates lower average annual state and local tax burden growth rates in comparison with US average (5.25% for California and 5.58% for US average). However, the reason of this lower growth level is the state's authority tax policy in 1980 and 2002 years. In these years authority considerably decreased overall state and local tax burden: by -7.5% in 1980 year and -6% in 2002 year. In comparison, the average US state and local tax burden increased by 5% in 1980 year, and decreased by 1% in 2002 year.

Therefore, based on the stated above analysis of the representative states it is possible to conclude the following: Massachusetts, New York and Texas represent economic regions with the higher state and local tax burden growth rates: Northeast (New England), Northeast (Mid-

Atlantic) and South (West South Central) respectively. Moreover, the South (West South Central) region demonstrates higher deviation of tax decision-making in comparison with the average US level. Three other states – Minnesota, Florida and Tennessee – represent Midwest (West North Central), South (South Atlantic), South (East South Central) regions respectively. These regions demonstrate average state and local tax policies. However, Midwest (West North Central) region demonstrates inconsistent tax growth rates during 30 years period in comparison with national average. This evidence indicates the state authority power to establish its own tax policy in accordance with state's needs. Finally, Illinois, Arizona and California represent Midwest (East North Central), West (Mountain) and West (Pacific) regions respectively. These US regions implement lower state and local tax policies in comparison with US average. The West (Pacific) region introduces very volatile state and local tax decisions in accordance with economic needs.

Table 2. Conclusions for the state and local tax growth rates in representative states

#	**Group of states**	**Basic trend**
1	Massachusetts (New England) New York (Mid-Atlantic) Texas (West South Central)	- **Higher** state and local tax growth rates (comparable to US Average); - **Texas** demonstrates a considerable deviation of tax decision-making policies (comparable to the US average)
2	Minnesota (Midwest) Florida (South Atlantic) Tennessee (East South Central)	- **Average** state and local tax growth rates (comparable to US average) - **Minnesota** demonstrates very inconsistent tax growth rates (comparable to the US average)
3	Arizona (Mountain) California (West) Illinois (Midwest)	- **Lower** state and local tax growth rates (comparable to US average) - **California's** tax policy is very volatile (comparable to the US average)

Tax Burden Estimation and Analysis

Tax Burden Analysis

Based on the provided above definition of the tax burden its estimation has been conducted based on the formula (1). Applying this formula to the official statistical data acquired from the US Census databases we determined the tax burden for the period of 1993-2009 years for each representative state (Table 3).

Table 3. State Tax Burden for the representative states, 1993-2009 years.

	CA	AR	TX	TN	FL	MN	IL	NY	MA
Year	**TB.%**	**TB.%**	**TB.%**	**TB.%**	**TB.%**	**TB.%**	**TB.%**	**TB.%**	**TB.%**
1993	6.92	7.05	5.11	5.65	5.53	8.15	5.29	6.74	6.73
1994	6.76	6.90	5.16	5.37	5.71	8.07	5.39	6.95	6.81
1995	6.90	7.00	5.05	5.17	5.57	8.24	5.44	6.82	6.82
1996	7.11	6.69	5.04	5.18	5.56	8.39	5.42	6.43	6.91
1997	7.16	6.36	4.91	5.27	5.56	8.70	5.44	6.30	6.94
1998	7.33	6.17	4.84	5.24	5.61	8.26	5.46	6.17	7.06
1999	7.31	6.27	4.77	5.14	5.67	8.50	5.62	6.27	6.71
2000	7.77	6.12	5.09	5.52	5.91	9.07	6.03	6.77	7.36
2001	7.97	6.02	5.01	5.35	5.49	8.52	5.77	6.75	7.14
2002	6.77	5.88	4.57	4.90	5.12	7.92	5.43	6.38	5.93
2003	6.69	5.73	4.47	5.30	5.27	8.06	5.20	6.11	6.11
2004	6.79	5.86	4.45	5.42	5.58	7.99	5.37	6.22	6.23
2005	7.36	6.12	4.42	5.40	5.74	8.28	5.73	6.58	6.36
2006	7.37	6.54	4.47	5.31	5.84	8.42	5.51	6.74	6.39
2007	7.37	6.66	4.57	5.43	5.45	8.15	5.60	6.92	6.50
2008	7.29	6.03	4.60	5.28	4.86	8.15	5.78	7.00	6.56
2009	6.36	5.17	4.22	4.88	4.42	7.76	5.40	7.23	6.03
Average	**7.13**	**6.27**	**4.75**	**5.28**	**5.46**	**8.27**	**5.52**	**6.61**	**6.62**

