Volume 2, Number 2

ISSN 1944-656X H
ISSN 1944-6578 O

BUSINESS STUDIES JOURNAL

Gary Schneider
Quinnipiac University

The official journal of the
Academy for Business Studies,
an Affiliate of the Allied Academies

The *Business Studies Journal* is owned and published by the DreamCatchers Group, LLC. Editorial content is under the control of the Allied Academies, Inc., a non-profit association of scholars, whose purpose is to support and encourage research and the sharing and exchange of ideas and insights throughout the world.

Authors provide the Academy with a publication permission agreement. Neither the Academy, the Allied Academies, nor the DreamCatchers Group is responsible for the content of the individual manuscripts. Any omissions or errors are the sole responsibility of the individual authors. The Editorial Board is responsible for the selection of manuscripts for publication from among those submitted for consideration. The Editors accept final manuscripts in digital form and the Publishers make adjustments solely for the purposes of pagination and organization.

The *Business Studies Journal* is owned and published by the DreamCatchers Group, LLC, PO Box 1708, Arden, NC 28704 USA. Those interested in subscribing to the *Journal*, advertising in the *Journal*, or otherwise communicating with the *Journal*, should contact the Executive Director of the Allied Academies at info@alliedacademies.org.

BUSINESS STUDIES JOURNAL

Gary Schneider, Editor
Quinnipiac University
Gary.Schneider@quinnipiac.edu

Board of Reviewers

BUSINESS STUDIES JOURNAL

TABLE OF CONTENTS

LETTER FROM THE EDITOR vi

PERCEPTIONS OF ENCOUNTERS WITH DISRESPECTFUL STUDENTS: COMPARING ADMINISTRATORS' AND BUSINESS FACULTY'S VIEWS 1
Reginald L. Bell, Prairie View A&M University
Shahedur Rahman, Prairie View A&M University
Peter W. Sutanto, Prairie View A&M University
Ada Till, Prairie View A&M University
Bettye Desselle, Prairie View A&M University
Munir Quddus, Prairie View A&M University

THE KEYS TO E-SERVICE RECOVERY: A FAST AND FAIR FIX 21
Daisy Wang, Minot State University
Chia-Jung Lin, Robert Morris University
Kiattisak (Pong) Phongkusolchit, University of Tennessee at Martin

ARE S&P 500 INDEX MUTUAL FUNDS CREATED EQUALLY? 35
John Cresson, Southeastern Louisiana University

2008-2009 TUITION AND FEES IN HIGHER EDUCATION 51
Brian T. Kench, The University of Tampa
H. Scott Wallace, University of Wisconsin-Stevens Point
Kevin Neuman, University of Wisconsin – Stevens Point

CONVERGENCE OF E-TAILING AND
SOCIAL NETWORKING 65
Maria Luisa C Delayco, Hankuk University of Foreign Studies
Brandon Walcutt, Hankuk University of Foreign Studies

USE OF CREDIT CHECKS IN EMPLOYEE SELECTION: LEGAL AND POLICY ISSUES FOR EMPLOYERS 87
Gerald E. Calvasina, Southern Utah University
Richard V. Calvasina, University of West Florida
Eugene J. Calvasina, Southern University

DEVELOPING COLLABORATION SKILLS:
A MIXED TEMPERAMENT APPROACH TO
TEAMWORK 101
David W. Nickels, University of North Alabama
Joan B. Parris, University of North Alabama
Carol H. Gossett, University of North Alabama
Paulette A. Alexander, University of North Alabama

PROACTIVE PERSONALITY:
ORGANIZATION VS CAREER COMMITMENT 117
Leila Messara, Lebanese American University
Grace K. Dagher, Lebanese American University

LETTER FROM THE EDITOR

The *Business Studies Journal* is owned and published by the DreamCatchers Group, LLC. The Editorial Board and the Editors are appointed by the Allied Academies, Inc., a non profit association of scholars whose purpose is to encourage and support the advancement and exchange of knowledge, understanding and teaching throughout the world. The *BSJ* is a principal vehicle for achieving the objectives of the organization.

The *BSJ* is a journal which allows for traditional as well as non-traditional and qualitative issues to be explored. The journal follows the established policy of accepting no more than 25% of the manuscripts submitted for publication. All articles contained in this volume have been double blind refereed.

It is our mission to foster a supportive, mentoring effort on the part of the referees which will result in encouraging and supporting writers. We welcome different viewpoints because in those differences we improve knowledge and understanding.

Information about the Allied Academies, the *BSJ*, and the other journals handled by the Academy, as well as calls for conferences, are published on our web site, www.alliedacademies.org, which is updated regularly. Please visit our site and know that we welcome hearing from you at any time.

Gary Schneider, Editor
Quinnipiac University
Gary.Schneider@quinnipiac.edu

PERCEPTIONS OF ENCOUNTERS WITH DISRESPECTFUL STUDENTS: COMPARING ADMINISTRATORS' AND BUSINESS FACULTY'S VIEWS

Reginald L. Bell, Prairie View A&M University
Shahedur Rahman, Prairie View A&M University
Peter W. Sutanto, Prairie View A&M University
Ada Till, Prairie View A&M University
Bettye Desselle, Prairie View A&M University
Munir Quddus, Prairie View A&M University

ABSTRACT

In this study, we surveyed 400 faculty and administrators whose names appeared on a current directory of the Association for the Advancement of Collegiate Schools of Business-International (AACSB). We also surveyed 400 business faculty members from 14 randomly selected Historically Black Colleges and Universities (HBCU). Data were collected via Survey Monkey. We compared means of the responses and determined perceptions differed significantly between part-time and full-time faculty members and among other meaningful variables. Our findings suggest business faculty and administrators who perceive they are encountering disrespectful student behavior should reconsider their views. We make a series of recommendations that highlight the solutions to some of the more common problems of perceptions in relation to students' disrespect.

INTRODUCTION

When students are disrespectful to the point effective teaching becomes impossible, nothing can be worse for classroom teachers—and their students. In this study, we wanted to know if faculty's and administrators' perceptions of their encounters with disrespectful students' behaviors varied across employment status, gender, rank, nationality, and other meaningful variables. While the literature is sparse on faculty perceptions of students' disrespectful behaviors, even fewer studies have compared empirically business faculty's and administrators' perceptions of their encounters with disrespectful students' behaviors directly with variables that might be significantly correlated to their perceptions. It would certainly be a contribution to the management education literature to

know what aspects (gender, rank, part-time or full-time status, etc.) of the faculty's work environment are significantly correlated with the differing dimensions of perceptions of encounters with disrespect: our latent (hidden) variable.

We know student disrespect was evident as early as the nineteenth century when colleges experienced student riots and disorderly behavior (Hessinger, 1999). Elite colleges and universities such as Harvard, Yale, Johns Hopkins, Princeton, and the University of Pennsylvania suffered from disruptive student behavior (Brubacher & Rudy, 1997). College officials struggled to solve the disorderly conduct as they moved from pre-colonial institutions that prided themselves on the patriarchal authority of college faculty and administration to the Post-Revolution institutions where students abhorred such authority.

Hessinger (1999) reported that during this period school authorities believed that the student disorderly conduct was caused by students' loyalty to their peers over loyalty to their superiors. Officials at the University of Pennsylvania invoked a structure of college governance that included a system of meritocracy by rewarding both good scholarship and good behavior. This system, known today as grading, was originally developed at Yale in 1783 (Hessinger, 1999). The merit scales adopted by many colleges in the early nineteenth century also included demerits, the loss of merit points for disorderly behavior (Hessinger, 1999). Historically Black Colleges and Universities (HBCU), which still primarily enroll African American students, also were encountering similar examples of unruly conduct or what might be construed as "disrespectful behaviors."

Up to the mid 20th century, more than 90% of African-American students enrolled in post secondary programs attended HBCU. There were reports of significant student disrespect and unrest at Talladega College during the period of 1887-1914. The college, founded in 1867 by local African Americans and the American Missionary Association, was the site of a student rebellion in 1889, with students claiming that they were subjected to tyranny and outrage by the faculty. In 1895, the leader of a group of female protestors was suspended and sent home for disrespectful behavior. In 1914, a group of female students went on strike against the disciplinary action taken by the faculty. By the 1920's, African American students challenged white faculty and college administrators. This led to student unrest on black college campuses across the country (Jones, 1985).

The unrest on the HBCU campuses continued into the early 1960's. Harrison (1972) noted that student unrest on Black college campuses resulted in the resignation of presidents and other administrators, as well as faculty turnover. During this period, student grievances were related to several causes including disciplinary practices, social privileges, student personnel services, and food services. By 1968, a good number of African American students were enrolled in predominantly white colleges and universities, in part because of desegregation in higher education, and a dramatic increase in the number of African Americans enrolled in college (Kim & Conrad, 2006; Willie & Cunnigen, 1981).

Nevertheless, HBCU continued to attract primarily African American students. In 2005, at the approximately 100 HBCU, 83% of the students enrolled were African Americans, with a wide

variation in the ethnic population of the individual school. In 2005, student enrollment in all degree-granting institutions (approximately 4,300 two-and four-year institutions) was 17.5 million, while enrollment at the HBCU was approximately 312,000. This was 1.8% of all college students and 14% of all African American college students (National Center for Education Statistics, 2007). Since the early 1970's, there has been no empirical research on disrespectful student behavior that exclusively applied to HBCU.

As shown in the aforementioned studies, there is a need for this type of research as it is related to students at all institutions. There is a gap in the literature that needs to be filled because knowing what administrators and business faculty perceive about the disrespect from students they encounter helps guide policy and classroom management activities in relation to these perceptions. There is a paucity of research on faculty perceptions of student disrespectful behavior at HBCU. These institutions were founded prior to 1964 for providing collegiate education to African Americans (Brown II and Davis, 2001). They have a unique history as compared to many of the colleges that are members of the Association to Advance Collegiate Schools of Business International (AACSB). While less than a dozen HBCU are currently members of the AACSB, most are not. Therefore, sampling merely from the list of AACSB members might result in an underrepresentation of faculty from the HBCU whose views on disrespectful students' behaviors deserve analysis too (Quddus, Bell, Bodie, Dyck, Rahman, Holloway, Desselle, & Till, 2009).

It is probably safe to assume that college business faculty members today encounter various types of disruptive student behavior in their classrooms. The behavior may be overt such as talking on a cell phone, or talking during class; or covert such as sleeping in class, arriving late, and eating noisily (Seidman, 2005; Meyers, 2003). Charles (1999) defined these disruptive behaviors as *misbehavior,* while Hendrix (2007) referred to such behaviors as *incivility*, *resistance*, or *reactive behavior*. The disruptive student may negatively affect the intellectual and academic progress of other students. Such behavior can also impact the learning environment (Seidman, 2005). Faculty members exposed to such behavior have experienced higher incidence of apathy, frustration, and teacher burnout (Evers, Tomic, & Brouwers, 2004).

The behavior of college students has changed because of changes in the ethnic and social class diversity, cultural norms, age, and lifestyle. Faculty members who possess pre-conceived ideas about proper classroom etiquette will need to modify their expectations to reflect these changes (Boice, 1986:1993; Emerick, 1994; and Williams, 1994). For example, some faculty members may assume that a student who wears a baseball hat indoors is inappropriately dressed, while other faculty members may not notice (Tom, 1998). In some cases, the manner in which a student dresses may be viewed as an incivility, or insubordinate act, while the student's behavior is based on ignorance or what they perceive as current acceptable norms. Hendrix (2007) noted that one form of incivility involves the behavior of students of color toward professors of the same race at HBCU or at predominantly white universities.

Buttner (2004) studied business students' opinions on respectful and disrespectful behavior of business faculty. She found significant differences in expectations between female and male students in their opinions about how a faculty member conveys respect in the classroom. Buttner (2004) noted that the differences could be based on the differing views of female and male students of interactional justice, interpersonal relationships and interactions. Similarly, the perceptions of male and female faculty members may be affected by these same views.

In a recent survey of the members of the AACSB, the perceptions and actual disrespectful encounters of faculty related to disrespectful student behavior revealed male and female business professors' perceptions and actual encounters with students' disrespectful behavior were the same (Quddus, et al, 2009). This study also examined the affect on a business professor's perceptions and actual encounters with disrespectful student behavior of the following variables: (1) a professor's rank (instructor, assistant professor, associate professor, full professor, or other); (2) contract status (tenured, tenure track, or non-tenure track); (3) employment status (full-time or part-time); (4) country of birth; (5) the Carnegie classification of the professor's institution (community college, liberal arts, comprehensive, and research one); and (6) the professor's ethnicity.

Quddus, et al (2009) found significant differences in the business professor's perceptions when the professor's rank and employment status were tested. Significant differences were also noted for professors teaching at various Carnegie classified institutions for actual disrespectful encounters. They reported that student behavior that violated prudence (such as arriving to class late, or answering a cell phone), to be more disrespectful than behaviors associated with youthful self-expressions (wearing a baseball hat, or arguing about an assignment or grade). The researchers also suggested that a formal university-wide or college-wide code of conduct be developed: minority faculty was underrepresented in that study's sample with 36 of 39 women reporting their race as White and 52 of 67 men reporting their race as White (Quddus, et al, 2009, p. 3).

This Study's Purpose

This study's purpose is based in part on the work of Quddus, et al. (2009). The purpose of our research efforts is to compare the mean differences between perceptions of disrespect among the 400 administrators and faculty members surveyed in the AACSB directory and the 400 business faculty listed in the 14 HBCU randomly selected. This study will resolve the issue of sampling underrepresentation of minority faculty in the Quddus, et al (2009) study.

The AACSB reports on its website (source: *Business School Data Trends and 2009 List of Accredited Schools*) there were slightly more than 1,700 new doctorates in business awarded in 2005-06. Not surprisingly, only 3.9 percent of the new doctorates in business went to Black, non-Hispanics in 2007-2008. The business faculty at AACSB accredited schools of business is woefully underrepresented by African American business scholars. Therefore, surveying a directory of AACSB members only is less than adequate if the opinions of a diverse group of business faculty,

especially African Americans, are deemed important to faculty's and administrator's views on disrespectful student behavior.

The main research questions more specifically asks: Are business professors' demographic characteristics significantly related to their perceptions of their encounters with students' disrespectful classroom behavior? And, do faculty who are from AACSB accredited business programs differ from faculty whose affiliations are with HBCU organizations? To investigate further, the following hypotheses were written in order to test the research questions.

HYPOTHESES TESTING

The same Memory Encounters Scale (MES) developed and validated by Quddus, et al (2009) was used in this study. One-Way Analysis of Variance (ANOVA) was used to detect differences in the MES with respect to (1) gender, (2) rank, (3) employment status, (4) contract status, (5) U.S. born, (6) code-of-conduct usage, and (7) ethnicity; we used MANCOVA to test mean differences between (8) HBCU vis-à-vis AACSB affiliation, with employment status (full-time vs. part-time) used as the covariate. The null hypotheses were stated as follows:

Hypothesis $_1$: There is no significant difference in perceptions of encounters with disrespectful student behavior as measured by the MES between male and female professors.

Hypothesis $_2$: There is no significant difference in perceptions of encounters with disrespectful student behavior as measured by the MES among professors with different ranks.

Hypothesis $_3$: There is no significant difference in perceptions of encounters with disrespectful student behavior as measured by the MES among professors with different employment status.

Hypothesis $_4$: There is no significant difference in perceptions of encounters with disrespectful student behavior as measured by the MES among professors with different contract status.

Hypothesis $_5$: There is no significant difference in perceptions of encounters with disrespectful student behavior as measured by the MES between US-born professors and foreign-born professors.

Hypothesis $_6$: There is no significant difference in perceptions of encounters with disrespectful student behavior as measured by the MES between professors teaching at institutions with a mandatory code-of-conduct and those without a mandatory code-of-conduct.

Hypothesis $_7$: There is no significant difference in perceptions of encounters with disrespectful student behavior as measured by the MES among professors with different ethnicity.

Hypothesis $_8$: There is no significant difference in perceptions of encounters with disrespectful student behavior as measured by the MES between persons listed in the AACSB directory and professors teaching at HBCU institutions when employment status (part-time and full-time) is used as a covariate.

METHODOLOGY

Survey, Sample and Descriptive Statistics

Ethical guidelines were followed and institutional permission was granted to collect data. A survey and a separate list of questions that pertain to assessment of demographic variables were administered electronically, via Survey Monkey. Four hundred names were randomly selected from the Association to Advance Collegiate Schools of Business-International (AACSB) list of 1,370. The sample consisted of professors and academic administrators representing collegiate schools of business throughout the world. The contacts were randomly selected, using systematic sampling from the AACSB population. Since it is well known that less than a dozen HBCU are accredited by the AACSB, we wanted to assure ourselves we had a more diverse population of business faculty and administrators. This was a limitation in Quddus, et al (2009).

Therefore, a list of 400 faculty members names listed in the online directories of 14 randomly selected Historically Black Colleges and Universities (HBCU) were surveyed. A random sample of 14 of the 100 HBCU was selected. A sample of 400 HBCU email addresses was generated. Email addresses were verified prior to sending the survey. The survey responses were deemed representative of the AACSB and HBCU population. A total of 111 out of 400 AACSB surveys were useable since some respondents completed only the demographic portion of the survey and 36 surveys could not be used for data analysis from the AACSB responses. Among the 400 HBCU emailed surveys, 61 responded and these were all useable. The 172 useable returns represent 21.5 percent of those surveyed; 400 names from the AACSB directory and 400 names from 14 HBCU.

Analysis of the demographic data revealed 109 male professors and 61 female professors completed the survey; two professors did not indicate their gender. The rank was represented by 13 instructors, 20 assistant professors, 38 associate professors, 49 full professors, and 52 other faculty types. Among the respondents, there were 16 part-time and 155 full-time faculty, and 100 men and 53 women on full-time status. There were 61 from HBCU and 111 from AACSB. Females and males from AACSB represented 40 and 69 respectively, while HBCU females and males were 21 and 40 respectively. The average part-time and full-time experience was 4.57 years and 15.2 years respectively, with one person teaching for 45 years. There were 116 born in the United States, as opposed to 50 born elsewhere. Of those responding, 35 were from liberal arts colleges, 97 from comprehensive universities, and 39 were from research institutions. The contract status for males and females combined was 43 non-tenure track (which comprised 25.4% of the respondents), 49 tenure track (29%), and 77 were tenured (45.6%). And, finally, 110 White, 26 Black, 17 Hispanic, 10 Asian and 4 other races of faculty members responded. The descriptive data collected from the survey responses is presented in Tables 1a, 1b, 1c, 1d, 1e, 1f, 1g, 1h and 1i.

Table 1a: Affiliation of Respondent

	Frequency	Percent	Valid Percent	Cumulative Percent
AACSB	111	64.5	64.5	64.5
HBCU	61	35.5	35.5	100.0
Total	172	100.0	100.0	

Table 1b: Faculty Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	109	63.4	64.1	64.1
Female	61	35.5	35.9	100.0
Total	170	98.8	100.0	
Missing	2	1.2		
Total	172	100.0		

Table 1c: Professorial Rank				
	Frequency	Percent	Valid Percent	Cumulative Percent
Instructors	13	7.6	7.6	7.6
Assistant Professors	20	11.6	11.6	19.2
Associate Professors	38	22.1	22.1	69.8
Full Professors	49	28.5	28.5	47.7
Other Faculty types	52	30.2	30.2	100.0
Total	172	100.0	100.0	

Table 1d: Employment Status				
	Frequency	Percent	Valid Percent	Cumulative Percent
Part-time	16	9.3	9.4	9.4
Full-time	155	90.1	90.6	100.0
Total	171	99.4	100.0	
Missing	1	.6		
Total	172	100.0		

Table 1e: Contract Status				
	Frequency	Percent	Valid Percent	Cumulative Percent
Non-Tenure Track	43	25.0	25.4	25.4
Tenure-Track	49	28.5	29.0	54.4
Tenured	77	44.8	45.6	100.0
Total	169	98.3	100.0	
Missing	3	1.7		
Total	172	100.0		

Table 1f: United States Born				
	Frequency	Percent	Valid Percent	Cumulative Percent
No	50	29.1	30.1	30.1
Yes	116	67.4	69.9	100.0
Total	166	96.5	100.0	
Missing	6	3.5		
Total	172	100.0		

Table 1g: Carnegie Classification				
	Frequency	Percent	Valid Percent	Cumulative Percent
Liberal Arts or Others	35	20.3	20.5	20.5
Comprehensive	97	56.4	56.7	77.2
Research Extensive	39	22.7	22.8	100.0
Total	171	99.4	100.0	
Missing	1	.6		
Total	172	100.0		

Table 1h Ethnicity				
	Frequency	Percent	Valid Percent	Cumulative Percent
Asian	10	5.8	6.0	6.0
Hispanic	17	9.9	10.2	16.2
Other	4	2.3	2.4	18.6
Black, non-Hispanic	26	15.1	15.6	34.1
White	110	64.0	65.9	100.0
Total	167	97.1	100.0	
Missing	5	2.9		
Total	172	100.0		

Table 1i:Code of Conduct Mandatory				
	Frequency	Percent	Valid Percent	Cumulative Percent
No	32	18.6	18.9	18.9
Yes	98	57.0	58.0	76.9
Not Sure	39	22.7	23.1	100.0
Total	169	98.3	100.0	
Missing	3	1.7		
Total	172	100.0		

THE MEMORY ENCOUNTERS SCALE

As mentioned earlier, the same Memory Encounters Scale (MES) developed and validated by Quddus, et al (2009) was used in this study. Quddus, et al (2009) showed the MES to have an

alpha reliability of .92. Since our study used a larger more diverse population we decided to run our own alpha reliability test (Cronbach, 1951; 1984) on the MES. The same 16 items semantic differential, represented by anchors "1 = never" and "7 = all the time," showed the MES alpha in our study to be .91, which exceeds the Nunnally (1978) criteria of 0.70; therefore, the MES appears to be a "very good" measure of the construct: professors' and administrators' perceptions of their own encounters with students' disrespectful behaviors.