The stated above data is not obvious for the further analysis. Therefore, it is reasonable to conduct a descriptive statistical analysis that will "average" these tax burden results.

Table 4. The descriptive analysis for the tax burden estimations.

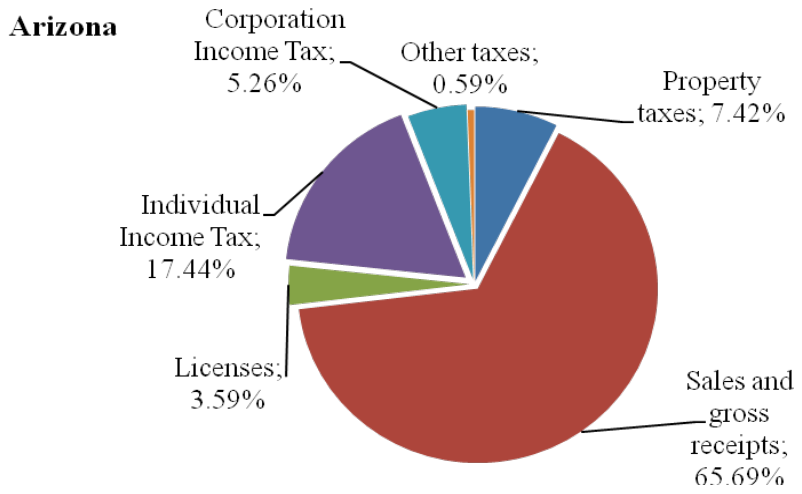
Indicator	**Amount**
Mean	6.21%
Standard Deviation	1.09%
Kurtosis	0.144
Skewness	0.617
Range	3.52%
Minimum	4.75%
Maximum	8.27%
Count (number of representative states)	9

Conducted statistical analysis reveals that the average tax burden for all selected states is 6.21%. The average volatility of the tax burden in any of the selected states is 1.09%. In other words, the average of the state tax burden can be increased or decreased by 1.09% from the average level. Also, the statistical analyses indicate the minimum and maximum tax burden rates. Thus, Texas has a minimum average tax burden at the level of 4.75% for the period 1993-2009 years. In the same time, the maximum tax burden level is assigned to Minnesota; its average tax burden rate for the past 16 years is 8.27%. Thus, the range between maximum and minimum tax burden level equals 3.52%.

Relation Between Tax Burden and State Tax Policy

To see the relation between tax burden and state tax policy we will compare the structures of the tax revenue among representative states and its tax burden. A state tax revenue structure is a representation of the overall state tax income in a view of different taxes. The analysis of the state tax structure helps to reveal the importance of each tax component in the overall state tax revenue. Moreover, it contributes understanding of reasons why particular taxes are more important for some states and less important for others. For this analysis the following states have been chosen: California, New York, Texas, Florida, Illinois, Massachusetts, Minnesota, Arizona and Tennessee (determined in the Part #1 of this paper). The data for this analysis is obtained from the official databases of US Census Bureau.

The state tax burden usually includes the following taxes: property taxes, sales taxes, licenses, income taxes and other. On the following graphs below we present the structure of the tax revenue for all 9 representative states.



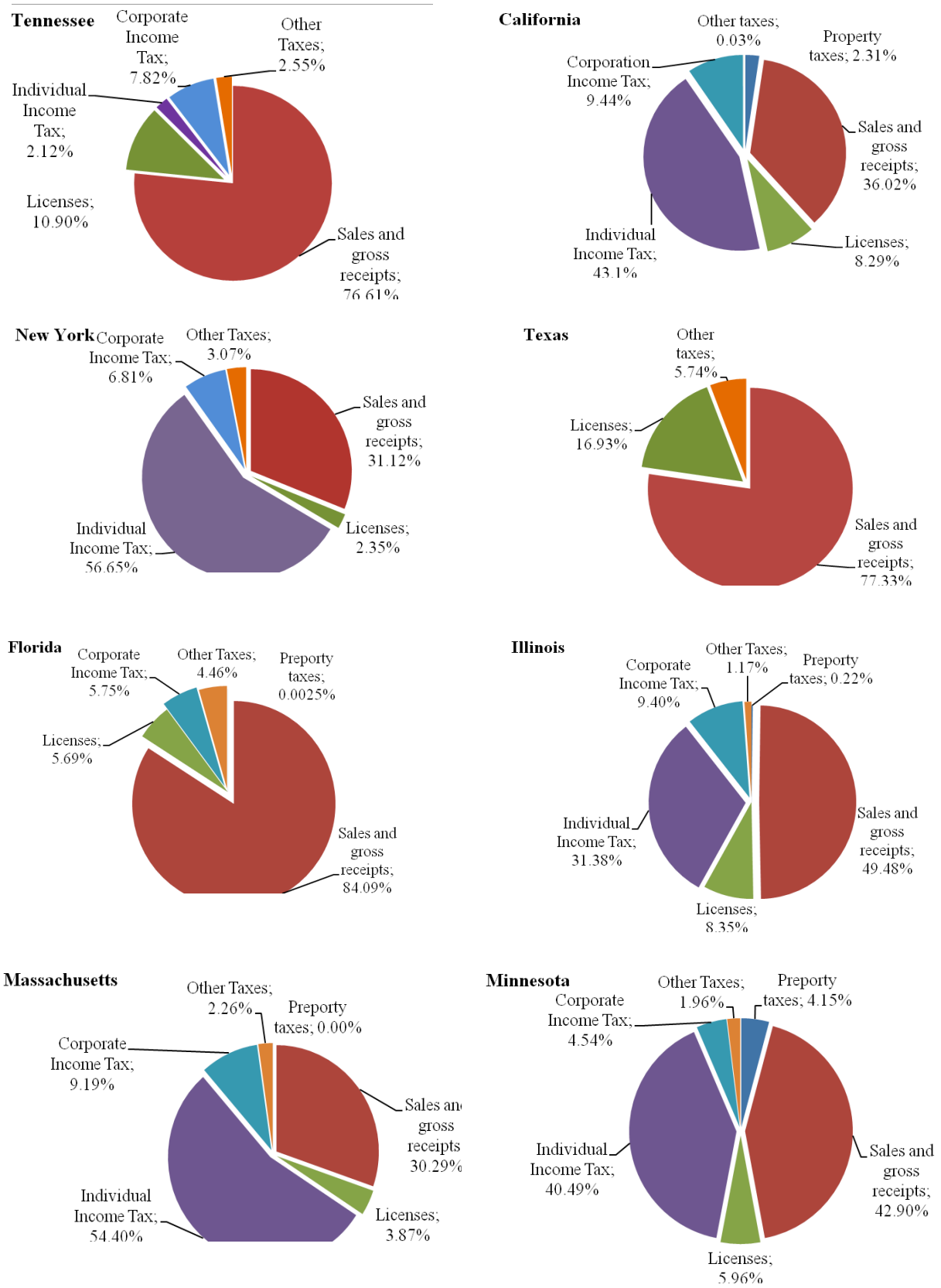


Figure 3. Tax structure analysis of selected group of states

The presented above structure of the collected taxes for the selected states reveals three major state groups.