PRINCIPAL AXIS FACTOR ANALYSIS

Principal Axis Factoring, using Promax with Kaiser Normalization as a rotation method, revealed several variable loadings above .60 on the MES derived factors. The Un-rotated Sum of Squared Loadings for the MES was 43.539, 11.433, and 7.360 respectively. In interpreting the rotated factor pattern, an item was said to load on a given factor if the factor loading was .50 or greater for that factor (Devellis, 1991; Hatcher, 1994; Kachigan, 1991) and was less than .50 for the others. Statements S9, S11, S12 and S8 did not survive the factor rotation when the cutoff was .50 or greater for a component to be said to load on a factor. The MES component saturation was very high. Summaries of factor analysis results are shown in Table 2.

Table 2: Rotated Component Matrix for Three Derived Factors on the Memory Encounters Scale (MES)

MES Alpha Reliability = .91 on the 16 Survey Items			
Three Factors explain 68% of the Variance in the MES	F1: Disagreeable	F2: Unresponsive	F3: Attendance
S14: At least two students have stormed out of class in anger.	**.882**	-.100	-.070
S15: At least two students have argued vehemently with me about an assignment or grade.	**.858**	-.103	-.005
S16: At least two students have openly challenged my knowledge.	**.829**	-.076	-.135
S4: At least two students in my class are argumentative with me and other students.	**.737**	.034	.050
S10: At least two students treat me and other students discourteously (interrupting, horse laughing, bad mouthing, etc.).	**.628**	.100	.145
S13: At least two students have answered cell phones while class was in session.	**.561**	.112	.041
S9: At least two students do not respond to my questions when I call on them.	.447	.387	-.245

Table 2: Rotated Component Matrix for Three Derived Factors on the Memory Encounters Scale (MES)			
MES Alpha Reliability = .91 on the 16 Survey Items			
Three Factors explain 68% of the Variance in the MES	F1: Disagreeable	F2: Unresponsive	F3: Attendance
S7: At least two students are not attentive during the lecture (sleeping, reading unrelated material, talking, browsing the Web, email of text messaging, etc.).	-.012	**.818**	.022
S6: At least two students have come to class unprepared (not reading required materials, having school supplies, and submitting required work on time).	-.190	**.782**	.089
S5: At least two students choose not to participate in mandatory class assignments or activities.	.081	**.745**	-.153
S11: At least two students talk to other students during my lectures.	.250	.365	.209
S2: At least two students have missed several days of class without prior notice.	-.050	.049	**.819**
S1: At least two students have repeatedly come to class late without prior notice.	-.074	.177	**.760**
S3: At least two students have walked out of the class without permission.	.190	.089	**.563**
S12: At least two students wear improper dress in my class (baseball hat, t-shirt with profanity, loud-jingling jewelry, etc.).	.388	-.019	.403
S8: At least two students address me by my first name in class.	.186	.225	-.366
Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization. A rotation converged in 5 iterations.			

Factor	Rotation Sums of Squared Loadings(a)
	Total Variance Explained Total
Disagreeable	5.650
Unresponsive	5.030
Attendance	4.492

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.896**
Bartlett's Test of Sphericity	Approx. Chi-Square	1308.453
	df	120
	Sig.	.000

Guadagnoli and Velicer (1988) dealt directly with the relationship of sample size to the stability of component patterns. The authors used a Monte Carlo procedure to vary sample size, number of variables, number of components, and component saturation in order to examine systematically the condition under which a sample component pattern becomes stable relative to the population. They determined that factor loadings of .60 or higher with at least four variable loadings per factor permit stability of the factor pattern regardless of sample size. Furthermore, using SPSS 15.0 for this study, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .896, far exceeding the most conservative cutoff of .60.

RESULTS

We were unable to reject Hypothesis 1: There is no significant difference in perceptions of disrespectful student behavior as measured by the MES between male and female professors. ANOVA results are shown in Table 3.

Table 3: Gender

		Sum of Squares	df	Mean Square	F	Sig.
Disagreeable	Between Groups	2.579	1	2.579	1.905	.169
	Within Groups	211.184	156	1.354		
	Total	213.763	157			
Unresponsive	Between Groups	.631	1	.631	.443	.507
	Within Groups	222.181	156	1.424		
	Total	222.812	157			
Attendance	Between Groups	1.124	1	1.124	.860	.355
	Within Groups	203.930	156	1.307		
	Total	205.054	157			

We were unable to reject Hypothesis 2: There is no significant difference in perceptions of disrespectful student behavior as measured by the MES among professors with different ranks. ANOVA results are shown in Table 4.

Table 4: Rank

		Sum of Squares	df	Mean Square	F	Sig.
Disagreeable	Between Groups	3.695	4	.924	.673	.612
	Within Groups	210.068	153	1.373		
	Total	213.763	157			
Unresponsive	Between Groups	3.591	4	.898	.627	.644
	Within Groups	219.221	153	1.433		
	Total	222.812	157			
Attendance	Between Groups	5.437	4	1.359	1.042	.388
	Within Groups	199.617	153	1.305		
	Total	205.054	157			

We rejected Hypothesis 3: There is a significant difference in perceptions of encounters with disrespectful student behavior as measured by the MES between professors with employment status as full-time and part-time. The means for the 15 part-time and the 142 full-time employees were -.86 and .10 respectively. The significant difference was p= .003. ANOVA results are shown in Table 5. A full-time faculty member is more likely than a part-time faculty member to perceive an encounter with an unresponsive student as disrespectful.

Table 5: Employment Status

		Sum of Squares	df	Mean Square	F	Sig.
Disagreeable	Between Groups	.175	1	.175	.127	.722
	Within Groups	212.719	155	1.372		
	Total	212.893	156			
Unresponsive	Between Groups	12.458	1	12.458	9.291	.003**
	Within Groups	207.834	155	1.341		
	Total	220.292	156			
Attendance	Between Groups	.589	1	.589	.455	.501
	Within Groups	200.662	155	1.295		
	Total	201.251	156			

**Denotes significant difference at p< .01.

We were unable to reject Hypothesis 4: There is no significant difference in perceptions of encounters with disrespectful student behavior as measured by the MES among professors with different contract status. ANOVA results are shown in Table 6.

Table 6: Contract

		Sum of Squares	df	Mean Square	F	Sig.
Disagreeable	Between Groups	1.000	2	.500	.360	.699
	Within Groups	211.255	152	1.390		
	Total	212.255	154			
Unresponsive	Between Groups	1.062	2	.531	.372	.690
	Within Groups	217.069	152	1.428		
	Total	218.131	154			
Attendance	Between Groups	.938	2	.469	.357	.700
	Within Groups	199.541	152	1.313		
	Total	200.479	154			

We were unable to reject Hypothesis 5: There is no significant difference in perceptions of disrespectful student behavior as measured by the MES between US-born professors and foreign-born professors. ANOVA results are shown in Table 7.

Table 7: U.S. Born

		Sum of Squares	df	Mean Square	F	Sig.
Disagreeable	Between Groups	1.001	1	1.001	.716	.399
	Within Groups	211.317	151	1.399		
	Total	212.318	152			
Unresponsive	Between Groups	.000	1	.000	.000	.999
	Within Groups	217.325	151	1.439		
	Total	217.325	152			
Attendance	Between Groups	1.431	1	1.431	1.091	.298
	Within Groups	198.085	151	1.312		
	Total	199.516	152			

We were unable to reject Hypothesis 6: There is no significant difference in perceptions of disrespectful student behavior as measured by the MES between professors teaching at institutions

with a mandatory code-of-conduct and those without a mandatory code-of-conduct. ANOVA results are shown in Table 8.

Table 8: Code of Conduct

		Sum of Squares	df	Mean Square	F	Sig.
Disagreeable	Between Groups	1.418	2	.709	.524	.593
	Within Groups	205.476	152	1.352		
	Total	206.894	154			
Unresponsive	Between Groups	5.600	2	2.800	2.004	.138
	Within Groups	212.336	152	1.397		
	Total	217.936	154			
Attendance	Between Groups	3.529	2	1.765	1.343	.264
	Within Groups	199.671	152	1.314		
	Total	203.201	154			

We were unable to reject Hypothesis 7: There is no significant difference in perceptions of disrespectful student behavior as measured by the MES among professors with different ethnicity. ANOVA results are shown in Table 9.

Table 9: Ethnicity

		Sum of Squares	df	Mean Square	F	Sig.
Disagreeable	Between Groups	6.768	4	1.692	1.235	.299
	Within Groups	204.215	149	1.371		
	Total	210.984	153			
Unresponsive	Between Groups	3.905	4	.976	.680	.607
	Within Groups	214.086	149	1.437		
	Total	217.992	153			
Attendance	Between Groups	4.752	4	1.188	.904	.463
	Within Groups	195.714	149	1.314		
	Total	200.466	153			

We rejected Hypothesis 8: There is a significant difference in perceptions of encounters with disrespectful student behavior as measured by the MES between 103 administrators and business faculty listed in the AACSB directory and the 54 business faculty teaching at HBCU institutions, with means of .05 for AACSB and -.06 for HBCU on factor two (Unresponsive). There

is a significant difference in perceptions of encounters with disrespectful student behavior as measured by the MES between 103 administrators and business faculty listed in the AACSB directory and the 54 business faculty teaching at HBCU institutions, with means of -.30 for AACSB and .54 for HBCU on factor three (Attendance). There appears to be opposite views on these two factors. Administrators and faculty at AACSB schools seem to view an unresponsive student encounter as more disrespectful than an HBCU faculty member. To the contrary, HBCU faculty members view their encounters with students' poor attendance to be significantly more disrespectful than AACBS faculty and administrators do. MANCOVA results are shown in Tables 10a and 10b.

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power(a)
Pillai's Trace	.171	10.481(b)	3.000	152.000	.000	.171	31.444	.999
Wilks' Lambda	.829	10.481(b)	3.000	152.000	.000	.171	31.444	.999
Hotelling's Trace	.207	10.481(b)	3.000	152.000	.000	.171	31.444	.999
Roy's Largest Root	.207	10.481(b)	3.000	152.000	.000	.171	31.444	.999

a) Computed using alpha = .05
b) Exact statistic
c) Design: Intercept+Status+OrgType

Table 10b: Tests of Between-Subjects Effects

Source	Three Factors	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power(a)
Model	Disagreeable	.175(b)	2	.088	.063	.939	.001	.127	.059
	Unresponsive	12.943(c)	2	6.471	4.806	.009**	.059	9.613	.791
	Attendance	25.944(d)	2	12.972	11.395	.000***	.129	22.790	.992

a) Computed using alpha = .05; **Denotes significance at p< .01; *** denotes p< .001.
b) R Squared = .001 (Adjusted R Squared = -.012)
c) R Squared = .059 (Adjusted R Squared = .047)
d) R Squared = .129 (Adjusted R Squared = .118)

DISCUSSION

We discuss our findings regarding faculty's perceptions of their encounters with disrespectful students' behaviors in this section. The faculty reports that the most disrespectful student behavior is students who come to class unprepared (not reading required materials, having

school supplies, and submitting required work on time); while students who miss several days of class without prior notice ranks second. These behaviors are indicative of students who were unresponsive and who had problems with class attendance. These findings were not surprising, and were reported by Charles (1999) and Seidman (2005).

The third and fourth most disrespectful behaviors were students who walked out of class without permission, and students who were not attentive during the lecture (sleeping, reading unrelated material, talking, browsing the Web, email of text messaging, etc.). (See Appendix A for a list of all reported behaviors and their mean rank.) In this technology-driven world, these findings are not unexpected because students seem to be tied to their mobile phones and are constantly browsing the web, texting, etc. These students are too unresponsive and have problems with class attendance. However, the two least reported behaviors that faculty encountered were students who openly challenged their knowledge, and students who stormed out of class in anger.

Our analysis revealed that a full-time faculty member is more likely than a part-time faculty member to perceive an encounter with an unresponsive student as disrespectful. This is not unexpected because full-time faculty has more day-to-day interaction with students. They tend to be involved with student organizations, and serve as role models and mentors for some students. Quddus, et al (2009) also reported a similar finding.

Our analysis also revealed that faculty and administrators from AACSB and HBCU schools differed in their perceptions of student disrespectful behavior as it relates to unresponsiveness and to attendance. AASCB members view an unresponsive student as more disrespectful than HBCU members. Perhaps some of the differences can be related to cultural differences and perceptions as noted by Tom (1998). Alternatively, HBCU members view a student who has problems with class attendance as being more disrespectful than AACSB members. Perhaps the emphasis on a student attending class at HBCU schools is attributable to the thought that students are exposed to the class materials through lecture, etc. rather than having to learn it on their own because they are not in class.

Our study revealed that the faculty and administrators in our study find the students who are most disrespectful are unresponsive and do not regularly attend classes. Students who are disagreeable, i.e. they storm out of class in anger, argue with the professor or other class members, etc. were not found to be behaviors that faculty had regularly encountered.

RECOMMENDATIONS

To create a healthy learning environment in the classroom, we believe that faculty should be in charge in the classroom. For this to happen, we encourage faculty to make their expectations of classroom etiquette known to the students and discuss these from time to time for emphasis. If a faculty considers tardiness to be disruptive, the students should be made aware of this and points

taken off, if feasible. The incentives have to be appropriate. Poor behavior should be consistently penalized and good behavior rewarded. Therefore, we make the following recommendations.

Any college of business could adopt a set of "Expectations for Classroom Behavior" that many faculty members could share on the first day of the class. These explain the faculty expectations of what is considered acceptable and unacceptable behavior, and provides the instructor latitude to penalize poor behavior. The expectations should be discussed with the students, signed by the student, and filed.

When a student is unresponsive or has poor attendance, the instructor should privately meet with the student to inform the student of the misconduct at the first sign, and then reinforce the displeasure in a written reprimand. The faculty is also advised to seek the assistance of the department head or the Dean's office in case of extreme disruptive behavior. The professor may also contact the university's assistant vice president in charge of disciplinary actions, or a similar administrator if the student's disrespectful behavior is extreme. Given these recommendations, there should be an improvement in the general student behavior in the classroom.

REFERENCES

A Loss of Respect (2004). *Spectator*, *294*(9167), 7-7.

Boice, B. (1986). Faculty development via field programs for middle-aged, disillusioned faculty. *Research in Higher Education*, *25*, 115-135.

Boice, B. (1993). *Primal origins and later correctives for midcareer disillusionment.* In M. J. Finkelstein (Ed.), Developing senior faculty as teacher (New Directions in Teaching and Learning, 55, 33-41). San Francisco: Jossey-Bass.

Brown II, M. C. & J. E. Davis (2001). The Historically Black College as Social Contract, Social Capital, and Social Equalizer. *Peabody Journal of Education, 76*(1), 31-49.

Brubacher, J. S. & Rudy, W. (1997). *Higher education in transition: A history of American colleges and universities (Forth Edition.).* U.S.A.: Transaction Publishers.

Buttner, H. E. (2004). How do we "dis" students?: A model of (dis)respectful business instructor behavior. *Journal of Management Education, 28*(3), 319-334, June.

Charles, C. (1999) *Building classroom discipline*. New York: Addison Wesley Longman, Inc.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests*. Psychometrika. 16,* 297-334.

Cronbach, L. J. (1984). *Essentials of psychological testing.* New York: Harper and Row.

Devellis, R. (1991). *Scale development.* USA: Sage Publications.

Emerick, R. (1994). A conversation on classroom etiquette in introductory sociology courses. *Teaching Sociology*, *22,* 341-344.

Evers, W. J., Tomic, W., & Brouwers, A. (2004). Burnout among teachers: Students' and teachers' perceptions compared. *School Psychology International, 25*(2), 131-148.

Guadagnoli, E. & Velicer, W. F. (1988). Relation of the sample size to the stability of component patterns. *Psychological Bulletin, 103*(2), 265-275.

Hatcher, L. (1994). *A step-by-step approach to using the SAS(R) system for factor analysis and structural equation modeling.* Cary, NC: SAS Institute.

Harrison, E. C. (Spring 1972). Unrest on Black college campus. *The Journal of Negro Education, 41*(2), 113-120.

Hendrix, K. G. "She must be 'trippin'": The secret of disrespect from students of color toward faculty of color. *New Directions for Teaching and Learning, No. 110*, published online at www.interscience.wiley.com.

Hessinger, R. (Autumn, 1999). The Most Powerful Instrument of College Discipline: Student Disorder and the Growth of Meritocracy in the Colleges of the Early Republic. *History of Education Quarterly, 39*(3), 237-262.

Jones, M. D. (Summer – Autumn, 1985). Student unrest at Talladega College. *The Journal of Negro History, 70*(3/4), 73-81.

Kachigan, S. K. (1991). *Multivariate statistical analysis.* New York: Radius Press.

Kim, M. & Clifton, C. (June 2006). The Impact of Historically Black Colleges and Universities on the Academic Success of African-American Students. *Research in Higher Education*, Vol. 47, No. 4, 399-427.

Meyers, S. (2003). Strategies to prevent and reduce conflict in college classrooms. *College Teaching*, *51*(3), 94-98.

National Center for Education Statistics, Higher Education General Information Survey (August 2007). *Fall Enrollment in Institutions of Higher Education, 1980: and 1990 through 2006.* Integrated Postsecondary Education Data System, downloaded from http://www.nces.ed.gov.

Nunnally, J. (1978). *Psychometric theory*. New York: McGraw-Hill.

Quddus, M. U., Bell, R. L., Bodie, N., Dyck, J., Rahman, S., Holloway, R., Desselle, B., & Till, A. (2009). Faculty perceptions and encounters with disrespectful student behavior. *Academy of Educational Leadership Journal,* 13 (1), 1-18.

Seidman, A. (2005, spring). The learning killer: Disruptive student behavior in the classroom. *Reading Improvement, 42*(1), 40-46.

Tom, G. (1998). Faculty and student perceptions of classroom etiquette. *Journal of College Student Development, 39*(5), 515-516.

Williams, J.A. (1994). *Classroom in conflict: Teaching controversial subjects in a diverse society.* Albany, NY: SUNY Press.

Willie, C. V. and D. Cunnigen (1981). Black studies in higher education: a review of studies, 1965–1980. *Annual Review of Sociology, 7*, 177-198.

APPENDIX A

Actual Scale Items on the MES Measuring Perceptions of Encounters with Disrespectful Students	
At least two students have come to class unprepared (not reading required materials, etc.)	5.34 (1)
At least two students have missed several days of class without prior notice.	5.02 (2)
At least two students have walked out of the class without permission.	4.89 (3)
At least two students are not attentive during the lecture (sleeping, reading unrelated material, etc.)	4.52 (4)
At least two students talk to other students during my lectures.	4.23 (5)
At least two students have walked out of the class without permission.	3.69 (6)
At least two students choose not to participate in mandatory class assignments or activities	3.40 (7)
At least two students wear improper dress in my class (baseball hat, t-shirt with profanity, etc.).	3.31 (8)
At least two students have answered cell phones while class was in session.	2.69 (9)
At least two students in my class are argumentative with me and other students	2.60 (10)
At least two students have argued vehemently with me about an assignment or grade.	2.46 (11)
At least two students treat me and other students discourteously (interrupting, bad mouthing, etc.).	2.35 (12)
At least two students do not respond to my questions when I call on them.	2.24 (13)
At least two students address me by my first name in class.	2.05 (14)
At least two students have openly challenged my knowledge.	2.00 (15)
At least two students have stormed out of class in anger.	1.66 (16)

THE KEYS TO E-SERVICE RECOVERY: A FAST AND FAIR FIX

Daisy Wang, Minot State University
Chia-Jung Lin, Robert Morris University
Kiattisak (Pong) Phongkusolchit, University of Tennessee at Martin

ABSTRACT

The growth of business-to-customer (B2C) electronic commerce unraveled tremendous opportunities for service providers. Along with this opportunity comes the challenge of identifying and rectifying service failures. Despite this growing interest on electronic service research, the empirical evidence in the literature is still evolving. The purpose of this study is to empirically examine the effect of the speed and magnitude of online service recovery activities on customer satisfaction, loyalty and positive Word-of-Mouth (WOM) in a B2C context. The results of our study strongly support a positive impact of the speed and magnitude of online service recovery on post-recovery customer behaviors. Research and practical implications are discussed.

Keywords: online service recovery, service failures, electronic commerce, speed of recovery, magnitude of recovery

INTRODUCTION

The growth of business-to-customer (B2C) electronic commerce unraveled tremendous opportunities for service providers. The convenient access of Internet technology by millions of consumers provides an excellent ground for the emergence of electronic retailers such as amazon.com and e-bay.com and online operation of brick-and-mortar stores, such as Walmart.com and Sears.com. Regardless of the type of service they provide, service providers sooner or later experience some degree of service failure. Research suggests that it costs up to five times as much to attract new consumers than it does to keep current consumers satisfied (Hart, Heskett, & Sasser, 1990; Maxham, 2001). As such, identifying and rectifying these service failures is crucial for achieving both consumer retention and overall competitiveness.