The first group includes states with a high level of sales tax weight in the tax structure: Texas (77%), Florida (84%), Arizona (66%) and Tennessee (77%). In the same time these states have low weights of individual and corporate income taxes. For example, Texas does not impose individual and corporate income tax on the state level; Florida taxes only corporate income (corporate income tax weight is 5.75% in the tax structure); Arizona's individual income tax percentage in the overall state tax structure is 17.44% and corporate income tax takes 5.26%; Tennessee's individual income tax weight is only 2.12% in the entire amount of collected taxes and corporate income tax is 7.82%. Interesting to notice that states in this group have a high level of taxes collected from licenses: Taxes – 17%, Florida – 6%, Tennessee – 11% (can be explained by high level of natural resources utilization in these regions) . Thus, state governments provide a policy of high taxes for business and personal transactions (sales taxes), in the same time it reduce the tax burden on the final income. This policy creates more incentives in the business initiatives.

The second group is presented by states with high level of individual and corporate income taxes. New York imposes high taxes on personal and corporate income. The result of this policy is high weights of these taxes in the overall tax structure: individual income tax provides 57% to the state tax collectors and corporate income tax brings 7%. This trend is similar for Massachusetts: individual income tax provides 54% into the entire state tax structure and corporate income tax - 9%. In California state individuals provide 44% to the state tax revenue and corporate taxpayers - 9% . As a result, in New York, Massachusetts and California income tax is a main source for the state budgets. This trend can be explained by the fact that concentration of the individual capital is the highest in the mentioned states. Thus, state governments establish ways to collect some portion of this capital.

The third group includes states with comparably balanced tax structure: Illinois and Minnesota. However, in these states a portion of sales and individual income taxes is also higher than contribution of other taxes into the state tax structure. For instance, Illinois collects 49% of all taxes from sales and 31% of all taxes from individuals (individual income tax). Minnesota state has a higher tax revenue from individuals – 40% in the overall state tax structure and 43% from sales taxes.

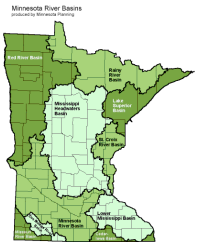
In conclusion of this section, it is interesting to underline that analysis of the state tax structures reveals states with same tax features. Texas, Florida, Arizona and Tennessee have a high portion (more then 65%) of sales taxes and low portion on income taxes (less than 17% or even absence of income taxes) in their tax structure. Then New York, California and Massachusetts obtain a lion share (more than 55%) of their tax income from income taxes (individual and corporate income taxes). Finally, Illinois and Minnesota have a comparably balanced tax income inflows; however, in these states sales and individual income taxes also play a significant role in the overall state tax structure.

Conclusion

Combining results obtained from the state tax growth rate analysis, tax burden estimation and tax revenue structure analysis it is reasonable to make a conclusion about a state with the most favorable and the most unfavorable taxation system.

Since Texas has the lowest tax burden for the period of 1993-2009 years (4.75%), it has a favorable tax treatment from the taxpayers' standpoint. It's tax structure allows state authorities to collect the highest level of tax revenue in its economic region and in the same time provide the most favorable treatment for its citizens. Interesting to notice that Taxes has an unusual state tax structure: its state government provides a policy of high taxes for business transactions (sales taxes) and in the same time reduces the tax burden on the final income. This policy creates more incentives in conducting and operating the business. Expressed in a different way, Taxes tax authorities provide more opportunities for business development in the state by eliminating income taxes. However, state is able to collect high tax revenues by establishing transaction taxes (sales taxes). Another fact about the Taxes tax structure is an absence of the property tax. Reasonable to assume that it also increases business activity in the state and per capita income. In numerical expression the Texas state tax structure is the following: sales taxes (77.33%), licensees (16.93%) and other taxes (5.74%). Licenses taxes are also transaction taxes in majority of cases, thus, the state follows its principle of transaction taxes increase.

As opposite to Texas Minnesota has the least favorable taxation for its taxpayers since the average tax burden is 8.27%. It's state tax structure is the following: sales taxes (42.90%), individual income tax (40.49%), licenses (5.96%), corporate income tax (4.54%), property tax (4.15%) and other taxes (1.96%). Thus, there is no "concentration" of the state tax policy on any particular source of income. Moreover, the tax growth rate analysis indicated that Minnesota has a very inconsistent tax growth rate in comparison with the US average level. Therefore, reasonable to underline that the state and local tax authorities provide discordant policy in the field of state taxation, which is not favorable for the state residents.



References

Becsi, Zsolt. 1996. Do state and local taxes affect relative state growth? Federal Reserve Bank of Atlanta Economic Review 81 (2): 18-36.

Feenberg, Daniel, William Gentry, David Gilroy, and Harvey Rosen. 1989. Testing the rationality of state revenue forecasts. Review of Economics and Statistics 71 (2): 300-308.

Fisher, Peter S., and Alan H. Peters. 1998. Industrial incentives: Competition among American states and cities. Kalamazoo, MI: W. E. Upjohn Institute for Employment Research.

Koester, Reinhard B., and Roger C. Kormendi. 1989. Taxation, aggregate activity and economic growth: Cross-country evidence on some supply-side hypotheses. Economic Inquiry 27 (3): 367-86.

Merriman, David. 2000. Economic conditions and state tax policy: Experience over the last decade and implications for the future. The Urban Institute Series A, No A-40.

Mocan, H. Naci, and Sam Azad. 1995. Accuracy and rationality of state general fund revenue forecasts: Evidence from panel data. International Journal of Forecasting 11 (3): 417-27.

Rodgers, Robert, and Philip Joyce. 1996. The effect of underforecasting on the accuracy of revenue forecasts by state governments. Public Administration Review, 56 (1): 48-56.

Tomljanovich, Marc. 2004. The role of state fiscal policy in state economic growth. Contemporary Economic Policy 22 (3): 318-30.

Wasylenko, Michael. 1997. Taxation and economic development: The state of the economic literature. New England Economic Review, March–April, 36-52.

Yamarik, Steven. 2000. Can tax policy help explain state-level macroeconomic growth? Economics Letters 68 (2): 211-15.

Adam Smith and Ludwig von Mises on the Moral Framework

Dr. Walton Padelford, Union University

Abstract

As business ethics intersects and becomes incorporated into the teaching of the business school, the appropriate moral framework becomes an important matter for discussion. Adam Smith was concerned with this problem as the occupant of the Chair of Moral Philosophy at Glasgow. His first great work was The *Theory of Moral Sentiments*. It is in viewing Smith's writings, including *The Wealth of Nations*, as an entire opus that we can begin to piece together Smith's moral framework.

The Austrian economists represent a school with a rigorous view of economics methodology. Ludwig von Mises is one of the exemplars of the Austrian school. So, an attempt is made to compare the moral framework of these two famous economists. Smith has a more holistic view of man and of human action, while von Mises concentrates more narrowly on the economic consequences of human action. However, this is not to say that there is no moral framework in von Mises.

For Smith, human happiness consists of tranquility and the sense of being beloved (Smith, *Moral Sentiments*, 41, 149). Smith is not convinced that prosperity is necessarily the way to attain this, but there is an invisible hand operating in the moral world as well as in the world of exchange. Smith's quote from the *Wealth of Nations* on the invisible hand is well known. However, there is also a powerful invisible hand at work in the area of moral behavior even though only a small number pursue the life of virtue while the vast majority pursue wealth and greatness (Smith, *Moral Sentiments*, 62). Happily, the path toward economic success is generally the same as the pursuit of virtue.

Von Mises also believes in the existence of a type of invisible hand. It is truly a market-driven invisible hand, but one does discern some Smithian good moral consequences in it.

One could hardly misinterpret more fundamentally the essence of social cooperation and the economic effort of civilized mankind than by looking upon it as if it were a fight or the playful duplication of fighting, a game. In social cooperation everyone in serving his own interests serves the interests of his fellow men. Driven by the urge to improve his own conditions, he improves the conditions of other people….Competition on the market must not be confused with the pitiless biological competition prevailing between animals and plants or with the war still waged between—unfortunately not yet completely—civilized nations. Catallactic competition on the market aims at assigning to every individual that function in the social system in which he can render to all his fellow men the most valuable of the services he is able to perform (Mises, *Foundation*, 79).