Service recovery studies have identified a number of important factors that are associated with the recovery process. Specifically, the antecedents of service recovery activities such as the degree of consumer's loyalty, perceived service quality and severity of failure are attributed to have

an impact on the success of recovery activities and consumer satisfaction (Bitner, 1990; Kelley & Davis, 1994; Miller, Craighead, & Karwan, 2000). The extant literature also provides evidence that successful service recovery activities involve both psychological and tangible compensations (Bell & Ridge, 1992; Clark, Kaminiski, & Rink, 1992), such as promptness, fairness, and monetary compensation.

However, most of the findings in the literature are based on service recovery efforts in the "traditional" service setting (i.e., service provided with direct physical contact between the consumer and service provider). Consequently, there is a limited understanding of online service recovery activities in a B2C setting (Holloway & Beatty, 2003). Examining the impact of B2C service recovery activities is particularly important given the phenomenal growth of electronic commerce both in the form of business-to-business (B2B) and business-to-customer (B2C) transactions. Online service recovery is significantly different from brick-and-mortar setting primarily due to customers' perceived insecurity of internet transactions and the lack of interpersonal interaction (Forbes, Kelley, & Hoffman, 2005b; Holloway, Wang, & Parish, 2005).

We believe that due to the evolving nature of online service recovery literature, there is a lack of an empirical study on the nature of web-based service recovery activities in relation to customer satisfaction, loyalty, and positive word-of-mouth (Holloway & Beatty, 2003). This study is intended to fill the gap of the literature and specifically to empirically examine the effect of the speed and magnitude of online service recovery activities on customer satisfaction, loyalty and positive word-of-mouth (WOM) in a B2C context.

THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

Web-Based Service Recovery

A service failure can be defined as "… any service mishap or problem that occurs during a consumer's experience with a firm" (Maxham, 2001, p. 11). It occurs when a consumer's perception of actual service experience falls below the expected level (Holloway & Beatty, 2003). In an exploratory study of online retailers, Holloway and Beatty (2003) identified the most common types of online service failure including delivery, website design, payment and security problems. Service recovery in general refers to "… those actions designed to resolve problems, alter negative attitudes of dissatisfied consumers and to ultimately retain these consumers" (Miller, et al., 2000, p. 388).

Since service failures are inevitable in both traditional and web-based service providers, effective service recovery efforts are essential for maintaining consumer satisfaction and loyalty. These efforts can be especially critical for web-based service providers (particularly those firms providing B2C services) when facing the challenge of resolving service failure situations without a face-to-face interaction with the consumer. This is a significant impediment given that providing

both psychological (e.g., empathy and apology) and tangible compensation as part of a full-fledged service recovery effort (Boshoff, 1999; Miller, et al., 2000). Moreover, consumers' level of trust in online transactions as well as complaining behavior in the event of a service failure to some degree influence the web-based service recovery process (Hoffman, Novak, & Peralta, 1999; Lee & Turban, 2001). Most importantly, the relatively low switching cost for consumers demonstrates significant pressure on online service providers in terms of resolving service problems promptly and effectively in order to maintain consumer loyalty. As such, this study empirically examines the impact of the speed and extent of service recovery effort on consumer satisfaction, consumer loyalty and positive word-of-mouth (WOM) in the B2C environment.

The extant literature further provides evidence for the declining post-service consumer satisfaction as a result of low levels of service recovery efforts (Goodwin & Ross, 1992; Kelley & Davis, 1994; McCollough & Berry, 1996). Researchers have adopted justice theory extensively to explain the process of service recovery activities and its consequences on consumers (Wirtz & Mattila, 2004). Distributive justice refers to the consumer's perception of what he or she receives as the outcome of the service recovery process(McColl-Kennedy & Sparks, 2003). A free air ticket for a delayed or cancelled flight from an airline company, or a free drink voucher for a slow meal service in a restaurant belongs to this category. Procedural justice in the service climate, on the other hand, is defined as the actual process that was used by the service provider to resolve the problem. Hence, it emphasizes the process more than the outcome (Smith, et al., 1999). Interactional justice deals with the way the service failure situation was handled between the consumer and service provider. Whether or not the service provider treats the consumer experiencing the service failure with sensitivity, empathy, compassion, dignity, and respect is considered as examples of interactional justice (Sparks & Mccoll-Kennedy, 2001).

Speed of Web-Based Service Recovery

One of the important efforts of service recovery is the degree of promptness. Especially in electronic service delivery settings, speed of recovery could play a crucial role in maintaining consumer satisfaction and loyalty in condition of relatively low switching costs for e-shoppers (Schweikhart, Strasser, & Kennedy, 1993; Spreng, Harrell, & Mackoy, 1995). In the light of procedural and interactional justice, a higher level of perceived promptness of online service recovery might help e-business to retain the customers with a result of improved customer satisfaction, loyalty, and even positive word-of-mouth. Generally speaking, most online shoppers are reluctant to continue doing business with an online retailer where they experience a service failure unless there is a prompt service recovery effort from the service provider. For instance, Hart, et al. (1990) noted that a service failure tends to be resolved successfully if the problem is solved promptly. Similarly, Wirtz and Mattila (2004) also found that the speed of service-providers

responding to a customer's complaint could serve as an indicator of organizational efficiency that speed of recovery is positively related to the overall perceived quality of the service providers.

Some other studies have also discussed consumer satisfaction the equity theory as theoretical framework. Customers would perceive differently based on equity of the situations and outcomes or compensation from the service providers. For example, Lapidus and Pinkerton (1995) adopt equity theory to examine various customer complaint situations. Their study found that subjects would perceive more resentment in an inequitable and low outcome situation, would perceive fairer and favorable to service providers offering a higher compensation, and would perceive more guilt in inequitable, high outcome situations. In sum, based on the equity theory perspective, consumer satisfaction is usually positively related to consumers' perceived fairness (Clemmer & Schneider, 1996; Oliver & Swan, 1989). In other words, perceived consumer satisfaction will increase as firms "fairly" and successfully resolve their service failures. Accordingly, perceived consumer satisfaction following a service failure is linked to perceived fairness in the recovery process (Maxham, 2001). In addition, a slow response to web-based service failures such as incorrect order item, incomplete billing, poor consumer service could result in lower consumer loyalty (Hart, et al., 1990). Hence, it is hypothesized that:

Hypothesis 1a: *The speed of web-based service recovery is positively related to post-recovery customer satisfaction.*

Hypothesis 1b: *The speed of web-based service recovery is positively related to post-recovery customer loyalty (repurchase intentions).*

Hypothesis 1c: *The speed of web-based service recovery is positively related to post-recovery customers' positive word-of-mouth (WOM).*

Magnitude of Service Recovery

Effective service recovery efforts involve not only prompt communication but also adequate and tangible compensation, which is also known as the magnitude of service recovery (Miller, et al., 2000). Prior studies on service recovery activities indicate that, overall, two major elements critical to ensure the effectiveness and completeness of service recoveries are psychological and tangible efforts (Miller, et al., 2000; Schweikhart, et al., 1993). The psychological elements may include empathizing and apologizing (Bell & Ridge, 1992; Zemke, 1994). Tangible recovery effort is to compensate for real and perceived damage (Zemke, 1994) that are aimed at providing a fair restitution for consumers' losses and inconveniences of the service failure. A secondary intent may

be to provide value-added atonement (see, e.g. Clark, et al., 1992; Hoffman, et al., 1995, Miller et al., 2000).

The magnitude of service recovery (i.e., the extent of tangibles provided) could result in higher consumer satisfaction since the consumer perceives that the service provider went "extra mile" to provide fair restitution. For instance, Clark et al. (1992) found that 91% of subjects in their study who received a "little extra" after a service failure intended to stay loyal to the specific service provider. This is consistent with the basic notion of expectation disconfirmation theory that defines satisfaction as exceeding customers' expectation (Andreassen, 2000; Oliver & Swan, 1989). In addition, the magnitude of service recovery in electronic transactions could also positively affect the spread of positive word-of-mouth (WOM) by the consumer. Prior studies have found a positive link between service recovery effort and WOM (Blodgett, Granbois, & Walters, 1993; Bloodget, Hill, & Tax, 1997). Hence, it is hypothesized that:

Hypothesis 2a: *The magnitude of web-based service recovery positively influences post-recovery customer satisfaction.*

Hypothesis 2b: *The magnitude of web-based service recovery is positively related to post-recovery customer loyalty (repurchase intentions).*

Hypothesis 2c: *The magnitude of web-based service recovery has a positive relationship with post-recovery customers' positive word-of-mouth.*

METHODOLOGY

Research Setting

A scenario-based experiment was used to gather data from respondents. A scenario-driven service research not only enables the researcher to gather important service recovery information but also manipulates key study variables for empirical testing (Harris, Grewal, Mohr, & Bernhardt, 2006; Weiner, 2000). We believe the use of scenarios in service research is appropriate at least for the following two reasons. First, carefully manipulated scenarios help researchers capture the wide range of customer responses to various service recovery activities (Smith, et al., 1999). Second, the use of scenarios reduces the potential for respondents' memory-bias, which is often a common drawback found in self-reported studies (Smith, et al., 1999; Smith, Bolton, & Wagner, 1998; Wirtz & Mattila, 2004).

With scenarios, service recovery manipulations could be better controlled, and potential ethical problems related to the actual experience of service failures could be avoided. The scenario used in this study was constructed to manipulate the speed and magnitude of online service recovery activities. We used a hypothetical scenario with two levels (low/high) of our independent variables (i.e., speed and magnitude of service recovery) in an online book retailer setting. Although the independent variables could be treated as a continuous variable, we chose to present them as categorical variables in order to distinctly capture the variance in our manipulations.

Sample

In order to test the above hypotheses, data were gathered using a scenario-based experiment with 151 undergraduate business students at a large Midwestern pubic university. We believe college students are suitable for this study based on the fact that their lifestyle involves using the Internet a lot not only for entertainment but also for shopping purposes. In addition, they are expected to have more confidence and aptitude in using technology in general and online shopping in particular. 63% of the respondents are male and mainly between the ages of 20-29 (80%). 65% of the respondents are Caucasians. In terms of online shopping behavior, fifty-one percent of the respondents indicated they shop online every month and forty percent of them admitted they spent between $50 and $250 per online purchase.

Measures

This research follows Maxham's (2000) study to use customer satisfaction, purchase intent and word-of-mouth as measures of post-recovery firm performance.

Post-recovery satisfaction

Post-recovery consumer satisfaction was measured using four items adopted from Boshoff's (1999) instrument. Although original instrument includes six items (communication, empowerment, feedback, atonement, explanation and tangibles) measuring post-recovery consumer satisfaction, we only select four items as measures of post-recovery satisfaction due to the nature of online setting. The Cronbach's Alpha for the four items was 0.96 indicating a high reliability. The four items were averaged to form a composite measure of post-recovery satisfaction.

Customer loyalty

Three items were used to measure customer loyalty (i.e., repurchase intentions) anchored on a five point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The items used

in our study were adapted from those of Maxham's (2000) study. Since most of the studies in the literature focused on the brick-and-mortar setting, the items were modified to fit the scope of our study focusing on online setting. The Cronbach's Alpha for the three items was 0.92 showing a high reliability. The three items were averaged to form a composite measure of customer loyalty.

Positive word-of-mouth (WOM)

We measured positive WOM using two items anchored on a five point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). These items are: "I am more likely to say positive things about the online book retailer to other people" and "I am more likely to encourage friends and others to do business with this online service provider" (Maxham, 2000). The Cronbach's Alpha for these two items was 0.95. Similar to the other dependent variables, we averaged the two items to create a composite measure of positive WOM.

DATA ANALYSIS AND RESULTS

Preliminary Study

Before conducting the main study, we pre-tested the measures of post-recovery customer satisfaction, loyalty and positive WOM using a separate group of 189 undergraduate students from the same institution. We presented a hypothetical online book retailer scenario followed by measurement questions regarding post-recovery customer satisfaction, loyalty, positive WOM, and demographic information.

No online retailer name was mentioned in the scenario to eliminate potential respondent bias. The respondents were asked to imagine a situation that they bought a textbook from an online book retailer right before the semester began. They did not receive the book on the date of delivery as promised in the confirmation email sent by the online book retailer. Therefore, they e-mailed the online book retailer to complain the unfulfilling book transaction. For pre-testing purposes, we gave the respondents a scenario with a single manipulated service recovery (low vs. high speed of recovery) by a hypothetical online book retailer.

Manipulation Check and Reliability Test

We then performed a manipulation check on the low vs. high service recovery. The results indicate that our scenario is perceived as planned by respondents and that the manipulation is significantly different between the two groups ($F_{(1, 187)} = 5.75$, $p < 0.05$). We also asked the respondents to what extent they think the scenarios are realistic and believable on a five-point scale

ranging from 1 to 5. Accordingly, the results indicate that most of the respondents think the scenario is indeed believable (Mean = 3.94) and realistic (Mean = 3.86).

Main Study

The participants were asked to read the unfulfilling book transaction description similar to the one in preliminary study, followed by one of the four manipulated service recovery situations (i.e., low speed-low magnitude, high speed-high magnitude, high speed-low magnitude and low speed-high magnitude of recovery). This manipulation result could be analyzed by a 2X2 Multivariate Analysis of Variance (MANOVA) with randomized equal cell assignments. MANOVA is suitable for hypothesis-testing in this study since we are interested in testing the effect of two categorical independent variables on three criterion variables (Hair, Black, Babin, Anderson, & Tatham, 2006). Prior research has shown that customers' online purchase experience can affect their satisfaction with service recovery activities (Holloway, et al., 2005; Wirtz & Mattila, 2004).

Results

The positive relationships between the speed of web-based service recovery and post-recovery customer behaviors predicted in the first set of hypotheses are supported (Wilks $\lambda = 0.59$, $F = 138.67$, $P < 0.01$). More specifically, Hypothesis 1a (H1a) proposed a positive relationship between the speed of web-based service recovery and post-recovery customer satisfaction. The results provide support for H1a ($F_{(1, 598)} = 405.953$, $P < 0.001$). Hypothesis 1b (H1b) stated a positive relationship between the speed of online service recovery and customer loyalty (repurchase intention) while hypothesis 1c (H1c) predicted a positive relationship between the speed of online service recovery and post-recovery positive WOM. The results of our analysis provided support for both H1b ($F_{(1, 598)} = 168.293$, $p< 0.001$) and H1c ($F_{(1,598)} = 138.976$, $p< 0.001$). Table 1 summarizes the MANOVA results on service recovery performance.

Table 1: Statistical Summary of MANOVA on Customer Satisfaction, Loyalty, and WOM

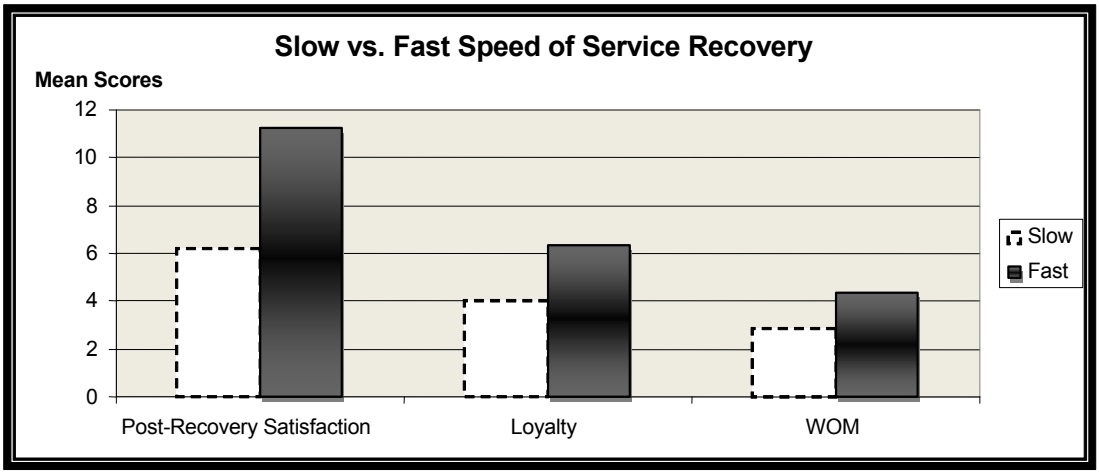
Analysis	Multivariate	Univariate	Univariate	Univariate
IVs \ DVs	MANCOVA	Customer Satisfaction	Customer Loyalty	WOM
Speed of Service Recovery	138.67***	405.95****	168.293****	138.976****
Magnitude of Service Recovery	178.85***	529.11****	197.998****	216.192****
Speed X Magnitude	32.18**			

* Significant at 0.1 ** significant at 0.05 ***significant at 0.01 **** significant at 0.001

Figure 2 shows the overall effect of the customers' perceived speed of service recovery on satisfaction, loyalty, and positive WOM. While the results on all three service recovery performance measures were significant, more dispersion of post-recovery customer satisfaction is shown between slow and fast service recovery manipulation.

Hypotheses 2a-2c proposed a positive relationship between the magnitude of service recovery, post-recovery satisfaction, loyalty and WOM respectively. The results show a strong support for the relationship between the magnitude of web-based service recovery and overall post-recovery customer behaviors (Wilks $\lambda = 0.53$, $F = 178.85$, $P < 0.01$). The univariate results provide support for the positive relationship between the magnitude of web-based service recovery and post-recovery customer satisfaction ($F_{(1, 598)} = 529.105$, $p < 0.001$), loyalty ($F_{(1, 598)} = 197.998$, $P < 0.001$) as well as positive WOM ($F_{(1, 598)} = 216.192$, $P < 0.001$).

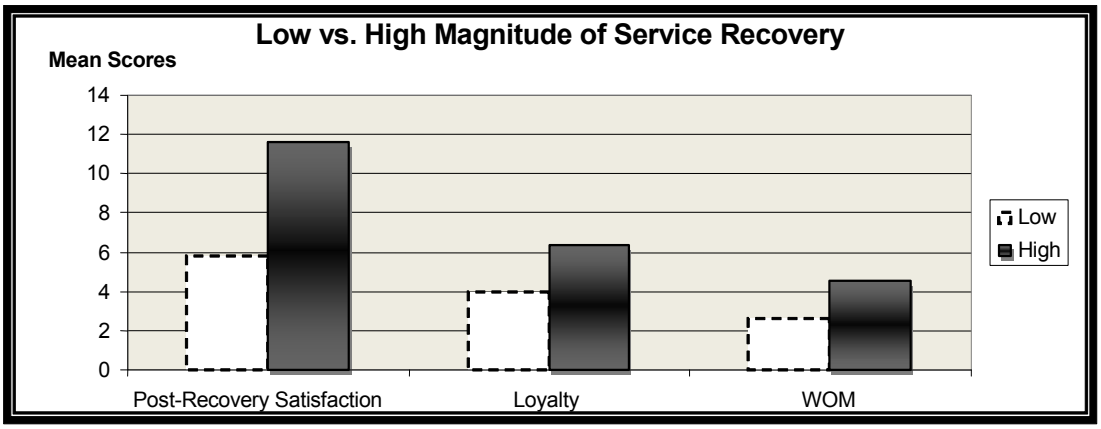
Figure 2: The Effect of Speed of recovery on Satisfaction, Loyalty and WOM[a]



[a] Mean Scores for variables are based on summed-item scores

Figure 3 presents the mean scores of post-recovery customer satisfaction, loyalty and positive WOM across low and high magnitudes of service recovery. Even though it was not part of our original hypothesized relationships, we also observed a significant interaction between the speed and magnitude of online service recovery activities (Wilks $\lambda = 0.86$, $F = 32.18$, $P < 0.01$). This finding indicates that consumers would perceive these two types of recovery activities interdependently or that firms that respond fast to the service failure usually respond with magnitudes.

Figure 3: The Effect of Magnitude of recovery on Satisfaction, Loyalty and WOM[a]



[a] Mean Scores for variables are based on summed-item scores

DISCUSSION AND CONCLUSION

Implications

The purpose of this study is to investigate whether the speed and magnitude of web-based service recovery significantly affect post-recovery customer satisfaction, loyalty and positive WOM. As presented above, the results provide a strong support for the aforementioned hypotheses. In general, the results of this study indicate that online shoppers experiencing a service failure situation are more likely to be satisfied with the online service provider's solution if it is done in a more timely manner and exceeding their expected compensation. The results also show that online shoppers are more likely to be loyal and spread positive WOM if they perceive that they received a speedy and fair resolution to their service problems.

These results are consistent with the findings in the extant literature (Holloway, et al., 2005; Wirtz & Mattila, 2004). For instance, Wirtz and Mattila (2004), in their study of 187 subjects using a restaurant scenario, found that the speed of recovery was positively related to higher repurchase intention and lower negative WOM. They also found a significant three way interaction among speed, apology and compensation on post-recovery customer satisfaction. However, their overall result suggests a stronger combination effect of immediate service recovery with apology increase post-recovery satisfaction. We believe that the results of our study contribute to the ongoing research particularly in the area of online service recovery by highlighting the role of offering a prompt service recovery as it might be a clue regarding service efficiency (McColl-Kennedy & Sparks, 2003; Smith, et al., 1999). More specifically, the role of procedural (i.e. speed of recovery)

and distributive (i.e. magnitude of recovery) justice seem to suggest particular relevance to online service recovery activities.

Our findings also offer important insights on the roles of speed and magnitude of web-based service recovery activities for online businesses. With abundance of service options, low entry barriers and minimal switching costs (Holloway & Beatty, 2003), today's web-based businesses in general and online retailers in particular have to focus their resources on building customer relationship in a fashion of speedy and fair resolution. As such, enhancing the speed and magnitude of web-based service recovery not only benefits B2C firms to maintain customer loyalty but also enables them to use existing customers as efficient marketing mediums via positive WOM.

Suggestions for Future Research

The findings of this study shed lights on a number of important avenues for future research. For instance, although we examined the role of the speed and magnitude of web-based service recovery as indicators of customers' perceived procedural and distributive justice, more research is needed on the implications of interactional justice in online service recovery process. Given the phenomenal growth of instant messaging and chatting, future research in this area should examine how online service providers use such features for effective and prompt service recovery. Another future research possibility could be examining the online service recovery activities difference, if any, between companies with a pure online business model and those with a combination of online and brick-and-mortar establishments. Future research could also investigate the effect of consumers' trust and firm's brand awareness or reputation on online service recovery effectiveness.

Conclusion

There is an increasing scholarly interest in both online service quality and service recovery research (Forbes, Kelley, & Hoffman, 2005a; Holloway, et al., 2005; Parasuraman, Zeithmal, & Malhotra, 2005). Despite the growing importance of online service research, the empirical evidence in the literature is still evolving (Holloway & Beatty, 2003). This study contributes to a better understanding of web-based service recovery effort and its repercussions on customer satisfaction, loyalty and positive WOM.

REFERENCES

Andreassen, T. W. (2000). Antecedents to Satisfaction with Service Recovery. *European Journal of Marketing, 34*(1/2), 156-175.

Bell, C., & Ridge, K. (1992). Service Recovery for Trainers. *Training and Development, 46*(5), 58-63.

Bitner, M. J. (1990). Evaluating the service encounters: the effects of physical Surroundings and employee responses. *Journal of Marketing, 54*(1), 95-106.

Blodgett, J. G., Granbois, D. H., & Walters, R. G. (1993). The effects of perceived justice on Complainant's Negative Word-of-mouth Behavior and Repartronage Intentions. *Journal of Retailing, 69*(4), 399-427.

Bloodget, J. G., Hill, D. J., & Tax, S. S. (1997). The Effects of Distributive, Procedural, and Interactional Justice on post complainant behavior. *Journal of Retailing, 73*(2), 185-210.

Boshoff, C. (1999). RECOVSAT: an instrument to measure satisfaction with transaction-specific service recovery. *Journal of Service Research, 1*(3), 236-249.

Clark, G. L., Kaminiski, P. F., & Rink, D. R. (1992). Consumer complaints: advice on how Companies should respond based on an empirical study. *The Journal of Services Marketing, 6*(1), 41-50.

Clemmer, E. C., & Schneider, B. (1996). Fair Service. In T. A. Swartz, D. E. Bowen & S. W. Brown (Eds.), *Advances in Services Marketing and Management* (Vol. 5, pp. 109-126). Greenwich, CT: JAI Press.

Forbes, L. P., Kelley, S. W., & Hoffman, K. (2005a). Typologies of E-Commerce Retail Failures and Recovery Strategies. *Journal of Services Marketing, 19*(5).

Forbes, L. P., Kelley, S. W., & Hoffman, K. D. (2005b). Typologies of E-Commerce Retail Failures and Recovery Strategies. *Journal of Services Marketing, 19*(5), 280-292.

Goodwin, C., & Ross, I. (1992). Consumer responses to service failures: an influence of Procedural and Interactional fairness perceptions. *Journal of Business Research, 25*(2), 149-163.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate Data Analysis* (6th ed.). Upper Saddle River, NJ: Pearson Education, Inc.

Harris, K. E., Grewal, D., Mohr, L. A., & Bernhardt, K. L. (2006). Consumer Responses to Service Recovery Strategies: The Moderating Role of Online versus Offline Environment. *Journal of Business Research, 59*, 425-431.

Hart, C. W., Heskett, J., & Sasser, W. (1990). The profitable Art of Service Recovery. *Harvard Business Review, August*, 148-156.

Hoffman, D. L., Novak, T. P., & Peralta, M. (1999). Building consumer trust online. *Communications of the ACM, 42*(4), 80-85.

Holloway, B. B., & Beatty, S. (2003). Service Failure in Online Retailing: A Recovery Opportunity. *Journal of Service Research, 6*(1), 91-105.

Holloway, B. B., Wang, S., & Parish, J. T. (2005). The Role of Cumulative Online Purchasing Experience in Service Recovery Management. *Journal of Interactive Marketing, 19*(3), 55-66.

Kelley, S. W., & Davis, M. A. (1994). Antecedents to consumer expectations for service Recovery. *Journal of Academy of Marketing Sciences, 22*(1), 52-61.

Lapidus, R. S., & Pinkerton, L. (1995). Customer complaint situations: An equity theory perspective. *Psychology and Marketing, 12*(2), 105-122.

Lee, M. K. O., & Turban, E. (2001). A Trust Model for Consumer Internet Shopping. *International Journal of Electronic Commerce 6*(1), 75-91.

Maxham, J. G. (2001). Service recovery's influence on consumer satisfaction, positive Word-of-mouth, and purchase intentions. *Journal of Business Research, 54*(1), 11-24.

McColl-Kennedy, J. R., & Sparks, B. A. (2003). Application of Fairness Theory to Service Failures and Service Recovery. *Journal of Service Research, 5*(3), 251-266.

McCollough, M. A., & Berry, L. L. (1996). A conceptual model and empirical investigation of consumer satisfaction after service failure and recovery. In R. T. Rust & R. L. Oliver (Eds.), *Frontiers in Services. A Conference co-sponsored by the American Marketing Association and the Center for Services Marketing and Vanderbilt University*. Chicago: American Marketing Association.

Miller, J. L., Craighead, C. W., & Karwan, K. R. (2000). Service recovery: a framework and Empirical investigation. *Journal of Operations Management, 18*(4), 387-400.

Oliver, R., & Swan, J. E. (1989). Consumer perceptions of interpersonal equity and satisfaction In transactions: a field survey approach. *Journal of Marketing, 53*(2), 21-35.

Parasuraman, A., Zeithmal, V., & Malhotra, A. (2005). E-S-QUAL: A multiple-item scale for Assessing electronic service quality. *7*(3), 213-233.

Schweikhart, S. B., Strasser, S., & Kennedy, M. R. (1993). Service recovery in health Services organizations. *Hospital and Health Administration, 38*(1), 3-21.

Smith, A. K., Bolton, R. N., & Wagner, J. (1999). A Model of Customer Satisfaction with Service Encounters Involving Failure and Recovery. *Journal of Marketing Research, 36*(3), 356-372.

Smith, A. K., Bolton, R. N., & Wagner, J. A. (1998). A model of consumer satisfaction with Service encounters involving failure and recovery. Marketing Science Institute.

Sparks, B. A., & Mccoll-Kennedy, J. R. (2001). Justice strategy options for increased customer satisfaction in a services recovery setting. *Journal of Business Research, 54*(3), 209-218.

Spreng, R. A., Harrell, G. D., & Mackoy, R. D. (1995). Service recovery: impact on Satisfaction and intentions. *Journal of Services Marketing, 9*(1), 15-23.

Tax, S. S., Brown, S. W., & Chandrashekaran, M. (1998). Customer evaluations of service complaint experiences: implications for relationship marketing. *The Journal of Marketing, 62*(2), 60-76.

Weiner, B. (2000). Intrapersonal and Interpersonal Theories of Motivation from an Attributional Perspective *Educational Psychology Review, 12*(1), 1-14.

Wirtz, J., & Mattila, A. (2004). Consumer Responses to Compensation, Speed of Recovery and Apology after a Service Failure. *International Journal of Service Industry Management, 15*(2), 150-166.

Zemke, R. (1994). Service recovery. *Executive Excellence, 11*(9), 17-18.

ARE S&P 500 INDEX MUTUAL FUNDS CREATED EQUALLY?

John Cresson, Southeastern Louisiana University

ABSTRACT

Standard and Poor's (S&P) 500 Index mutual funds are designed to replicate the S&P 500 Index, and therefore, should move very closely with the S&P 500 Index. They are supposed to be homogeneous goods. In this study, I analyze the performance of S&P 500 Index mutual funds. The great appeal of researching Index funds is that there are limited opportunities in the equity markets to study homogeneous investment vehicles. This study differs from previous papers in a number of ways. Unlike other researchers who use Morningstar exclusively as their data source, I employee two popular mutual fund data sources to conduct my analysis, Morningstar and Lipper. Also, I analyze both tracking and performance, and examine possible influences on performance. I present evidence that tracking measures are very high and that managers do a good job of tracking the S&P 500 Index. However, despite the high tracking measures, S&P 500 Index funds clearly underperform the S&P 500 Index. I present evidence that funds with lower expenses and funds which are more established have higher returns. Also, there is evidence that returns are positively correlated with past returns.

INTRODUCTION

Standard and Poor's (S&P) 500 Index mutual funds have become enormously popular with investors. Chen, Noronha, and Singal (2005) argue that part of the popularity results from the evidence that actively managed mutual funds do not consistently outperform index mutual funds. S&P 500 Index mutual funds are designed to replicate the S&P 500 Index. Frino, Gallagher, Neubert, and Oetomo (2004) note that the management of index portfolios is theoretically straightforward. Even though the management of index portfolios may be straight forward in theory, Frino and Gallagher (2001), and Elton, Gruber, and Busse (2004) note that the actual practice is far more complicated.

Despite the popularity of S&P 500 Index mutual funds, Frino and Gallagher note that empirical research addressing index funds is scarce. In this study, I analyze the performance of S&P 500 Index mutual funds. The great appeal of researching Index funds is that there are limited opportunities in the equity markets to study homogeneous investment vehicles. This study differs from previous papers in a number of ways. Unlike other researchers who use *Morningstar*

exclusively as their data source, I employee two popular mutual fund data sources to conduct my analysis, *Morningstar* and *Lipper*. Also, I analyze both the tracking and performance of S&P 500 Index mutual funds, and the possible influences on performance. (For studies that analyze tracking, see Frino & Gallagher (2001), Elton, Gruber & Busse (2004), and Frino, Gallagher & Neubert-Oetomo (2004).)

I present evidence that tracking measures are very high and that managers do a good job of tracking the S&P 500 Index. However, despite the high tracking measures, S&P 500 Index funds clearly underperform the S&P 500 Index. Elton, Gruber, and Busse note that expenses may account for a portion of the differential performance between index funds. Presenting evidence consistent with their argument, I find that funds with lower expenses have higher returns. I also find a positive, significant relationship between the return and the age of a fund. This is evidence that older, more established funds have higher returns. Elton, Gruber, and Busse also note that investors should consider if they can predict the returns that a fund will generate in the future. An investor who is concerned about future returns will likely study past returns when picking funds. I present evidence that returns are positively correlated with past returns.

Since S&P 500 Index funds are supposed to be homogeneous goods, investors may assume that they are all the same. Even index fund managers admit that high expenses exist because the funds feel they can get away with it. "Investors usually don't think to compare our expenses. They think we're all the same" according to a manager of a high-expense fund ("Up Front," Business Week, April 14, 1997, McGraw-Hill Companies). This paper presents evidence that there are variations in returns across S&P 500 Index mutual funds and that higher expenses reduce returns. With so many index funds to analyze, investors may simply be overwhelmed with information. This paper provides research to simplify the analysis for investors.

S&P 500 INDEX MUTUAL FUNDS

S&P 500 Index mutual funds are designed to replicate the performance of the S&P 500 Index, a market-value-weighted index of five hundred stocks that are traded on the New York Stock Exchange, the American Stock Exchange, and the NASDAQ National Market (S&P 500 1999/2000 Directory). Since S&P 500 Index mutual funds are designed to replicate the S&P 500 Index, they should perform like the S&P 500 Index.

Even though the management of index portfolios may be straight forward in theory, actual practice is far more complicated. Elton, Gruber, and Busse argue that even if index mutual funds did not charge expenses, their returns would probably differ from the Index's returns. For example, it costs money to run an index mutual fund, while a pure index is a fictitious paper portfolio that incurs no expenses. Also, the composition of the Index frequently changes. In 2001 alone, there were 30 additions and 30 deletions to the S&P 500 Index, with at least one change occurring in every month of the year. In 2002 there were 24 additions and 24 deletions occurring in months other

than March, April and October. In 2003 there were 9 additions and 9 deletions occurring in February, March, April, July, August, September, and November (Source: Standard and Poor's).

The goal of an S&P 500 Index mutual fund manager is to replicate the performance of the S&P 500 Index given market constraints. This is demonstrated by information provided by *Morningstar* and the mutual funds themselves for a sample of "S&P 500" mutual funds. For example, one fund seeks to provide investment results that correspond to the total return of the S&P 500, while another fund seeks growth of capital and income that correspond to the investment return of the S&P 500 index. The second fund will primarily invest in common stocks that comprise the index.

DATA

In this paper, I employee two popular mutual fund data sources to conduct my analysis, *Morningstar* and *Lipper*. Construction of the *Morningstar* data set starts with a list of mutual funds monitored by *Morningstar* in 2003 that are entitled as "S&P 500" mutual funds. This leads to eighty-one funds. From this list, funds are eliminated if I cannot verify that they are indeed S&P 500 Index funds or if they are enhanced or hedge S&P 500 Index funds. The final *Morningstar* sample consists of forty-two S&P 500 Index mutual funds.

The *Lipper* dataset consists of mutual funds monitored by *Lipper* that they classify as "S&P 500 Index" mutual funds effective February 2004. This results in 172 funds. *Lipper* provides the three-year, five-year and ten-year returns of the funds that they monitor. This leads to 151, 100, and 39 S&P 500 Index mutual funds that are available for analyses that have returns for three, five, and ten years, respectively. *Lipper* also provides a ranking of S&P 500 Index mutual funds in terms of meeting certain goals, such as expenses. The scores presented by *Lipper* are derived from complex formulas that scrutinize funds based on clear criteria with each fund being ranked against its peers.

The descriptive statistics of the S&P 500 Index mutual funds as collected from *Morningstar* are presented in Table 1. The average fund has more than 97 percent of its holdings in stock, and is relatively young (an average inception date of 1997). The average S&P 500 Index mutual fund has more than one billion dollars in total assets, with one fund having as little as 13 million dollars in assets and another fund having more than 6.8 billion dollars in assets. The average expense ratio of an S&P 500 Index fund is .5054 percent, with a low of .13 percent and a high of 1.5 percent.

Table 1: Descriptive Statistics of S&P 500 Index Mutual Funds			
	Mean	Minimum	Maximum
Total Assets ($Mill)	1,004	13	6,897
Expense Ratio (%)	5054	.13	1.5
Inception Date	1997	1985	2002
Percentage in Stock	97	93	100
This table presents the mean, minimum, and maximum of the total assets, expense ratio, inception date, and percentage of the fund's assets invested in stocks of S&P 500 Index mutual funds employing *Morningstar* data.			

TRACKING RESULTS OF S&P 500 INDEX MUTUAL FUNDS

According to Elton, Gruber, and Busse, investors should care about how closely a fund tracks the index. Although several measures of tracking error are presented in the literature, Chen, Noronha, and Singal (2005) note that there is no universally accepted definition. Elton, Gruber, and Busse employ the coefficient of determination, R^2 of an ordinary least squares regression, to measure tracking. R^2 of the regression model indicates the closeness to which the index fund mimics the S&P 500 Index. According to *Morningstar*, R^2 "reflects the percentage of a fund's movements that are explained by movements in its benchmark index. An R^2 of 100 means that all movements of a fund are completely explained by the movements in the index. Thus, index funds that invest only in S&P 500 stock will have an R^2 very close to 100." R^2 is usually expressed as ranging from 0 to 1. However, *Morningstar* expresses R^2 as having a range from 0 to 100 (in percentages). *Morningstar* provides the R^2 values of the mutual funds they monitor. R^2 of each S&P 500 Index Mutual Fund is displayed in Table 2. According to *Morningstar,* every fund in my sample (with an available R^2) has an R^2 of 100. (Since *Morningstar* calculates R^2 over a three-year period, R^2 is available for thirty-five of the funds in my sample.) The mean R^2 of the S&P 500 Index mutual funds is 100, with a standard deviation of 0. Thus, employing Morningstar data, every fund perfectly tracks the Index. My findings are consistent with the results of other studies that employ monthly returns in determining R^2 values of S&P 500 Index mutual funds. Considering how difficult it is to truly replicate the S&P 500 Index, these high values of R^2 are very encouraging. Thus, managers do a relatively good job of tracking the S&P 500 Index.

Table 2: R^2 Values of S&P 500 Index Mutual Funds	
Panel A: R^2 values of S&P 500 Index Mutual Funds.	
Ticker	R2
AASPX	100
AAFPX	100
ADIDX	100
ADIEX	100
WFSPX	100
BNSPX	100
SPFIX	100
CINIX	100
SBSDX	100
DSPCX	100
DSPNX	100
DSPIX	100
PEOPX	100
ETSPX	100
GIDIX	100
ISIIX	100
ISPIX	100
MDSRX	100
MASRX	100
SPIAX	100
SPIBX	100
SWPEX	100
SWPIX	100
SCPIX	100
KSAAX	100
SSPIX	100
TRQIX	100
SBSPX	100
SVSPX	100
SAPIX	100
PSPIX	100

Table 2: R^2 Values of S&P 500 Index Mutual Funds				
Panel A: R^2 values of S&P 500 Index Mutual Funds.				
Ticker			R2	
PWSPX			100	
UASPX			100	
UAIIX			100	
USSPX			100	
Panel B: Descriptive Statistics				
	Mean	Standard Deviation	Minimum	Maximum
R^2	100	0	100	100
This table presents the R^2 values of S&P 500 Index mutual funds. Panel A presents the fund ticker and R^2 for each fund. The mean, standard deviation, minimum and maximum R^2 values are displayed in Panel B.				

RETURNS OF S&P 500 INDEX MUTUAL FUNDS

Elton, Gruber, and Busse argue that, in addition to tracking, investors should also be concerned with an index fund's returns relative to the index's returns. Even if a fund has a high tracking measure, this may not translate into returns following the index. Following Elton, Gruber and Busse's lead, I now analyze the returns on the S&P 500 Index mutual funds relative to the S&P 500 Index over a four year time period. The data is provided by *Morningstar* and presented in Table 3. Clearly, S&P 500 Index mutual funds underperform the S&P 500 Index. The average S&P 500 Index mutual fund underperformed the S&P 500 Index by .6520% in 1999, .3928% in 2000, .4781% in 2001, and .3537% in 2002. Some funds underperformed the Index by as much as two percent. At least 92, 92, 97, and 92 percent of the funds underperformed the Index in 1999, 2000, 2001, and 2002, respectively. Elton, Gruber, and Busse suggest that the performance of index funds would likely differ from the returns on the index. Thus, my findings are not alarming.

Table 3: Returns of S&P 500 Index Mutual Funds Relative to the S&P 500 Index				
Panel A: Deviation of Returns of S&P 500 Index Mutual Funds				
	Mean	Stand Dev	Minimum	Maximum
1999 Deviation (%)	-.6520	.4840	-2.0	0.1
2000 Deviation (%)	-.3928	.4082	-1.4	0.6
2001 Deviation (%)	-.4781	.3237	-1.7	0.1
2002 Deviation (%)	-.3537	.3486	-1.2	0.4

Table 3: Returns of S&P 500 Index Mutual Funds Relative to the S&P 500 Index				
Panel B: Number of Funds that Outperform and Underperform the S&P 500 Index				
	1999	2000	2001	2002
# that Outperform	1	2	1	3
	(.0400)	(.0714)	(.0244)	.0732)
# that had Same Performance	1	0	0	0
	(0400)	(.0000)	(.0000)	(.0000)
# that Underperform	23	26	40	38
	(.9200)	(.9286)	(.9756)	(.9268)
Number of funds in Sample	25	28	41	41

Panel A presents the deviation of returns of S&P 500 Index mutual funds relative to the Index over a four year period. The mean, standard deviation, minimum and maximum of deviations of returns are presented. Panel B presents the number of S&P 500 Index Mutual Funds that outperform, underperform, and perform the same as the S&P 500 Index over a five year period. The percentages are in parentheses. Morningstar is the data source.

RELATIONSHIP BETWEEN THE RETURN AND THE EXPENSE RATIO

According to Collins (1999), assuming an index fund successfully replicates its index, the fund's expense ratio may be the primary determinant as to whether the fund does better or worse than comparable index funds. Elton, Gruber, and Busse also suggest that expenses may explain the differences in returns amongst index funds. They maintain that by purchasing and selling securities, a fund incurs transaction costs which result in returns below that of an index. The descriptive statistics presented in Table 1 demonstrate that there are differences across funds in terms of the expense ratio. The amount that a fund underperforms the S&P 500 Index varies across funds, and a portion of the differential performance may be explained by the difference in expenses between funds.

In this section, S&P 500 Index mutual fund returns are regressed on their expenses to determine whether the variation in returns across mutual funds is explained by the variation in expenses. *Lipper* is the data source for this analysis since they rank S&P 500 Index mutual funds based upon expenses. A service that *Lipper* provides is that it ranks a fund based on minimizing expenses relative to its peers for a three-year, five-year, and ten-year time period. Three, five, and ten year return and expense statistics are presented in Table 4.

Table 4: Returns and Expenses of S&P 500 Index Mutual Funds					
	Mean	Std Dev	Min	Max	N
3 Year Returns	-1.64	.425	-2.83	-1.01	151
3 Year Expenses	3.01	1.428	1	5	151
5 Year Returns	-.650	.403	-1.66	-.03	100
5 Year Expenses	3.03	1.44	1	5	100
10 Year Returns	10.94	.247	10.42	11.42	37
10 Year Expenses	3.108	1.409	1	5	37
This table presents the mean, standard deviation, minimum, and maximum of three-year, five-year and ten-year returns and expenses. The number of observations (N) is also displayed. *Lipper* is the data source.					