Here, in von Mises, there is a sort of self-giving, or serving of others, that is furthered by normal market action and competition. Both of these views of the outcomes of market activity may be too sanguine, too optimistic. However, these themes of social and moral good are worth pursuing in the face of continuing attack against the morality of the market system.

Is the United States Wireless Communication Device Industry Becoming Less Competitive?

Matthew Boyle, Georgia College & State University

Abstract

Several sources shed light on the fact that the United States wireless communication device industry is growing rapidly in the amount of companies at an astonishingly high rate. Information from the Big United States companies such as Verizon, AT&T, Sprint, & T-Mobile reveal recent trends in competitiveness. Research shows that the majority of profits were divided disproportionately among these four largest companies account for "90 percent of industry revenue"(Anonymous 2010).

The Herfindahl Hirschman Index shall be analyzed in order to portray the current numbers equivalence of this industry in 2010. Other sources have suggested the best measure of competitiveness may be "Falling Prices, increased product quality, and features"(Largent 2010, p.1). Also, the theory of contestable markets and pricing for "Potential competition"(Wegberg 1992) will need to be analyzed for situations in which a high Herfindahl-Hirschman Index may not mean monopolistic profits, because the incumbent firms may be pricing at perfect competition.

Using AACSB Assessment to Compare Student Learning Outcomes in Online vs. Traditional Course Delivery Modes

Jennifer P. Pitts, Columbus State University

Abstract

As an increasing number of traditional universities expand their online and blended course offerings, assessment of student learning outcomes, particularly at AACSB accredited business schools, has become an important measure of comparing modes of course delivery on student performance. Recent findings from research comparing student performance in online vs. traditional courses suggest that online courses compare favorably to traditional modes of course delivery. In this study, AACSB Assurance of Learning guidelines for assessment are used to evaluate student performance in two modes of course delivery of an introductory level Management Information Systems course. AACSB program assessment procedures and results of student performance are discussed.

Lease Accounting and Faithful Representation: A Summary and Analysis of the FASB/IASD Exposure Draft on Lease Accounting

Robert T. Fahnestock, University of West Florida
Eric D. Bostwick, University of West Florida

Abstract

This paper summarizes and analyzes the joint FASB/IASB exposure draft (ED) on leases. The ED identifies improved presentation of lease-related cash flow effects, faithful representation of entities' business purposes, reduced complexity, and increased comparability as expected objectives/results of the proposed treatment. Evaluating the ED on these theoretical and practical considerations, only the disclosure requirements improve reporting. Several provisions impede faithful representation, and many requirements increase complexity and reduce comparability. The paper concludes with four example leasing transactions for which application of the ED does not faithfully represent the business purpose of the entities involved.

The Creation of a Sustainable Business Certification Program: A Case Study

Nancy E. Landrum, University of Arkansas at Little Rock

Abstract

This presentation chronicled two years of student projects in the graduate and undergraduate Sustainable Business Practices courses. The presentation discussed each semester's projects and student contributions and demonstrated how each semester's projects built upon work completed by the previous semester's projects. The projects ultimately resulted in the creation of a sustainable business certification program for the Sustainable Business Network of Central Arkansas, a nonprofit business membership organization akin to a "green" chamber of commerce. The certification program will now be used by the nonprofit organization to certify local businesses in sustainable business practices. As a pedagogical approach, this case study discussed how students were able to translate theory into real world projects and gain valuable applied skills

Monetary Policy Rule Welfare Comparisons

Peter V. Bias, Florida Southern College

Abstract

Interest rate targeting rules such as Taylor's, NGDP, price level, and inflation are compared using two models, a standard AD/AS model and a New Consensus Macroeconomic model. All monetary policy rules are employed in simulations covering several different possible policy scenarios and then measured for a proxy for welfare loss, the squared deviations from the targeted values and the actual values, or RMSE. The simulation process is also used to determine the impact when the targeted values are not the same as the market clearing values. The method used here is to have the two different macroeconomic simulation models subjected to those rules and then to make welfare comparisons in order to determine the best rules.