Since *Lipper* provides data over different time periods, several simple regression models can be analyzed. Three-year, five-year and ten-year returns are regressed on the three-year, five-year, and ten-year expense scores, respectively. The results are presented in Table 5, Panel A. The simple regression model is as follows:

$$RET_i = a_i + b_i EXP_i + \varepsilon_i \quad (1)$$

where RET_i is the three-year return (Model 1), five-year return (Model 2), and ten-year return (Model 3) on mutual fund i, and EXP_i is the three-year expense measure (Model 1), five-year expense measure (Model 2), and ten-year expense measure (Model 3) of fund i. Following the argument of Elton, Gruber, and Busse, the prediction is that the relationship is negative. Indeed, this is what I find. The slope is -.1406 when employing three-year returns and expenses, -.1422 for five-year returns and expenses, and -.1395 for ten-year returns and expenses. All slope coefficients are statistically significant at the 1% level. The test statistic is -6.5286 for the three-year data, -5.8612 for the five-year data, and -7.7199 for the ten-year data. This is evidence that funds with lower expenses have higher returns. Also, this empirical evidence supports Collins' contention that, assuming that the index fund successfully replicates its index (as I find), the fund's expense ratio may be the primary determinant as to whether the fund does better or worse than comparable index funds.

RELATIONSHIP BETWEEN THE RETURN AND THE AGE OF THE FUND

Replicating the S&P 500 Index is a very difficult task. If experience has any value, then managers may get better at replicating the S&P 500 index over time. Fortin, et al, suggest that it would be logical to assume that there is a direct correlation between fund performance and portfolio manager experience. Following the argument of Fortin, et al, fund families with more experience

should have higher returns. There should be a positive relation between the experience of a fund, as measured by longevity, and its return. To determine if a relationship exists, returns are regressed on the age of the fund using *Lipper* data. The expectation is that the slope coefficient is positive. The simple regression model is as follows:

$$RET_i = a_i + b_i AGE_i + \varepsilon_i \quad (2)$$

where RET_i is the return on mutual fund i, and AGE_i is the age of fund i. As was mentioned previously, with *Lipper* providing data over different time periods, several simple regression models can be analyzed. The results are presented in Table 5, Panel B. The return is the three-year return and the age is the 3, 5 or 10 years of existence of the fund in Model 1. In Model 2, the return is the five-year return and the age is the 5 or 10 years in existence of the fund. I indeed observe a positive, highly significant relationship between the return and age of a fund. When regressing three-year returns on age, the slope coefficient is .0494 (test-statistic = 4.0889) and significant at the 1% level. The slope coefficient is .0479 (test-statistic = 3.0087) and significant at the 1% level when regressing five-year returns on age. This is evidence that older, more established funds have higher returns.

MULTIPLE REGRESSION

From the simple regression models above, I find that the expense measure and the age of the fund are highly correlated with the return on an S&P 500 Index mutual fund. In this section, I analyze whether or not any additional variation in returns can be explained by a multiple regression model. The model is:

$$RET_i = \alpha_i + \beta_1 EXP_i + \beta_2 AGE_i + \varepsilon_i \quad (3)$$

where the dependent and independent variables were previously defined. The existence of multicollinearity may result in the expense ratio and/or the inception date not being significant in a multiple regression model. The results are presented in Table 5, Panel C. In Model 1, three-year returns are regressed on three-year expenses and age. In Model 2, five-year returns are regressed on five-year expenses and age. As presented, both independent variables remain highly statistically significant with the same signs as from the simple regression models. The expense ratio is negatively significant (one-percent level), while age is positively significant (one-percent level in Model 1, and five-percent level in Model 2) in both multiple regression models. Overall, both models are highly significant (F-value of 30.6971 in Model 1, and 21.2512 in Model 2) and improve the explanatory power relative to the simple regression models.

Table 5: Regression of Returns on Fund Characteristics		
Panel A: Simple Regression Model: $RET_i = a_i + b_iEXP_i + \varepsilon_i$		
Indep Var	Model 1	Model 2
	3-yr Rets	5-yr Rets
Intercept	-1.223	-.2191
	(-17.04)***	(-2.69)***
EXP	-.1406	-.1422
	(-6.53)***	(-5.86)***
R^2	.2224	.2595
N	151	100
Panel B: Simple Regression Model: $RET_i = a_i + b_iAGE_i + \varepsilon_i$		
Indep Var	Model 1	Model 2
	3-yr Rets	5-yr Rets
Intercept	-1.925	-.9831
	(-25.49)***	(-8.39)***
AGE	.0494	.0479
	(4.09)***	(3.01)***
R^2	.1009	.0846
N	151	100
Panel C: Multiple Regression Model: $RET_i = \alpha_0 + \beta_1EXP_i + \beta_2AGE_i + \varepsilon_{i,}$		
	Model 1	Model 2
Indep Var	3-yr Rets	5-yr Rets
Intercept	-1.489	-.4943
	(-15.37)***	(-3.65)***
EXP	-.131	-.132
	(-6.345)***	(-5.541)***
AGE	.042	.035
	(3.85)***	(2.51)**
R^2	.2931	.3046
Adjusted R^2	.2836	.2903
F-value	30.70***	21.25***
N	151	100

Table 5: Regression of Returns on Fund Characteristics

, * indicate significance at the 5%, and 1% level, respectively.
The fund characteristics are regressed on returns to determine whether the variation in returns across mutual funds is explained by the variation in these fund characteristics. The dependent variable is RET. RET is the three-year return, five-year return, and ten-year return. The independent variable is the expense measure (EXP) in Panel A and the age of the fund (AGE) in Panel B. Simple regression models are presented in Panel A and Panel B, while multiple regression models are presented in Panel C. The regression coefficient is followed by the test statistic in parentheses.

PREDICTABILITY OF RETURNS

Elton, Gruber, and Busse note that investors should consider if they can predict the returns that a fund will generate in the future. An investor who is concerned about future returns, will likely study past returns when picking funds. Past returns might predict future returns. In this section, I examine if a statistically significant relationship exists between returns over time. Returns are regressed on lagged returns to determine whether the variation in returns across mutual funds is explained by the variation in lagged returns. Since *Morningstar* and *Lipper* provide the returns on the funds that they monitor, both data sources are employed in this analysis.

Using *Lipper* data, five-year returns are regressed on three-year returns (Model 1), ten-year returns are regressed on three-year returns (Model 2), and ten-year returns are regressed on five-year returns (Model 3). The results are presented in Table 6. I present evidence that performance is positively correlated with past performance. The slope coefficient is positive and highly significant (all at the one percent level) for each of the three regression models.

Table 6: Regression of Returns on Lagged Returns

	Model 1	Model 2	Model 3
Indep Var	5-yr Rets	10-yr Rets	10-yr Rets
Intercept	.981	12.447	11.435
	(34.78)***	(213.51)***	(543.53)***
3 Year Rets	1.033	1.073	
	(59.509)***	(26.823)***	
5 Year Rets			1.043
			(28.40)***
R^2	.9730	.9510	.9561
N	100	39	39

Table 6: Regression of Returns on Lagged Returns

, * indicate significance at the 5%, and 1% level, respectively.
Returns are regressed on lagged returns to determine whether the variation in returns across mutual funds is explained by the variation in lagged returns. In Model 1, five-year returns are regressed on three-year returns. Model 2 presents the ten-year returns regressed on three-year returns. In Model 3, ten-year returns are regressed on five-year returns. The regression coefficient is followed by the test statistic in parentheses. *Lipper* is the data source.

When employing *Morningstar* data, year 2000 returns are regressed on year 1999 returns, year 2001 returns are regressed on year 2000 returns, year 2002 returns are regressed on year 2001 returns, and year 2003 returns are regressed on year 2002 returns. The results are presented in Table 7, Panels A, B, C and D (Model 1). The slope coefficient is positive and highly significant (all at the one percent level) for all four simple regression models. The slope (and test statistic) is .7425 (9.1174), .5676 (7.4912), .7257 (5.9365), and .8646 (5.0414) when regressing 2000 returns on 1999 returns, 2001 returns on 2000 returns, 2002 returns on 2001 returns, and 2003 returns on 2002 returns, respectively.

Table 7: Regression of Returns at Time T+1, T+2, T+3, T+4 on Returns at Time T

Simple Regression Models:	Model 1: $RET(T+1)_i = \alpha_i + b_i RET(T)_i + \varepsilon_i$
	Model 2: $RET(T+2)_i = a_i + b_i RET(T)_i + \varepsilon_i$
	Model 3: $RET(T+3)_i = a_i + b_i RET(T)_i + \varepsilon_i$
	Model 4: $RET(T+4)_i = a_i + b_i RET(T)_i + \varepsilon_i$

Panel A: Independent Variable is 1999 Returns, Dependent Variables are 2000, 2001, 2002, 2003 Returns

	Model 1	Model 2	Model 3	Model 4
Indep Var	2000 Rets	2001 Rets	2002 Rets	2003 Rets
Intercept	-24.61	-23.15	-34.49	11.10
	(-14.81)***	(-20.57)***	(-19.90)***	(6.58)***
1999 Returns	.7425	.5308	.5913	.8304
	(9.11)***	(9.63)***	(6.96)***	(10.04)***
R^2.7832	.8011	.6781	.8144	
N	25	25	25	25

Panel B: Independent Variable is 2000 Returns, Dependent Variables are 2001, 2002 and 2003 Returns

	Model 1	Model 2	Model 3	
Indep Var	2001 Rets	2002 Rets	2003 Rets	
Intercept	-6.929	-15.275	36.923	
	(-9.62)***	(-16.28)***	(39.11)***	

Table 7: Regression of Returns at Time T+1, T+2, T+3, T+4 on Returns at Time T				
2000 Returns	.5676	.7557	.9366	
	(7.49)***	(7.65)***	(9.42)***	
R^2	.6833	.6926	.7736	
N	28	28	28	
Panel C: Independent Variable is 2001 Returns, Dependent Variables are 2002 and 2003 Returns				
	Model 1	Model 2		
Indep Var	2002 Rets	2003 Rets		
Intercept	-13.472	43.417		
	(-8.90)***	(29.88)***		
2001 Returns	.7257	1.2507		
	(5.93)***	(10.65)***		
R^2	.4746	.7441		
N	41	41		
Panel D: Independent Variable is 2002 Returns, Dependent Variables is 2003 Returns				
	Model 1			
Indep Var	2003 Rets			
Intercept	47.358			
	(12.30)***			
2002 Returns	.8646			
	(5.04)***			
R^2	.3945			
N	41			

*, **, *** indicate significance at the 10%, 5%, and 1% level, respectively.
Returns are regressed on lagged returns to determine whether the variation in returns across mutual funds is explained by the variation in lagged returns using Morningstar data. These are simple regression models. In Panel A, the returns from 1999 are regressed on the returns from 2000, 2001, 2002, and 2003, respectively. The returns from 2000 are regressed on the returns from 2001, 2002, and 2003, respectively, in Panel B. The returns from 2001 are regressed on the returns from 2002, and 2003, respectively, in Panel C. In Panel D, the returns from 2002 are regressed on the returns from 2003. The regression coefficient is followed by the test statistic in parentheses.

I now examine the association between returns and past returns lagged for two, three and four periods as presented in Table 7. In Panel A, returns from 2001, 2002, and 2003, respectively, are regressed on returns from 1999. Panel B presents the results of returns from 2002 and 2003, respectively, regressed on returns from 2000. Returns from 2003 being regressed on returns from 2001 are displayed in Panel C. The simple regression models are:

$$RET(T+2)_i = a_i + b_i RET(T)_i + \varepsilon_i \text{ (Model 2)} \quad (4)$$

$$RET(T+3)_i = a_i + b_i RET(T)_i + \varepsilon_i \text{ (Model 3)} \quad (5)$$

$$RET(T+4)_i = a_i + b_i RET(T)_i + \varepsilon_i \text{ (Model 4)} \quad (6)$$

where: $RET(T+2)_i$ is the return on mutual fund i two time periods subsequent to time T; $RET(T+3)_I$ is the return on mutual fund i three time periods subsequent to time T; $RET(T+4)_i$ is the return on mutual fund i four time periods subsequent to time T; and $RET(T)_i$ is the return on mutual fund i at time period T. When examining the association between returns and returns lagged two, three, and four periods, I get very strong results. As presented in Table 7, the slope coefficient is positive and significant at the one percent level for every simple regression. When 2001, 2002, and 2003 returns, respectively, are regressed on 1999 returns, the slope coefficient (and test statistic) is .5308 (9.6256), .5913 (6.9612), .8304 (10.0461), correspondingly. The slope (and test statistic) is .7557 (7.6545) and .9366 (9.4278) when 2002 and 2003 returns, respectively, are regressed on 2000 returns. The slope is 1.2507 with a test statistic of 10.6509 when returns from 2003 are regressed on returns from 2001. Thus, I present additional evidence that returns are positively correlated with past returns.

CONCLUSIONS

In this study, I analyze the performance of S&P 500 Index mutual funds. The great appeal of researching Index funds is that there are limited opportunities in the equity markets to study homogeneous investment vehicles. I investigate the issues that Elton, Gruber, and Busse contend that index fund investors should care about: returns and tracking. This study differs from previous papers in a number of ways. Unlike other researchers who use *Morningstar* exclusively as their data source, I employee two popular mutual fund data sources to conduct my analysis, *Morningstar* and *Lipper*. Also, I analyze both tracking and performance, and examine possible influences on performance.

My results reveal that managers do a relatively good job of tracking the S&P 500 Index. However, despite the high tracking measures, S&P 500 Index funds clearly underperform the S&P 500 Index. I present evidence that funds with lower expenses have higher returns and older, more established funds have higher returns. I also find that returns are positively correlated with past returns over several time periods. With so many index funds to analyze, investors may simply be overwhelmed with information. This paper provides research to simplify the analysis for investors.

REFERENCES

Blume, M., & R. Edelen (2004). S&P 500 Indexers, Tracking Error, and Liquidity. *The Journal of Portfolio Management*, Spring, pp. 37-46.

Carhart, M. (1997). On Persistence in Mutual Fund Performance. *Journal of Finance*, 52, pp. 57-82.

Chen, H., G. Noronha, & V. Singal (2005). Index Changes and Unexpected Losses to Investors in S&P 500 and Russell 2000 Index Funds, Working Paper.

Collins, P. (1999). Monitoring Passively Managed Mutual Funds. *Journal of Investing*, 8, p 49-61.

Cresson, John E. (2002). R^2: A Market-Based Measure of Portfolio and Mutual Fund Diversification. *Quarterly Journal of Business and Economics*, 41, Summer/Autumn, pp. 115 - 143.

Elton, E., M. Gruber, & C. Blake (1996). The Persistence of Risk-Adjusted Mutual Fund Performance. *Journal of Business*, 69, pp. 133-157.

Elton, E., M. Gruber, & J. Busse (2004). Are Investors Rational? Choices among Index Funds. *Journal of Finance*, 59, pp. 261-288.

Fortin, R., S. Michelson, & J. Jordon-Wagner (1999). Does Mutual Fund Manager Tenure Matter? *Journal of Financial Planning*, 12, pp. 72-79.

Frino, A., & D. Gallagher (2001). Tracking S&P500 Index Funds. *Journal of Portfolio Management*, 28, pp. 44-55.

Frino, A., D. Gallagher, A. Neubert, & T. Oetomo (2004). Index Design and Implications for Index Tracking: Evidence from S&P 500 Index funds. *Journal of Portfolio Management*, Winter, pp. 89-95.

Goetzmann, W., & M. Massa (2002). Daily Momentum and Contrarian Behavior of Index Fund Investors. *Journal of Financial and Quantitative Analysis*, 37, pp. 375-389.

Grinblatt, M. & S. Titman (1989). Mutual Fund Performance: An Analysis of Quarterly Portfolio Holdings. *Journal of Business*, 62, pp. 393-416.

Gruber, M. (1996). Another Puzzle: The Growth in Actively Managed Mutual Funds. *Journal of Finance*, 55, pp. 783-810.

Keim, D. (1999). An Analysis of Mutual Fund Design: The Case of Investing in Small-Cap Stocks. *Journal of Financial Economics*, 51, pp. 50-69.

Malkiel, B. (1995). Returns from Investing in Equity Mutual Funds from 1971 to 1991. *Journal of Finance*, 50, pp. 549-572.

Perold, A. (1988). The Implementation Shortfall: Paper Versus Reality. *Journal of Portfolio Management*, 20, pp. 4-9.

2008-2009 TUITION AND FEES IN HIGHER EDUCATION

Brian T. Kench, The University of Tampa
H. Scott Wallace, University of Wisconsin-Stevens Point
Kevin Neuman, University of Wisconsin – Stevens Point

ABSTRACT

Using data set from U.S. News & World Report, the Princeton Review, and the Association to Advance Collegiate Schools of Business, this paper isolates 9 choice variables, 5 control variables, and 18 rankings variables that account for between 79 and 90% of the variation in tuition and fees across 518 institutions of higher learning in the United States. It is hoped that the results will give guidance to schools by quantifying the costs and benefits of making a given change to their tuition and fee structure.

INTRODUCTION

The degree of heterogeneity among institutions of higher learning in the U.S. is considerable. Universities and colleges are differentiated across a wide variety of attributes: public versus private, graduate programs versus no graduate programs, and religious versus secular to name a few. In addition, many colleges and universities focus their resources in excelling in specialized fields. This diversity is a great strength and is one of the reasons why the United States remains the world leader in education at the university level.

The attributes colleges and universities possess obviously are critical in determining the choices of attendees. Yet, administrative decisions regarding the level of tuition and fees often are haphazard and unrelated to the strengths of the university. In an era of declining taxpayer support and unfavorable demographic trends, public institutions, in particular, need to set tuition to the specific benefits that they offer students. To do this wisely, schools must assess their competitive positions vis-à-vis other institutions. Using data from U.S. News & World Report, supplemented by the Princeton Review and the Association to Advance Collegiate Schools of Business, we isolate 9 choice variables, 5 control variables, and 18 rankings variables that account for 79 to 90 percent of the variation in tuition and fees across 518 institutions of higher learning. The objective of this analysis is to analyze market outcomes econometrically in an effort to assist administrators in their task of setting tuition and fees given their school's market attributes.

Mapping Competitive Markets

The theoretical foundation that underpins the analysis used in this paper dates back to the 1960s with the work of economist Lancaster (1966, 1971). Lancaster introduced a new approach to consumer theory that emphasized the importance of product characteristics in the utility maximizing choices of consumers. This *characteristics* approach "assumes that consumer demand is directed not towards products per se but rather towards product characteristics. For example, when searching for a computer, consumers look for microprocessor speed, RAM capacity, hard disk capacity, screen size, and so forth. A consumer's valuation for a particular computer is the sum of the valuations for each particular characteristic" (Cabral, 2000, 207). The *characteristics* approach has led to efforts in developing empirical methods for hedonic models, which are used to estimate the demand for consumer products. Drawing upon data on car models sold in the U.S. from 1971 to 1990, economists, for example, have estimated "own- and cross-price elasticities as well as elasticities of demand with respect to vehicle attributes (such as weight or fuel efficiency)" (Berry, Levinsohn & Pakes 1995, 841). The value of this analysis is not limited to the economics discipline. For example, Gorman (1980) analyzed the egg market. Petrin (2002) studied the minivan market. And Benkard and Bajari (2004) estimated personal computer demand.

D' Aveni (2007) adapted the characteristics approach to create what he calls a "price-benefit positioning map." A price-benefit positioning map is similar to Lancaster's approach because it shows the relationship between the primary benefit that a product provides to customers and the prices of all the products in a given market (D'Aveni 2007, 112). The author outlines a number of steps that need to be completed in creating a price-benefit positioning map. First, the firm must define the relevant market for its product. This requires that it identify other products that are similar to the firm's own product in the sense that they satisfy the same consumer needs. In addition, firms must define the geographic region within which competition occurs. Second, firms need to collect data on prices of these products and on the benefits that these products provide to consumers. Drawing on this data, firms then perform regression analysis to find the relationship between product price (the dependent variable) and product benefits (the independent variables). Third, try to isolate the primary benefit (or group of correlated benefits) that accounts for the greatest variation in prices among competing products (D'Aveni, 2007).

Building on the above analysis, this paper seeks to isolate the variables that explain the variation in tuition and fees across institutions of higher education in the U.S. The results, we hope, will give guidance to enrolment management personal at colleges and universities by quantifying the costs and benefits of making a given change to their tuition and fee structure.

EMPIRICAL MODEL

The empirical results from the framework outlined by D'Aveni (2007) come from a basic regression analysis. We estimate the following model to investigate the effects of various institution characteristics on tuition:

$$\text{Tuition \& fees} = a + b_i*\text{choice variables} + b_j*\text{control variables} + b_y*\text{rankings} + e.$$

The dependent variable is the undergraduate tuition and fees for the 2008-2009 academic year. We estimate two OLS regressions reporting the results later in the paper. The first model uses in-state tuition and fees for public institutions and the second uses out-of-state tuition and fees for public institutions. The tuition and fees amount for private institutions is the same in both models. As the majority of students pay in-state tuition we consider the in-state model to be the baseline estimates. However, a number of students do pay out-of-state rates making this pricing decision important as well. Differences between students who pay in-state versus out-of-state tuition may also cause differences in the relevant factors for each market, information which can be useful for administrators in charge of setting tuition rates.

We divide the explanatory variables of the model into choice, control, and ranking groups. The primary variables in the model are the choice variables, which are defined as variables that an institution has the freedom to change at their discretion. While tuition may vary for other reasons, if the variables are out of the control of the institutions they are not variables which can be manipulated to strategically price tuition, thus making them relatively less important. The control variables are variables which likely have an effect on tuition, but are not characteristics which can be controlled by the institution. We include these variables to avoid biasing the choice variable coefficients, but also to help separate possible submarkets of higher education due to region and school type. Finally, we include a series of ranking variables constructed by various third parties. The ranking variables are included to see if outside perceptions of the institution affect pricing decisions.

Data

The next step of the theoretical framework is to define the appropriate market. Given our background and the prominent place of the United States in higher education, we use the U.S. as the relevant geographic market. Even within this geographic market, prospective students have the opportunity to consider a variety of colleges and universities. Thus, we include 267 master's level universities, 133 national universities, and 118 liberal arts colleges as described in the 2009 U.S. News & World Report (USNWR). Fourteen additional institutions had incomplete USNWR data and have been dropped from the study. Thus, the dataset used here contains 518 observations, which

represents 23 percent of all colleges and universities in the U.S. (Although we prefer an analysis of the total population, limited data have constrained our analysis to the available sub-group. Given the distribution of the sample the results should be representative of the entire population.)

The USNWR data set contains a variety of information about institutions, such as tuition, student to faculty ratio, and mean graduation rate. USNWR also compiles rankings of institutions within regions and school type. While gathered by a third party not actively involved in higher education, the data and rankings grab the attention of both sides of the education decision. Administrators actively advertise their position in the rankings lists, while prospective students use the data to compare institutions, trusting that the data is accurate and comparable. As such the USNWR data is an ideal source of information for our efforts to map the relationship between tuition and the characteristics valued by prospective students.

We also draw information from a few other sources to supplement our analysis. To incorporate other elements of the college experience we include data from 12 of the most common Princeton Review (PR) ranking categories for 2009. While primarily known for their test preparation services Princeton Review also compiles top ten lists of institutions with regard to academic issues, but also with regard to broader factors such as politics, quality of life, and social scene. To test for the effects of business school accreditation we include data on membership status during the fall of 2008 in the Association to Advance Collegiate Schools of Business (AACSB). The mission of AACSB is to advance quality management education worldwide through accreditation and through leadership. Having the AACSB accreditation is thought to be a signal of educational excellence. Numerous other accreditation bodies exist which could be included in this type of analysis, both for business schools and other disciplines. However, AACSB is the most relevant accreditation to the discipline of the current analysis and is the only one which is included.

Choice variables

The model has nine choice variables which capture dimensions institutions can change if they desire. The first two variables capture the highest degree awarded. USNWR categorizes institutions as national, masters, or liberal arts, which turn out to be proxies for the highest degree awarded. At all national universities the highest degree awarded is a PhD, at all masters universities the highest degree awarded is a masters, and at all liberal arts colleges the highest degree awarded is a bachelors. The *masters* variable has institutions that award masters level degrees as the highest degree coded 1, while all others are coded 0. The *PhD* variable has institutions that award PhD level degrees as the highest degree coded 1, while all others are coded 0. Both categories are measured relative to institutions where a *bachelors* degree is the highest degree awarded. Institutions have the ability to change the highest degree that they award to define the markets in which they compete. The variables included should capture how tuition varies across the degree types. The results should inform other institutions looking to enter a different market by showing whether tuition can be

changed to recoup the costs of a higher degree. The next two choice variables measure *the percent of classes with less than 20 students* and the *percent of classes with greater than 50 students*. These variables are included to capture the effect of relatively small and large classes, both of which may be manipulated to attract students or to cut costs. Smaller class sizes are a draw for some students but may come at a price for the institution if they need to hire faculty or cut enrolment to achieve them. On the other hand, larger classes could be a sign of trying to get more production from the same faculty and may allow institutions to lower tuition as a result.

The fifth choice variable measures the s*tudents-to-faculty ratio*. This commonly cited variable is a rough measure of the intensity of use of the faculty inputs in the education process. Once again, low student-to-faculty ratios may be attractive to students allowing institutions to charge higher tuition, but they also may be more costly forcing institutions to raise tuition. The sixth choice variable measures the *average graduation rate*. USNWR defines the average graduation rate as the percentage of entering freshmen who graduated within a six-year period or less, averaged over the classes entering from 1999 through 2002. This calculation excludes students who transferred into the school. If a school submits fewer than four years of graduation rate data, then the average is based on the number of years that are submitted. As graduation is the end product of the education consumption decision, the ability to bring students to graduation is an important measure of the efficiency of the institution. The next two variables capture the size of the student population and are included to check for economies of scale in the provision of education. The variables also might reflect different willingness to pay of students for different size institutions. Two dummy variables have been created for this purpose. Institutions that have an undergraduate student population between 6,000 and 8,999 are coded 1, while all others are coded 0. Institutions that have a student population of 9,000 and higher are coded 1, while all others are coded 0. Both categories are measured relative to institutions that have a student population between 1 and 5,999. The final choice variable captures whether or not an institution has the AACSB business school accreditation. Institutions that are *AACSB* accredited are coded 1, while those that are not are coded 0 (either because their business school is not accredited or because they do not have a business school). As achieving AACSB, or any accreditation, is a costly but potentially marketable endeavor, we include this variable to see if tuition changes as a result.

Control Variables

The model has five control variables which are included to capture variations in tuition due to characteristics out of the control of the institution. The first of these variables controls for religious affiliation: *secular* institutions, with no religious affiliation, are coded 0, while institutions that have a *religious* affiliation are coded 1. The variable should capture whether students are willing to pay a premium to attend a religious institution. The second variable controls for private institutions: *public* institutions are coded 0, while *private* institutions are coded 1. Once again, this

variable can capture different willingness to pay for private and public institutions, but can also be thought to measure the size of any subsidy received by public institutions. The last three control variables are for the institution's region of the country. USNWR divides the United States into four regions: north, south, west, and mid-west. Here we have coded three dummy variables using regional boundaries defined by USNWR. Institutions located in the south (west, mid-west) are coded 1, while institutions outside of the south (west, mid-west) are coded 0. The three regional dummy variables are measured relative to institutions located in the north. The three regional controls should account for cost of living differences in each region, but also may measure different willingness to pay for education in the regions.

Rankings Variables

Lastly, the model has two sources of ranking variables: six variables from USNWR and 12 variables from the PR. The six USNWR ranking dummy variables are *top 10 masters-north*, *top 10 masters-south*, *top 10 masters-west*, *top 10 masters-mid-west*, *top 10 national*, and *top 10 liberal arts*. Institutions that are ranked in the top 10 in each USNWR ranking category are coded 1, while all other institutions are coded 0. USNWR rankings are included to measure whether the third party rankings allow institutions to raise tuition due to the recognition.

The 12 Princeton Review ranking dummy variables are *top 10 institutions with the best classroom experience*, *top 10 institutions with the best Greek life*, *top 10 institutions with the least happy students*, *top 10 institutions with the happiest students*, *top 10 institutions where students are happiest with financial aid*, *top 10 institutions that are socially liberal*, *top 10 socially conservative institutions*, *top 10 institutions with the most diverse student population*, *top 10 institutions with the most homogeneous student population*, *top 10 biggest party schools*, *top 10 institutions where students rarely study*, and *top 10 institutions where students always study*. Institutions that are ranked in the top 10 in each PR ranking category are coded 1, while all other institutions are coded 0. The PR rankings include a much more diverse set of institution characteristics, some of which administrators may not actually desire. However, the various social characteristics may be valued by prospective students and therefore may be characteristics than can be exploited with higher tuition.

RESULTS

We estimate the model using in-state tuition and fees as our baseline model, presenting the results in Table 1. Turning to the choice variables we find a number of significant results which institutions might be able to manipulate for their advantage. First, relative to the 118 institutions that only award a bachelors degree, tuition and fees at the 133 institutions where the highest degree awarded is a PhD are lower by $3,050.14, whereas, tuition and fees are lower by $3,920.69 at the

267 institutions where the highest degree awarded is a masters, ceteris paribus. There are at least two possible explanations for this difference. First, advanced degree programs typically charge higher tuition and fees, and thus some pressure to raise undergraduate tuition and fees is diminished. The second, and the more pessimist perspective, is that schools that offer advanced degree programs spread themselves too thin. A variety of resources are funneled into these advanced degree programs at the expense of the undergraduate degree program, and the effect of this diminution is measured by the market in the form of lower tuition and fees for institutions in this category. Administrators are often uncertain of the opportunity costs of their actions. In many cases administrators only count the benefits, e.g., tuition and fees from advanced degree programs. However, the coefficients on the variables *Masters* and *PhD* offer a market measure of the opportunity cost of having advanced degree programs.

The variables *percent of classes with less than 20 students* and *percent of classes with more than 50* students capture the marginal effects of changing the number of seats offered in each class. We find that while the small class size variable is insignificant, relatively large classes do have a significant effect on tuition and fees. The coefficient of the *percent of classes with greater than 50 students* reveals that if the percent of classes with greater than 50 students decreases by one percentage point, tuition and fees would increase by $113.26 per student. This result suggests that lowering the percent of classes with 50 or more students generates a bigger bang-for-the-buck than increasing the percent of classes with less than 20 students. While both moves would likely raise costs due to the necessity of hiring more instructors, breaking up larger sections into average size classes is a more marketable move. These results make the monetary benefits associated with altering class size clearer, and would seem to refute the idea that prospective students value small class sizes.

The students-to-faculty ratio is also commonly advertised in an effort to attract prospective students. Of the 518 institutions in our dataset, the mean students-to-faculty ratio is 13.4. The marginal effect of decreasing this ratio by one percentage point is $287.97 per student, ceteris paribus. To put this number in perspective, for an average sized institution of 9,157 students, with the mean students-to-faculty ratio, hiring 10 additional faculty members would reduce the students-to-faculty ratio by 0.2 percentage points. This decrease in the ratio would raise tuition by $57.59 per student on average, for an overall increase in tuition receipts of over $527,000. This result suggests that unless the institution can hire 10 faculty members for less than $527,000, which may be quite difficult, it may not be cost effective to compete through this mechanism.

The mean graduation rate at the 518 institutions in our dataset is 67.8, which informs us that 67.8 percent of all freshman graduate within 6 years. For each incremental increase in the graduation rate above the mean, institutions charge $177.87 more in tuition and fees, ceteris paribus. Students are willing to pay more for higher than mean graduation rates and less for lower than mean graduation rates. While there are likely a variety of ways institutions can work to improve their

graduation rate, the result gives an idea of the monetary benefit associated with the improvement and can be used to evaluate the cost effectiveness of various techniques.

Our dataset has a mean institution size of 9,157 students and contains 301 small institutions with a student population below 5,999, 58 medium sized institutions with a student population between 6000 and 8,999, and 159 large institutions with a student population greater than 9,000. Relative to small institutions, medium sized institutions charge $1,960.87 more per student, while large institutions charge $2,119.55 more per student, ceteris paribus. The results may reflect diseconomies of scale in the provision of education, but also may reflect a greater willingness to pay for larger institutions with the amenities they offer.

Finally, in our dataset, 248 institutions are accredited by AACSB. Tuition and fees at institutions with the AACSB accreditation is $1,036.66 higher relative to non-AACSB accredited institutions, ceteris paribus. For an average sized institution the coefficient can give administrators a monetary benchmark to weigh the costs of achieving the accreditation. Some caution should be exercised when interpreting the results, however. While the AACSB variable likely reflects the value of an accredited business program, if institutions with AACSB accreditation are also more likely to work towards other accreditations, the variable may be picking up the value of other accreditations as well.

With regard to the control variables, tuition and fees at the 206 religiously affiliated institutions is lower by $2,577.78, ceteris paribus. This result may reflect a lower willingness to pay for religious institutions, or perhaps a greater ability to raise donor money due to their religious affiliation. Tuition and fees at the 359 private institutions is higher by $19,727.95. Stated differently, the average federal, state, and local subsidy per student at public institutions in the 2008-09 academic year was $19,727.95 per student. This per-student public subsidy has increased by $2,497.98 when compared to a similar analysis made in Kench and Wallace (2010).

To measure regional differences in tuition and fees we used USNWR's regional categorization, which resulted in 179 northern, 104 southern, 107 western, and 128 mid-western institutions. Relative to institutions in the north, tuition and fees at institutions in the south are lower by $3,227.98, in the west are lower by $1,142.01, and in the mid-west are lower by $2,013.51, ceteris paribus. It is interesting to observe the deep discount for southern institutions – 2.8 times that of institutions in the west and 1.6 times that of institutions in the mid-west. This difference reflects regional cost of living differences, but also likely reflects a different willingness to pay across the regions. While administrators cannot easily change their region of the country, they should use institutions in their region as comparisons when setting tuition.

Checking for effects of outside perceptions, we find the rankings data from USNWR and PR have mixed results. First, consider the USNWR ranking data. After controlling for the other independent variables in our model, only the variable *USNWR top 10 masters west* is significant. Institutions ranked in the top 10 in the masters west region receive a premium of $2,548.01 per student, ceteris paribus. This result suggests there is some benefit to appearing in the rankings,

although it does not seem to be widespread. Second, consider the PR rankings. Interestingly, the top 10 institutions where students are happiest with financial aid actually have tuition and fees that are lower by $4,292.81, perhaps reflecting a lesser need for financial aid given the lower tuition. In addition, the top 10 most socially conservative institutions have tuition and fees that are lower by $4,334.84 per student. This reduced tuition could possibly reflect fewer available amenities due to a lower demand by conservative students. However, students at the top 10 most homogeneous institutions are willing to pay $2,529.97 more per student for a homogeneous environment, ceteris paribus.

The results in Table 1 using in-state tuition rates likely reflect the primary decision for institutions as the majority of students pay in-state rates. However, a non-trivial number of students do pay out-of-state tuition, and may base their decisions on different characteristics. To most accurately price this market administrators should take any differences into consideration. Table 2 reports the regression results when the dependant variable for public institutions contains out of state tuition and fees. In general the results in Table 2 are quite similar to the baseline results using in-state tuition. The choice variables *masters*, *PhD*, *students to faculty ratio*, *mean graduation rate*, *student population between 6000 and 8999*; the control variable *religious*, *private*, *south*, *mid-west*; and the ranking variables *PR top 10 institutions where students are happiest with financial aid*, and *PR top 10 socially conservative institutions* all remain statistically significant with the same sign – although the magnitude of each coefficient has changed somewhat.

Table 1: Full Regression Estimates, Using In-State Tuition & Fees

Parameter	Estimate	*p-value*
(Constant)	4285.52	.11
Bachelors	0	
Masters	-3920.69	<.00
PhD	-3050.14	<.00
Percent of classes with less than 20 students	10.97	.54
Percent of classes with more than 50 students	-113.26	.05
Students to faculty ratio	-287.97	.00
Mean graduation rate	177.87	<.00
Student population between 1 and 5,999	0	
Student population between 6000 and 8999	1960.87	.00
Student population over 9000	2119.55	.00
No AACSB	0	
AACSB	1036.66	.04
Secular	0	

Table 1: Full Regression Estimates, Using In-State Tuition & Fees		
Parameter	Estimate	*p-value*
Religious	-2577.78	<.00
Public	0	
Private	19727.95	<.00
North	0	
South	-3227.98	<.00
West	-1142.01	.03
Mid-west	-2013.51	<.00
USNWR top 10 masters north	260.04	.85
USNWR top 10 masters south	1817.75	.16
USNWR top 10 masters west	2548.01	.05
USNWR top 10 masters mid-west	-1233.82	.34
USNWR top 10 national universities	-95.20	.95
USNWR top 10 liberal arts	248.66	.86
PR top 10 institutions with the best classroom experience	1059.67	.48
PR top 10 institutions with the best Greek life	-81.45	.95
PR top 10 institutions with the least happy students	-758.55	.70
PR top 10 institutions with the happiest students	1094.74	.43
PR top 10 institutions where students are happiest with financial aid	-4292.81	.01
PR top 10 institutions that are socially liberal	2501.84	.10
PR top 10 socially conservative institutions	-4334.84	.01
PR top 10 institutions with the most diverse student population	-1137.95	.40
PR top 10 institutions with the most homogeneous student population	2529.97	.08
PR top 10 biggest party schools	-783.48	.61
PR top 10 institutions where students rarely study	-635.56	.71
PR top 10 institutions where students always study	-13.31	.99
Adjusted R-square .901; F-statistic = 147.91, p-value = <.00; no evidence of multicollinearity because no individual variable inflation factor (VIF) is greater than 10.		

We do find a few differences in the results, however. The choice variables *percent of classes with greater than 50 students*, *student population over 9000*, and AACSB are not significant in the out-of-state model suggesting they are not factors in determining prices in this market. Perhaps the most interesting result is that for AACSB which suggests that students willing to move to another

state for their education are not willing to pay more for the distinction. In addition, the estimate of the control variable *west* is not significant. Lastly, the rankings variables *USNWR masters west* and *PR top 10 institutions with the most homogeneous student population* lose significance, while two of the PR rankings variables, *PR top 10 institutions that are socially liberal* and *PR top 10 institutions with the most diverse student population,* gain marginal significance in the out-of-state model. While somewhat interesting, the marginal significance of the rankings results in both Table 1 and Table 2 suggests the difference in the models is not extreme.

Table 2: Full Regression Estimates, Using Out-of-State Tuition & Fees

Parameter	Estimate	*p-value*
(Constant)	7671.64	.01
Bachelors	0	
Masters	-3474.57	<.00
PhD	-2035.09	.02
Percent of classes with less than 20 students	24.89	.19
Percent of classes with more than 50 students	37.44	.53
Students to faculty ratio	-272.57	.00
Mean graduation rate	243.62	<.00
Student population between 1 and 5,999	0	
Student population between 6000 and 8999	1537.76	.03
Student population over 9000	-487.79	.74
No AACSB	0	
AACSB	636.82	.22
Secular	0	
Religious	-2194.25	<.00
Public	0	
Private	9536.04	<.00
North	0	
South	-1781.42	.00
West	122.12	.83
Mid-west	-1678.05	.00
USNWR top 10 masters north	687.21	.64
USNWR top 10 masters south	2087.66	.12
USNWR top 10 masters west	2035.07	.13
USNWR top 10 masters mid-west	-1521.21	.26

Table 2: Full Regression Estimates, Using Out-of-State Tuition & Fees		
Parameter	Estimate	*p-value*
USNWR top 10 national universities	-2072.87	.21
USNWR top 10 liberal arts	-487.79	.74
PR top 10 institutions with the best classroom experience	596.87	.70
PR top 10 institutions with the best Greek life	-1060.24	.46
PR top 10 institutions with the least happy students	913.77	.66
PR top 10 institutions with the happiest students	223.90	.88
PR top 10 institutions where students are happiest with financial aid	-4267.42	.01
PR top 10 institutions that are socially liberal	2702.04	.09
PR top 10 socially conservative institutions	-6520.56	<.00
PR top 10 institutions with the most diverse student population	-2592.38	.07
PR top 10 institutions with the most homogeneous student population	2494.02	.10
PR top 10 biggest party schools	776.95	.62
PR top 10 institutions where students rarely study	-145.91	.93
PR top 10 institutions where students always study	-318.92	.85
Adjusted R-square .791; F-statistic = 62.32, p-value = <.00; no evidence of multicollinearity because no individual variable inflation factor (VIF) is greater than 10.		

What we have here are end points for the value of product characteristics in higher education. Because some public students do pay out of state tuition and fees, they certainly see the world through the lens of Table 2. However, many more students pay in state tuition and fees and thus see the higher education landscape though the lens of Table 1. It must also be noted that once the decision to attend a particular institution is made, some out of state students are able to capture in state prices by documenting relevant information. This effect places more weight on the result presented in Table 1; however, the results presented in Table 2 cannot, be dismissed.

SUMMARY AND CONCLUSIONS

It is hoped that administrators at colleges and universities around the U.S. will use the results of our analysis as a road map to help guide them in pricing their product optimally. The results offered here give important clues as to how the market would respond to decisions that enrolment managers might make. For example, the data reveal that students do not value small classes, but are willing to pay more to lower the percent of classes with greater than 50 students. If budgets are tight, and we know that they are, then institutions should focus on decreasing the number of classes with more than 50 students before they increase the number of classes with less than 20 students. We also

find that lower student-to-faculty ratios and higher graduation rates are valued on the market with students willing to pay higher tuition. The empirical results we obtain give administrators the tools to test whether these are cost effective ways of competing in the market. If the costs of new faculty and efforts to raise graduation rates are too high, the additional tuition might not be enough to make the moves profitable.

In addition, if your institution has a business school, it might be worth the enormous effort of gaining AACSB accreditation. The data suggest that by adopting AACSB's standards for a quality management education, the institution as a whole seems to gain a positive externality. Administrators are often curious as to whether gaining AACSB accreditation is worth the significant hurdles an institution must go over to do so. Our empirical evidence identifies a benefit associated with having AACSB accreditation that can be compared with the costs incurred throughout the process.

Institutions where a graduate program exists need to take note. Something interesting is happening in the market such that undergraduate students are paying less if a graduate program exists, relative to undergraduate students at institutions with no graduate programs. If this difference is not due to revenue shifting across degree types, but rather a declining quality of the undergraduate experience, administrators should be concerned about entering this segment of the marketplace because the aggregate behavior of consumers is certainly signaling that something interesting is going on.

Finally, for all the conversation about campus Greek life, top party schools, and other PR categories, we observe, in most cases, no significant difference in the tuition and fees charged by the top ten institutions in these categories and all others. The same can be said for the USNWR academic rankings. These results suggest that putting too much stock in the outside opinions of the institution is unwarranted, as market participants do not appear to be willing to pay for the distinctions.