A Comparison of Control Charting Applications for Variable Sample Sizes in Service Processes

Alan Chow, University of South Alabama
Kelly C. Woodford, University of South Alabama
Ameina Tressler, University of South Alabama

Abstract

Over the last several decades, quality improvement approaches and applications have expanded beyond the manufacturing floor to other areas of the operation. In more recent years, service industries have embraced the concepts of continuous improvement and six sigma as well. In applying the quality tools to service processes, challenges have developed in making the transition from factory volume production rates and the sometimes more variable activity rates of services.

A problem seen when applying control charts to monitor performance for service processes is that the size of the sample can vary dramatically from sample to sample. For u chart applications, several transformation methods for handling the variation in the size of the sample have been developed over the past few decades.

When faced with the desire to take advantage of run rules and the straight line control limits under process conditions of varying sample sizes, the practitioner has several choices. In practice, having one transformation that is a better performer than others under given process conditions will allow the practitioner the ability to use the more appropriate transformation method, and thus have a more optimal control charting application.

Three transformation methods for u-charts when sample sizes vary are compared using simulation and Pitman Closeness Criterion. The results provide process conditions under which each transformation performs better than the others, but also reveal that in real world applications, these differences may be negligible. We also show this as a reminder that when using simulations and computer computations, a review of the raw data is necessary to determine real relevance in the findings.

Accounting Meets POGIL

Abbie Gail Parham, Georgia Southern University
Dr. Dena Hale, Georgia Southern University

Abstract

This study introduces Process Oriented Guided Inquiry Learning (POGIL) to students in the introductory managerial accounting course. POGIL was created under a grant from the National Science Foundation (NSF) and has been successfully used by organic science courses across the nation. Studies have shown that traditional teaching methods of lecturing to students may no longer be adequate. This has led to many initiatives/reforms geared toward student involvement in the learning process. In a POGIL classroom students work in learning teams on specially designed activities. Using this approach students not only learn discipline specific content but also develop skills needed in problem solving, communication, and teamwork. POGIL is a student centered learning environment where the teacher becomes a facilitator instead of just a lecturer and the student is responsible for his/her learning.

After attending a three day workshop on POGIL and hearing of the great benefits this approach has had in other disciplines (specifically science/chemistry), many colleagues in the social sciences decided to adapt the process to their own classrooms. The first social science colleagues to examine the use of POGIL in their classroom were Dena Hale and Linda Mullen, both marketing professors within the College of Business Administration. POGIL was utilized in a number of sections for a Professional Selling course, with the lecture sections being the control groups and the POGIL sections being the treatment groups. Initial results from the sales course provided similar findings as those reported in the Chemistry presentations and demonstrated promise for the use of POGIL for non-science courses (see Hale and Mullen, 2009).

The first author decided to implement POGIL into the accounting discipline to see if **results could be replicated.** The author was scheduled to teach three sections of a managerial accounting course (Acct 2102) during fall semester 2009. POGIL was implemented into one section of the course and traditional lecture was continued in the other two sections. All classes met two days per week (75 minutes each day). Approximately two days were devoted to each chapter in the textbook. All sections, Lecture and POGIL, were conducted similarly on the second day of the material; differences in teaching protocol existed mainly on the first day of material coverage.

In the traditional classes (control groups), the first day of the chapter consisted of a lecture on the chapter material. At the end of the first day students were assigned homework to be completed before the next class. This practice homework was not collected nor graded. In the POGIL section, students were placed in four member teams. On the first day of material coverage the teams were given a POGIL activity (worksheet) to discuss and complete in class. Each worksheet contained three to four activities/concepts. There was no lecture. The teams would work on each activity for 10 – 15 minutes. At that time each team would be asked for

their response to questions in the activity. This forced the teams to work on the activity. The second day of material coverage for all sections consisted of a review of the practice homework and a quiz over the material to assess student learning.

Results of this study indicate that the students in the POGIL section had a better understanding and retention of the course material. For preliminary analysis, one learning module was selected for further analysis. The results of one ten point quiz (assessment) were compared for the different groups. The POGIL section showed a significantly higher quiz average over the lecture sections. The following results were found:

Table 1. Results of Quiz for Traditional vs. POGIL Sections

Class Section	POGIL/Traditional	Number of Students Taking Quizz	Average, %
ACCT 2102 G	TRADITIONAL	22	64.55 %
ACCT 2102 H	**POGIL**	**17**	**75.56%**
ACCT 2102 I	TRADITIONAL	21	56.19%

Additional analysis on **final course grades** revealed a slight shift in grade distribution from Ds and Fs to Cs and Bs in the POGIL section. In the traditional lecture sections, the percent of D and Fs were almost twice the percent in the POGIL section. In section G, eighteen percent of the students enrolled failed the course (grade of D or F). Twenty seven percent of the students enrolled in section I received a failing grade. In the POGIL class (section H) only ten percent failed. The percent of As were about the same in all sections. One third of the students in the POGIL section earned a B, compared to less than fifteen percent for the other sections.

Table 2. Final Course Grade Distribution Traditional vs. POGIL

	Acct 2102 G (Traditional)	% of Total	**Acct 2102 H (POGIL)**	**% of Total**	Acct 2102 I (Traditional)	% of Total
Number of As	1	3 %	**2**	**7 %**	2	7 %
Number of Bs	3	9 %	**10**	**33 %**	4	14 %
Number of Cs	18	53 %	**8**	**27 %**	11	38 %
Number of Ds	3	9 %	**1**	**3 %**	6	20 % *
Number of Fs	3	9 %	**2**	**7 %**	2	7 %
Number of W/Ds	6	17 %	**7**	**23 %**	4	14 %
Total enrollment	34	100 %	**30**	**100 %**	29	100 %

*Rounded

Overall, using POGIL in accounting courses appears to improve student learning and retention and warrants further consideration as a learning method. The grade distribution reflected in this study follows the same trends noted in the Chemistry POGIL results. It would appear that the benefits of the POGIL pedagogy is consistent in its effectiveness outside of the hard sciences and may provide benefits within the accounting discipline. One area of concern that needs further investigating is the percent of withdraws from the POGIL course. At this stage, the authors are unsure if this is an artifact of the classroom and its design or of the student population registered for the POGIL course. This is an area of future research and exploration.

Pricing in the Marketing Text: Time for Review

Pj Forrest, Alcorn State University

Abstract

Pricing is one of the ubiquitous business issues, which does not stay neatly categorized but jumps from discipline to discipline at will. Pricing is found in Management, Marketing, Accounting, Finance and Economics. Each discipline claims it as a viable subject and adds its own terminology, calculations and purpose for Pricings' role in the business process. All of these claims are likely valid. However, in Marketing, which evolved as a discipline later than most other business disciplines, the subject of Pricing has relied far too heavily on terminology and concerns borrowed from these other business disciplines. Is how to calculate break-even points or cost-plus prices an appropriate use of time in the marketing classroom? Or should we be spending the time discussing the things that are purely marketing? Is pricing given adequate attention in marketing classes? This paper examines several of the popular Marketing texts for the type and quantity of pricing coverage, and makes suggestions for a consistent, Marketing, approach in the future.

Student Opinion Towards the Use of Dedicated Software in Decision Modeling Class

Akash Dania, Alcorn State University
William Pinney, Alcorn State University
PJ Forrest, Alcorn State University

Abstract

Does the use of dedicated software in decision modeling class promote conceptual understanding of course material among its students? To understand this issue we survey business students of an institute of higher learning based in Southeastern Unites States. Results from this survey using a Kolmogorov-Smirnov test indicate that there is a preference among students for use of dedicated software in classrooms as a teaching aide. These students indicate that the use of dedicated software helps them understand ideas, add interest in the instructional material, and aids in understanding decision modeling related lectures better.

Keywords: Decision Modeling, Business Instruction, Classroom teaching