Although our study produces some interesting results, it does have a few limitations. While our results show in which direction tuition and fees move given various institution characteristics, we are not able to necessarily identify why the tuition is changing. For example, increases in tuition could be due to greater willingness to pay for the characteristic by students, but also may be due to necessary price increases to offset higher costs. Future research should attempt to identify the mechanism behind the tuition changes. It would also be informative to include other accreditation distinctions in the analysis to see if it is AACSB accreditation specifically which is valued on the market, or whether the variable is capturing a recognition of higher quality instruction overall. Given these issues we hope our analysis provides a useful starting point to aid and inform administrators.

REFERENCES

Benkard, C.L., and Bajari, P. (2004). Demand Estimation with Heterogeneous Consumers and Unobserved Product Characteristics: A Hedonic Approach, NBER working paper 10278.

Berry. S., Levinsohn, J., and Pakes. A. (1995). Automobile Prices in Market Equilibrium, *Econometrica*, Vol. 63, pp. 841-890.

Cabral, L. (2000). *Introduction to Industrial Organization*. Cambridge: The MIT Press.

D' Aveni, R. (2007, November). Mapping Your Competitive Position, *Harvard Business Review*, November, pp. 110-120.

Gorman, T. (1980). A Possible Procedure for Analyzing Quality Differentials in the Egg Market, *Review of Economic Studies*, 47(5): pp. 843-856.

Kench, B. T., and H. Scott Wallace. (2010). Mapping 2007-08 Tuition and Fees in Higher Education, *Journal of Applied Business Research*, 26(1): pp. 11-18.

Lancaster, K. (1966). "A New Approach to Consumer Theory," *Journal of Political Economy,* Vol. 74, No. 2, April, pp. 132-157.

Lancaster, K. (1971). *Consumer Demand.* New York: Columbia University Press.

Petrin, A. (2002). Quantifying the Benefits of New Products: The Case of the Minivan, *Journal of Political Economy,* 100: pp. 705-729.

CONVERGENCE OF E-TAILING AND SOCIAL NETWORKING

Maria Luisa C Delayco, Hankuk University of Foreign Studies
Brandon Walcutt, Hankuk University of Foreign Studies

ABSTRACT

Social networks are fundamentally changing business models and shaping markets as they empower internet retailers or e-tailers, potential and current consumers and consumer groups. E-tailing is growing, allowing small and medium e-tailers (SMETs) to offer varied products to the market. Being a SMET once posed structural and functional limitations, but incorporating the capabilities of the web and the presence of social networks allows these firms to create mechanisms and strategies for marketing, communication and distribution that level the playing field. Two cases are examined to extract internet retailing strategies used by SMETs that particularly make use of social networks in their communication strategies. Key issues for customers and e-tailers are discussed. Critical success factors are identified and strategies are suggested for SMETs.

This paper is unded by Hankuk University of Foreign Studies, Seoul, Korea.

INTRODUCTION

Social networks and their influence on internet retailers or e-tailers are becoming more and more evident in today's virtual world (Enders & Jelassi, 2000). Although the true effects of social networks cannot yet be measured, a growing number of companies are beginning to incorporate this channel into their marketing and communications strategies. Even large companies like DELL, Kodak and General Motors are using tools, such as Twitter, to buff their brands and provide customer service (King, 2008).

Social Networking Sites (SNS) are recognizing this development and are providing facilities and services for e-tailer use. Notable examples of these services are Facebook Connect and Business on Twitter. These services are free and are making themselves attractive to small and medium sized firms by helping reduce e-tailing marketing costs.

The usage of social networking by e-tailers is also expected to grow as the online market gains ground. Studies indicate that digitized products (software, music, books etc.) are expected to make a radical shift into e-tailing (Enders & Jelassi, 2000; Grewal, Iyer & Levy, 2004). This shift can also be expected for market leaders of touch and feel products (clothes, grocery items etc.)

because of their prior customer base, but not for small players (Grewal, Iyer & Levy, 2004). These smaller players have found it difficult to compete in the e-tailing world for a variety of reasons, however one particular constraint has been cost. The cost barrier is slowly being lowered which is allowing small and medium e-tailers (SMETs) and even individuals to more effectively compete in the online market. Social networking is a prime example of these cost-reducing tools that are growing in usage. Social networking tools are now allowing SMETs to offer touch and feel products that are perishable over the internet. This research showcases this development in e-tailing of baked goods made possible through social networking and marketing strategies.

This paper examines the dynamics in the convergence of social networking, e-tailing and users. The dynamics and strategies that are identified in this research are vital for SMETs to evaluate their online businesses, utilize a value-adding tool and effectively allow them to operate more competitively in the global environment.

There is insufficient literature on customer to customer value creation online; so this study underscores the importance of C2C value creation in the dynamics of the convergence.

This paper is organized into 4 parts. We begin by describing Social Networks and SNS, E-tailing, and the members of the social network (individuals or companies). In part two, we discuss relevant theories and develop a study framework to analyze the dynamics of the convergence. We then look closely at two SMETs in the e-tailing business and evaluate their cases using the framework. Finally, we summarize the critical success factors and suggest strategies for e-tailing resulting from the convergence.

SOCIAL NETWORKING AND E-TAILING DEFINITIONS AND OVERVIEW

This section will describe social networks, internet retailer or e-tailer, and SNS members. Definitions and overviews will be provided for the concepts as well as an identification of individuals/companies that make up the memberships of social networks.

Social Networks

A social network is a virtual community where members with a common purpose or interest interact online to share information, support and concern (Siegel, 2004). Social networks can also be considered as a web of personal relationships (Macaulay, Keeling, McGoldrick, Dafoulas, Kalaitzakis & Keeling, Summer 2009). They provide a venue for socialization and business where friends, co-workers, and business contacts create a virtual community where they can interact (Hopkins, 2003).

Social networks provide linkage between community members by allowing them to share virtually an unlimited, unrestricted amount of information through different forms and mediums. Common social networking forms include micro blogging, subscriptions, status, mobile text alerts,

blogs, instant messaging, and forums among others. Users primarily share these forms through the mediums of the web and cell phones.

There are numerous social networking sites (SNS), but the top three, based on number of visits are Facebook.com (1,191,373,339), Myspace.com (810,153,536) and Twitter.com (54,218,731) (Kazeniac, 2009). As is evident from the visit counts, the growth of SNS has been tremendous. In the case of Twitter, users have jumped to an estimated 32.1 million from 1.6 million a year ago (Vascellaro, 2009). These sites are setting the standard for the growth and the directions social networking is taking and can be used as good examples of their varied functionalities. The following are overviews of the top three SNS.

Facebook

Facebook was founded in 2004 and its mission is to give people the power to share and make the world a more open and connected place. It also has over 400 million active users (based on users revisiting the site in the last 30 days) (Facebook). Facebook's primary networking features that are relevant and helpful to SMETs are:

- Facebook Connect: Provides access for Facebook on the web, I-phone and mobile web. It has many features to help drive traffic, increase engagement, and grow revenue on the user's website or application.
- Facebook Pages: Allows for profiles of brands, which look and behave like user profiles, to connect and engage with customers and amplify messages to friends.
- Facebook Advertising: Gives users a do-it-yourself advertising service to reach targeted audiences and connect real customers to SMETs. It can also assist in finding customers before they search.

MySpace

MySpace was launched in 2004 and brings together more than 100 million active users around the globe. Its focus is connecting people through personal expression, content, and culture. The firm empowers its global community to experience the Internet through a social lens by integrating personal profiles, photos, messaging, games, and the world's largest music community (My Space Fact Sheet). Relevant and helpful MySpace's networking features are:

- Basic Functionality: Includes friend search, customized personal profiling, picture/video upload, music search, creation of own web address, subscriptions, status, mobile text alerts, blogs, Myspace IM, and forums.

- MySpace My Ads: Provides users the ability to conduct banner advertising that enables targeting, tracking and performance monitoring.
- Connect with MySpace: Increases social networking by allowing connection between MySpace accounts and sites around the Web, desktop clients, mobile applications, and more.

Twitter

Twitter began in 2006 and provides a real-time information network for people around the world. Twitter is a pioneer in micro blogging where users keep others informed of their current status by way of text messaging, instant messaging, e-mail, or the Web (My Space Fact Sheet). Users have unlimited use as long as their message is within 140 characters or less in limit (Chapman). It can be accessed through more than 50,000 third-party Internet and mobile applications (Twitter for businesses). Twitter's SMET applicable networking features are:

- Basic Tool: Allows a real-time, micro blogging connection with an audience to share information.
- Customer Direct Interaction: Although part of the standard functionality, more companies are using Twitter to collect feedback on products or services, communicate advertising offers, build relationships and gather real-time market intelligence (Twitter for businesses).

More and more, retailers are using social networking sites as channels to market or communicate information about their latest products (Moroz, 2008). SNS and online word of mouth has even been identified as a threat to traditional marketing practices. Companies like Nike and Honda have built online communities where consumers have a public voice (Stern & Wakabayashi, 2007), promotional product videos are seen in Youtube.com, and use of Twitter to inform customers about online sales and discounts (Wade, 2009).

SNS poses both advantages and disadvantages for SMETs using the services for marketing or communication. Advantages include helping e-tailers keep track of what is said about their brands and delivers business value when customers need it most (King, 2008). It also assists with transparency and in creating a cohesive corporate identity (Chen & Leteney, 2000; King, 2008) as well as helping to build brand awareness (Chapman). A primary function of SNS allows the SMETs to build on-line "brand" communities which can add stability and continuity to businesses (Macaulay, Keeling, McGoldrick, Dafoulas, Kalaitzakis & Keeling, Summer 2009) while making connections, identifying prospective customers and pointing others to a SMET's website or other websites for resources. Lastly, the SNS provided search tools can significantly increase a SMETs exposure within their targeted industry or area of interest.

As a disadvantage, SNS can also provide a platform to e-tailers who are impersonating a SMET (domain squatting) to send out messages that were not authorized by the company (King, 2008). This impersonation can confuse a SMET's marketing message and can lead to loss of business and downgrades in consumer trust.

Internet Retailer or E-Tailer

Internet retailing or e-tailing is the newest store format in retailing (Grewal, Iyer & Levy, 2004). An e-tailer can be classified as a pure play e-tailer or a bricks and clicks e-tailer. A brick and click e-tailer has a physical store and uses the internet whereas a pure play e-tailer only uses the Internet to sell their goods. This study focuses on e-tailers that use pure play as their initial and primary approach to the market.

Pure play e-tailers pose one of the most interesting possibilities for e-tailing's future as they are identified as being small and engaged only in Internet selling. These e-tailers cover various niches and hard to find products and have a tendency to be created and run by SMEs (Grewal, Iyer & Levy, 2004). The internet market has been conducive to SME operated businesses as it can level the competitive playing field by allowing small companies to extend their geographical reach and secure new customers in ways formerly restricted to much larger firms (Chong, 2008). The recession has accelerated the trend of a fast growing e-tail sector of small businesses and individuals with online shops with the prediction that global online sales will grow by over 10% this year (Solomon, 2009). More e-tailers means more competitive offerings for consumers.

This growth can be attributed to a number of benefits. E-tailing benefits entail an ease of communication between company and consumer (Chen & Leteney, 2000), few infrastructure requirements (Enders & Jelassi, 2000; Hofacker, 2008), a ubiquitous convenience, as well as a greater reach and accessibility or a potential worldwide reach thus allowing greater sales to SMEs (Enders & Jelassi, 2000; Grewal, Iyer & Levy, 2004). In addition, e-tailing provides consumers with easy access to information on their assortment of goods, competitors' product offerings, related information for better purchase decisions (Chen & Leteney, 2000; Grewal, Iyer & Levy, 2004) and a high level of privacy and anonymity in the purchase of certain sensitive products (Grewal, Iyer & Levy, 2004). Combining all of these benefits provides an extremely conducive utility for consumers and companies alike.

E-tailing is not without its issues. For an e-tailer, operational issues range from determining how much of a product range or information to make available to consumers (Chen & Leteney, 2000), high shipping and handling costs, problems with economies of scale due to small numbers of repeat buyers and small orders (Grewal, Iyer & Levy, 2004) and the need for an efficient distribution system (rapid response demanded by Internet customers) (Chen & Leteney, 2000; Grewal, Iyer & Levy, 2004). Distribution is a key factor as it can avoid the risk of lost shipments and fraudulent claims (Chen & Leteney, 2000), but requires complex coordination which may result

in late deliveries (Enders & Jelassi, 2000). Other ssues include security problems (credit card payments), general lack of technical expertise, and weak institutional arrangements (Chong, 2008).

Primary consumer issues with e-tailing are the result of an absence of the physical interaction and shopping experience (Enders & Jelassi, 2000), the lack of a pre-trial experience, the lack of interpersonal trust for products that are difficult to evaluate in terms of value, as well as a lack of instant gratification (Grewal, Iyer & Levy, 2004).

One of the newest additions to the application of e-tailing is its linkage with SNS or vice versa. To address the issues brought forward, e-tailers tie up with social networks (or vice versa) to create a platform that provides the ability for consumers to receive advice and recommendations from their social network friends. SNS provides this capability for e-tailers to enhance and do better business and effectively transform an internet shopping experience from a solo to a social activity (MacMillan, 2009). The popularity of SNS has led to further integration with the Internet industry (Rubel, 2009). According to Farquhar and Rowley (2006) the organizations that control the most popular virtual communities can dominate on-line business transactions.

SNS Members (End Users/Individuals/Companies)

Members of a social network provide and share personal information and views and expect legitimate wide networking features that would cover music, video, groups, etc. Members also want to network in a secure and easy environment (Social Networking Websites Review). SNS members may be individuals, groups, brands or business entities. In general, members of SNS sites bring together resources that create powerful capabilities which, in turn, create new sources of value for other member users (Hanson, 2000).

SNS provides its users many advantages and disadvantages. For end-users or individuals, SNS provide them with a public voice (Stern & Wakabayashi, 2007), freedom of expression (Keller & Libai) and a growing amount of consumer sovereignty (Grewal, Iyer & Levy, 2004). It can also provide them the ability to interact with homepage content and with other users, empower them to be producers of communcation (Asberg), and generate user content (Wade, 2009).

In terms of their shopping experiences, SNS can assist by provding more information on products as well as support increased social purchase involvement and a more intense shopping experience (Macaulay, Keeling, McGoldrick, Dafoulas, Kalaitzakis & Keeling, Summer 2009). In addition, SNS provide end users with increased consumer welfare through improved economic efficiency and greater choices (Grewal, Iyer & Levy, 2004). These same advantages can also lead to disadvantages. End users are subject to personal indecision due to the myriad of choices (Zmuda, 2009), lack of instant gratification, lower customer service based on the lack of high-contact pre- and post sales service, increased difficulty in product returns, exchanges and monetary refunds, as well as potential security issues (encryption, network and transactional privacy and security) (Grewal, Iyer & Levy, 2004).

E-tailing companies also receive many benefits from SNS. For example, it can help facilitate marketing, communication and interaction with customers as well as providing options for branding and even engage customers by providing a real-time, powerful and efficient two-way dialogue or complaint management between customers and the business (King, 2008; Martin, 2009; Pande, 2008). SNS also provides a mechanism to reach a wider sphere of demographics since users are usually grouped according to their interests (Garrahan, 2009). It can also be a useful channel for market research which targets different groups such as young consumers and other trendsetters that can influence the success/failure of a brand (Asberg).

STUDY FRAMEWORK

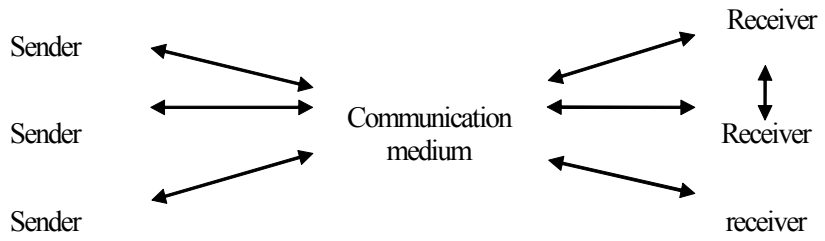
Theoretical Framework

Since its inception, e-tailing has been the subject of research interest regarding an entire spectrum of subjects from fulfillment efficiency to new marketing approaches. With the stated objective of this study being the examination of the dynamics in the convergence of social networking, e-tailing and users, three theories are used to develop the conceptual model.

Updated communications model

The first theory is the updated communications model. This theory helps to illustrate how technological and social developments are shaping communications. Senders are not in complete control of the messages that they send. Receivers are now playing more active roles in communication by helping shape the messages they receive. This development shows the increasing inability of the sender to control the media environment.

Figure 1 Updated Communication model



(Solomon, 2009)

The new media environment has led to new message formats pertaining to e-tailing, m-commerce and blogging. M-commerce (mobile commerce) is a message format where marketers promote their goods via wireless devices (i.e. cell phones). Blogging is when people post messages in two basic forms to the Web in diary form. The first blogging form is RSS (real simple syndication) where people sign up to have updates sent automatically to their computers. The second form is twittering where people share moment by moment reports on what they are doing through Twitter.com (Solomon, 2009). This updated communication model provides the basic foundation for SMETs to utilize social networking to achieve improved customer communication.

Value of e-commerce to the customer

The second theory relates to the value of e-commerce to the customer (Keeney, 1999). It has been identified that e-commerce offers customers the net value of the benefits and cost (value proposition) of both a product and the process of finding, ordering and receiving it. Keeney identified eleven points of value that internet commerce provides to consumers. These points are:

1.	Overall objective: Maximize customer satisfaction	7.	Maximize privacy: Avoid electronic mailing lists
2.	Maximize product quality	8.	Maximize shopping enjoyment
3.	Minimize cost: Product, tax, shipping, internet, and travel	9.	Make shopping a social event – minimize worry, inspire customers, enhance user productivity, minimize regret, minimize disappointment, maximize customer confidence, reduce demand for forced labor
4.	Minimize time to receive product: Delivery, shipping, and dispatch		
5.	Maximize convenience: Purchasing, time, quality after sales service, easy return process, less shopping effort, and ease of finding product	10.	Maximize safety: maximize driving safety, minimize risk of product use
6.	Minimize time spent: Purchasing, processing, payment, queuing, finding products, communicating, searching, ordering and selecting.	11.	Minimize environmental impact: Reduce environmental damages and pollution

Through these eleven points, customers will choose offerings that provide them the highest level of value, achieved through the combination of the product's benefits and price and based on their personal beliefs and preferences.

Word of mouth (WOM)

The last theory is word of mouth. Word of mouth (WOM) can be defined as informal oral communication between individuals, companies, etc. (Silverman, 2001). WOM communication has several sources and properties and possess a great deal of intrinsic power. Silverman (2001) identified a number of functionalities and characteristics of WOM which are shown in Table 1.

Table 1: Sources of Word of Mouth		
Sources of word of mouth	Function	Content (what it provides)
Company advocates	Information	Claims, benefits
Experts	Confirmation	Upside/downside potential under the best circumstances
peers	Verification	What to expect in the real world, in typical situations
(Silverman, 2001)		

WOM communication is customer driven, self-generating through exponential growth, unlimited in speed and scope and possesses a fair amount efficient and time-saving communication value.

Online WOM creates buzz. Buzz is described as the result of the online interaction among consumers that serves to amplify the original marketing message (Thomas Jr., 2004). It is characterized by being covert, grass roots, authentic, credible (Solomon, 2009) and provides e-tailers with a sense of:

- Ubiquity with a communications network accessible by all
- Expectations by showing the importance of network participants' view of successful technologies
- Sharing the efficiency that comes when a network allows reciprocity
- Specialization from the network allowing firms and providers the ability to specialize in their own key capabilities
- Virtual value activities that the network delivers through useful information (Hanson, 2000).

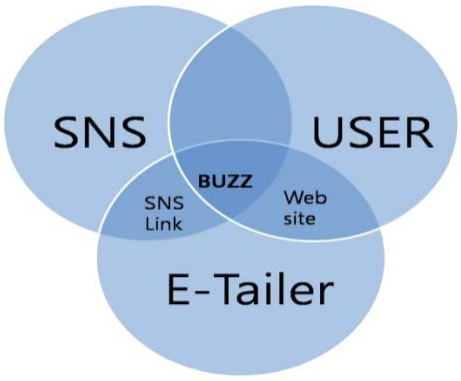
These three theories form the foundation of the conceptual framework that will be used for the analysis of the two case studies that demonstrate the convergence of social networks, e-tailers and users.

Framework for Analysis

The Internet is a nearly perfect market because information is instantaneous (Kuttner, 1998). E-tailers have a venue to market, communicate, interact and deliver service to their customers through their websites or SNS link and consumers can compare offerings of sellers worldwide. SNS provides the facility for all users , consumers and e-tailers, to interact online, share information and concern. The convergence of the e-tailer, consumer, and SNS in the web is providing synchrony and encouraging online interactivity.

This convergence creates online WOM which creates the buzz. The properties of the buzz make online WOM relevant for SMETs: it can address a consumer's lack of experience with a product and lower the perceived risk towards buying the product; it functions as the source of information from e-tailers; it facilitates confirmation and verification from peers/experts regarding products, costs, and the convenience in finding, ordering and receiving products, risk in privacy and safety; and it enables the consumer to have a social shopping experience.

Figure 2 Convergence of SNS, E-tailers and Users



This convergence results in the framework used by this study to analyze the presented business cases.

Two cases will be analyzed using the convergence framework. The elements in the framework that will be evaluated are the website, the SNS link, member users and the buzz.

CASE STUDIES: SMET UTILIZATION OF SOCIAL NETWORKS

This research utilized two case studies in its identification of the dynamics of the convergence of social networking, e-tailing and users. The first study concerns an e-tailer of cream puffs and other baked goods, Mommy Puff Bakeshop. In a similar vein, Hot Blondies, the second case e-tailer, is also a producer and marketer of baked goods. Both firms operate e-tailing websites and utilize social networking as part of their sales, marketing and communications strategies.

Mommy Puff Bakeshop

Mommy Puff Bake Shop was launched in 2003 and currently makes and sells pastries like cream puffs, éclairs, and caramel walnut tarts. Since its founding, the firm has grown and opened a retail outlet in addition to its online sales activities. Despite its growth, Mommy Puff Bake Shop remains a basic example of a SMETs first presence on the internet.

Mommy Puff's website can be found at http://mommypuffbakeshop.webs.com and provides brochure level information about the firm. The web site lists information showing rates and service, About Us, guestbook and contact information. Rates and service shows pictures of products, indicates that they are made to order (e-mail) and pickup/delivery areas. This section also gives their 6-item menu, minimum order quantities and prices. Contact information is also provided giving users access to the brick-and-mortar address, landline, cell, website and Facebook link. About Us information consists of a brief history of both the on- and off-line shops, incomplete contact information of a partial address, landline, cell and email address. The guest book allows visitors to make comments about their purchases and for the site owner to discuss product information. The comments span a period from 14 February 2009 to 5 October 2009. Finally, the contact page provides the same information as the About Us page, but does allow a user to send an integrated email to the bakery owners.

Mommy Puff utilizes two virtual communities to execute its SNS strategy. The first social networking site used is Multiply.com which acts as an extension of their web page and provides basic information about the bake shop that includes contact information (complete address, landline and cell numbers), shop background and the opening of a retail outlet as well as a product list complete with photos, packaging, quantity and pickup price. In addition, the site also provides 3 RSS feeds with the latest dating 13 March 2010 approximately a month before the study's information was gathered. The RSS information outlined contact information, a brief background of the shop and a product list consisting of 11 items indicating that the products are for pickup only.

The second community utilized by Mommy Puff is Facebook. Facebook contains much of the same basic information as Multiply in terms of company overview and background. It differs slightly in that administrators and links (Twitpic, Multiply and their website) are listed and more photos are displayed. In addition, their site lists 427 members, an old discussion, and a wall with 22 posts from February 2009 to April 2010.

Hot Blondies Bakery

Hot Blondies is a bakery that sells a wide range of brownies and a t-shirt via the Web, selected retailers, and events, in addition to catering. This example case provides a professionally created and well designed website coupled with a well organized and diversified business plan that is a large step past that of the first introduced case.

Hot Blondies website can be found at http://www.hotblondiesbakery.com and also provides brochure level information about the firm in addition to direct e-shopping functionality. The branded website provides the basic abilities to view their products, the shop, and read about the firm's news, catering options, FAQs and a brief history. The shopping section allows users full access to photos and descriptions of their 14 types of baked goods and a t-shirt with multiple payment types and delivery options. Although contact information is limited to a phone number and

email address, provided news items notify users of where the products can be purchased outside of the Internet at regular functions and physical stores. These new items span a period from 22 January 2009 to 4 May 2010 and allow their followers to be up to date on recent news and events.

Hot Blondies uses only Facebook in its SNS strategy. Their Facebook site contains similar general information as can be found in their website, such as branding, photos, contact data and an overview, but also allows for more customer interaction. The general information covers contact information such as email address, city and URL as well as displaying a much greater number of product shots than from their website and a dozen events from 2009. The e-tailer's Facebook page also allowed for more interaction in showing over 550 members, discussion and wall posts from 30 June 2008 to 21 April 2010.

CASE STUDY EVALUATION USING THE FRAMEWORK

Mommy Puff Bakeshop

Evaluating Mommy Puff through the identified framework requires an examination of the bakeshop's three different web pages and social networking sites in terms of looking at the convergence between their virtual tools' provided information and the buzz factor generated by the confirmation/verification qualities.

First, examining Mommy Puff's information provided across its web and SNS platforms, it is evident that they have not made a concerted effort to regularly update and synchronize the contents. In particular, there are a great deal of discrepancies regarding delivery options, links, addresses and contact information. An additional neglected area of information is that regarding security and privacy, however, as their website and SNS sites do not facilitate ordering, it is understandable. A correlation of information about Mommy Puff can be found in Table 2.

Table 2: Mommy Puff Bakeshop: Correlation of Information from the e-tailer

Content	Website Inform	Multiply Inform	Facebook Inform
Product/Cost	6 items	11 items	11 items
	Made to order		
Product Photos	13	15	16
Convenience to find	Complete address	Complete address with instructions	Incomplete address
Convenience to order	By email or leave phone number	Call	By email or leave phone number
Convenience to order	Email indicated	Email Not indicated	Email indicated
Convenience to order	2 landline numbers	2 landline numbers	2 landline numbers

Table 2: Mommy Puff Bakeshop: Correlation of Information from the e-tailer			
Content	Website Inform	Multiply Inform	Facebook Inform
Convenience to order	2 cell phone numbers different from SNS	1 cell phone number	1 cell phone number
Convenience to receive	Delivery in 3 areas or pick up	Pick up	Pick up
Risk in privacy/ safety			
Social experience	Indicates Facebook but no link	RSS feed	Link to website, Twitpic and Multiply
Social experience	16 posts from guestbook	3 RSS feeds	22 wall posts

The two-way interaction between the e-tailer and customers allows confirmation and verification to occur. The guest book facility of the website, RSS feeds of Multiply.com and the wall posts of Facebook enable interaction between Mommy Puff and her customers as well as initiating confirmation and verification between peer and expert customers. The confirmation and verification of product information provides for the "buzz" factor in the convergence between the SNS, user and the e-tailer. Table 3 shows the buzz among the three groups.

Table 3: Mommy Puff Bakeshop: Buzz Evaluation of Posts from E-tailer, Peers and Experts						
content	Buzz Function (Website)		Buzz Function (Multiply)		Buzz Function (Facebook)	
Customer Value	Inform	Confirm/ Verify	Inform	Confirm/ Verify	Inform	Confirm/ Verify
Product		6	1		1	8
Cost		1	1			3
Convenience in finding	1	1	1			3
Convenience in ordering	1	2				1
Convenience in receiving	2	3				
Risk in privacy and safety						
Social experience.	1	4			5	1
Most recent post	Oct. 15, 2009		Mar. 14, 2010		April 2, 2010	

Hot Blondies Bakery

Hot Blondies' evaluation also requires analyzing their web page and social networking site for provided information and buzz factors. In looking at their web site, it is evident, given the provided credit information, that they have had professional help building and maintaining their web

presence. In addition, although their Facebook page displays their web link, Hot Blondies' web page shows no indication of their presence on an SNS. Furthermore, despite their active updates, there is a need for synchronization between their Facebook and web pages. A correlation of information about Hot Blondies can be found in Table 4.

Table 4: Hot Blondies Bakery: Correlation of Information from the E-tailer

Content	Information in Web Site	Information in Facebook
Product/Cost	15 items	Indicated products
Convenience to find	Indicated city and landline	Indicated city no landline
Convenience to order	Shopping cart	Through email
Convenience to order	Indicated email	Indicated email
Convenience to receive	Shipping and delivery page	
Risk in privacy and safety	Specifies site maintenance and consultants	
Social experience	Link to facebook not indicated	Website link indicated
# of posts:		34 wall posts; 2 discussion posts
Most recent post	April 20, 2010	April 20, 2010

As there was no guest book on the Hot Blondies website, all buzz is generated through Facebook wall posts. The wall posts enable customers and members to interact with the e-tailer as well as confirm and verify information with other customers. Table 5 shows the buzz between this e-tailer's 2 groups.

Table 5: Hot Blondies Bakeshop: Buzz Evaluation of Posts from E-tailer, Peers and Experts

Content	Buzz Function (Website)		Buzz Function (Facebook)	
Customer Value	Inform	Confirm/Verify	Inform	Confirm/ Verify
Product			6	9
Cost			2	
Convenience in finding			3	
Convenience in ordering				
Convenience in receiving				2
Risk in privacy and safety				
Social experience.				
Most recent post				April 20, 2010

Buzz Analysis of Case Information, Confirmation and Verification

As introduced in the framework, buzz functions as a source of information from e-tailers, as well as the confirmation and verification from peers/experts regarding: product, customer cost, convenience, risk and social experience.

The first area regards the actual products offered in this case. Especially in the past, there were limitations on the types of products that could be offered online. Digitized materials, such as software or music, were considered more conducive to internet sales (Enders & Jelassi, 2000). However, in these cases, despite the high perishability of the products, both SMETs were not restricted from using the Web as their venue. They instead utilized the capabilities of the Web and developed appropriate strategies. In the case of Mommy Puff Bakeshop they designated delivery points, delivery schedules, minimum orders, and pre-ordering. In the case of Hot Blondies, they also identified delivery schedules, minimum orders and pre-ordering.

Customer cost is another area involving buzz. SMETs are faced with three areas where costs have a great effect. The first is customer cost bound by the lack of trial for products that require high sensory evaluation (Grewal, Iyer & Levy, 2004). Although it is impossible to give customers a bite or smell from their products, the bakeshops used technology to bridge that gap. Mommy Puff Bakeshop utilized both website and SNS to confirm and validate their products and the product experiences of peers/customers. On the other hand, Hot Blondies Bakeshop only utilized their SNS.

Shipping and handling costs are another factor facing e-tailers (Grewal, Iyer & Levy, 2004). These costs are not an issue for Mommy Puff, since they have schedules in delivering in designated areas, but may be an issue for Hot Blondies. The last customer cost issue is the result of the high economies-of-scale due to low repeat buys and small order sizes (Grewal, Iyer & Levy, 2004). In the case of Mommy Puff, the identified delivery and pick up points only partially covers this issue. In the case of Hot Blondies, their shopping cart facility and zone pricing more thoroughly covers this aspect.

Convenience is the third variable that would be covered by the buzz. Consumers typically enjoy a high degree of instant gratification when shopping in traditional stores. The required wait when shopping via the internet is a limitation on receiving that gratification (Grewal, Iyer & Levy, 2004). In both e-tailing cases, this need for instant gratification depends on the customer. If they want to immediately receive the product, they can choose to pick it up from a delivery point or physical store distributor rather than wait for product delivery.

Another area of convenience is that of customer service. Customer service from an e-tailer lacks the high-contact pre- and post-sales service (high agent to customer ratio) (Hanson, 2000). This poses limitation in terms of: product returns and exchanges and monetary refunds (Grewal, Iyer & Levy, 2004); types of interaction (real time, messaging); and type of service (self) (Hanson, 2000). In the case of Mommy Puff, the creator seems to have a "favorite" in terms of where to update. Thus, some venues, like their website, are quite outdated. This channel management further

aggravates the issue of lack of high contact. However, establishing a retail outlet for some customers would partially cover this channel management flaw. In the case of Hot Blondies, they regularly post current information about their activities as an e-tailer so even if there is lack of personal contact, the customer is assured that the website is regularly checked and can be relied upon as a valid medium. Hot Blondies has also identified selected retailers to carry their products, thus, more thoroughly covering this issue.

The next area to investigate is risk. These days, the need for encryption, network security, and transactional privacy and security as a means to ensure security and privacy have become a paramount concern (Grewal, Iyer & Levy, 2004). In this regard, network security would not be the concern of Mommy Puff customers since no financial transactions can happen on their web site. However, there may be an issue with regards to customers providing their names, addresses and telephone numbers when they order. In the case of Hot Blondies, although they have site maintenance and a consultant to provide them the security needed for online transactions, just looking at their website does not visually assure consumers of solid privacy and security.

The final area regards the social experience customers receive from their online shopping experiences. In both cases, personal indecision in terms of product, cost, convenience in receiving, risk in privacy and safety is confirmed and verified through SNS.

SMET SOCIAL NETWORK CRITICAL SUCCESS FACTORS

As demonstrated through the cases, a number of critical success factors have been identified that allow a virtual community, when incorporated into a business strategy, to enhance the business of an e-tailer. The seven critical success factors include: access to relevant synchronized information, personalization of communications, trust-building, lengthened reach, additional marketing or communication channel, additional feedback channel, and a multi-purpose method for motivation fulfillment.

The first critical success factor regarding improved customer access to information stems from the incorporation of a virtual community into an e-tailer's business strategy. To be successful, e-tailers need to provide accessible, relevant and synchronized information on product, cost, order and delivery terms, privacy and safety in doing Internet transactions. SNS is critical for both providing a full range of information and assisting in providing synchronized and up-to-date information. Synchronicity and relevance is critical, especially when the primary medium of customer interaction is virtual. Between the two cases Mommy Puff Bakeshop needs to be more vigilant since they have to synchronize information on 3 channels as compared to Hot Blondies who has 2 channels and has professional help for website maintenance.

A second success factor comes from personalization of communications. It is necessary for an e-tailer to provide its customers a personalized transaction process. Immediate or real-time feedback in websites and SNS would give the assurance that consumers are being attended to and

given importance. Converging channels (website and SNS) facilitate instantaneous communication so delayed feedback from the e-tailer is frustrating to the user and at the same time visible to other users. Thus, these channels should be efficiently utilized by e-tailers. Mommy Puff again needs improvement in this aspect as having a "favorite" channel compromises the other channel and posts in their website and SNS does gives the impression that there is nobody manning the store. In the case of Hot Blondies, it helps that their posts are current and covers their marketing activities. This gives the impression that they are "actively marketing" and that their channels are manned.

Trust building is the third primary factor required for e-tailing success. Virtual communities encourage user participation and even foster genuine relationships with customers, thus creating emotional links that boost brand differentiation and encourage product loyalty (Chong, 2008). Active posting of Mommy Puff, personal postings, even if it is not marketing related develops relationship between e-tailer and customer. It is like opening up and reaching out to its customers. On the other hand posting of events by Hot Blondies showcases their marketing and social activity that encourages member participation.

Virtual communities can reach large numbers of consumers. This reach is possible given the functionalities of the convergence that creates the buzz. The communications network is characterized by being covert, grass roots, authentic, credible (Solomon, 2009). Social networking sites provide the means for businesses to securely reach different segments since the users are usually grouped according to their interests. They are now becoming a more popular choice for advertising campaigns since they can reach about fifty million users daily (Garrahan, 2009). Evidence of this is in the number of SNS members registered to both companies in the provided cases.

The fifth success factor is connected to the virtual communities' provision of another marketing and communication channel. Both cases make use of virtual communities to complement their websites in communicating to their customers.

Social networks can also act as feedback channels since they give users a venue for user-generated content, collaboration, interactivity, and information sharing (Wade, 2009). As a feedback channel users have the opportunity to voice out their feelings, beliefs and experiences. By collaborating, prospective consumers can get helpful information from other consumers and assist in overcoming personal indecisions. Interactivity in social networks makes users more involved. Information-sharing verifies and confirms what has been provided by e-tailers as to information in their websites or SNS. Both cases utilize this functionality of their SNS which enable them to "observe" and interact with their customers.

Both satisfied and dissatisfied consumers can broadcast their views immediately which could create "buzz" that could either be positive or negative (i.e. online activism) (D'Angelo Fisher, 2009). Both cases studied in this research utilize SNS as a feedback channel in addition to their telephones, cell phones and websites. In both cases, registered feedback is positive.

The final critical success factor is based on a virtual community's ability to act as a multi-purpose method for motivation fulfillment. The integration of the internet industry exposes social networkers/customers to varied situations that enable them to fulfill several or even multiple motivations for visiting sites: product information and purchase; social support and information; while others are looking for a more intense experience and greater social involvement (Macaulay, Keeling, McGoldrick, Dafoulas, Kalaitzakis & Keeling, Summer 2009). An example where SMETs can benefit from this factor is when a manufacturer's representative or service provider uses an SNS to positively interact with a customer, thus changing the customer's perspective for the better (King, 2008). This critical success factor is, again, true in both referenced cases.

Overall, many critical success factors that involve SNS have been identified. Properly incorporating these factors into business strategies are critical to the survival and success of members of the e-tailing community.

SMET SOCIAL NETWORK STRATEGIES

Based on the learnings from the explored cases, eight strategies can be identified in which SMETs can make many value-adding uses of social networks and virtual communities. These strategies use social networking to:

A. Promote relationships and build trust (Macaulay, Keeling, McGoldrick, Dafoulas, Kalaitzakis & Keeling, Summer 2009). SMETs can use SNS in conjunction with their brands/companies to create relationships through constant communication and/or interaction via the online community.

B. Increase brand awareness and commitment (Macaulay, Keeling, McGoldrick, Dafoulas, Kalaitzakis & Keeling, Summer 2009).

C. Add value through the confirmation and validation from peers to other customers (Macaulay, Keeling, McGoldrick, Dafoulas, Kalaitzakis & Keeling, Summer 2009).

D. Integrate the e-tailer into a clicks and bricks company (Grewal, Iyer & Levy, 2004). As seen in both cases, e-tailers can open a physical front end with the customer base they created.

D. Pursue niche strategies. Both cases utilize this strategy in specifically indentifying target customers who love cream puffs and brownies.

E. Better position their products and brands as current Internet technology does not effectively allow retailers to convey the status differentiation of their stores (Grewal, Iyer & Levy, 2004).

CONCLUSION

Through the use of the two case studies, the dynamics in the convergence of social networking, e-tailing and users have been more fully identified. In addition, six strategies were identified in the hope of aiding SMETs better evaluate their online businesses and provide them with a powerful, value-adding tool to allow them to operate more competitively in the global environment.

REFERENCES

Acquisti, A. (2005). Information revelation and privacy in online social networks (The Facebook case). *Proceedings of the ACM workshop on Privacy in the electronic society*, 71-80.

Allen, S. (n.d.) *Guide to online business networking.* Retrieved February 6, 2009, from http://www.work.com/online-business-networking-767

Anon. Technology: we are all retailers (2008, May). *Country Monitor*, 1.

Applegate, L., C. Holsapple, R. Kalakota, F. Radermacher & A. Whinston (1996). Electronic commerce: building blocks of new business opportunity. *Journal of Organizational Computing & Electronic Commerce, 6*(1), 1-10.

Asberg, P. (n.d.). *Using social media in brand research.* Retrieved March 23, 2010, from http://www.brandchannel.com/images/papers/433_Social_Media_Final.pdf

Awad, N. F. & A. Ragowsky (Spring 2008). Establishing trust in electronic commerce through online word of mouth: an examination across genders. *Journal of Management Information Systems, 24*(4), 101-121.

Cao, M., Q. Zhang & J. Seydel (2005). B2C e-commerce web site quality: an empirical examination. *Industrial Management & Data Systems, 105*(5), 645-661.

Capineri, C. & T.R. Leinbach (2003). Globalization, e-economy, and transport. *Growth & Change, 34*(4), 385-389.

Chapman, C. (n.d.). *Brand Awareness: It's all a 'Twitter.* Retrieved March 23, 2010, from http://www.brandchannel.com/images/papers/493_Twitter_Brand_Ascension.pdf

Chen, S. & F.Leteney (2000). Get real! Managing the next stage of internet retail. *European Management Journal, 18*(5), 519-528.

Cheung, C., M. Lee & N. Rabjohn (2008). The impact of electronic word-of-mouth: the adoption of online opinions in online customer communities. *Internet Research, 18*(2), 229-247.

Chong, S. (2008). Success in electronic commerce implementation: a cross-country study of small and medium sized enterprises. *Journal of Enterprise Information Management, 21*(5), 468-492.

D'Angelo Fisher, L. (2009, September). Bad word spreads. *BRW,* 47.

Enders, A., H. Hungenberg, H. Denker & S. Mauch (2008). The long tail of social networking: revenue models of social networking sites. *European Management Journal, 26*(3), 199-211.

Enders, A. & T. Jelassi (2000). The converging business models of internet and bricks-and-mortar retailers. *European Management Journal, 18*(5), 542-550.

Facebook 'Detailed Info'. (n.d.) Retrieved March 8, 2010, from http://www.facebook.com/facebook?ref=pf#!/facebook?v=info&ref=pf

Farquhar, J. & J. Rowley (2006). Relationships and online consumer communities. *Business Process Management Journal, 12*(2), 162–177.

Ferguson, R. (2008). Word of mouth and viral marketing: taking the temperature of the hottest trends in marketing. *Journal of Consumer Marketing, 25*(3), 179-182.

Garrahan, M. (n.d.). *My Space on the money in social networking*. Retrieved February 9, 2009, from http://www.ft.com/cms/s/0/6317a9ec-ecc8-11dd-a534-0000779fd2ac.html

Grewal, D., G. Iyer & M. Levy (2004). Internet retailing: enablers, limiters and market consequences. *Journal of Business Research, 57*(7), 703-713.

Hanson, W. (2000). *Principles of Internet Marketing.* Australia, Cincinnati, Ohio: South Western College Publication.

Hofacker, C. (2008). E-tail constraints and tradeoffs. *Direct Marketing: An International Journal, 2*(3), 129-143.

Hopkins, J. (2003, December). Investors court social-networking sites. *USA Today*, 3b.

Francis, J. (2007). Internet retailing quality: one size does not fit all. *Managing Service Quality, 17*(3), 341-355.

Kazeniac, A. (2009, February). *Social Networks: Facebook takes over top spot twitter climbs.* Retrieved November 30, 2009, from http://blog.compete.com/2009/02/09/facebook-myspace-twitter-social-network

Keeney, R. (1999). The value of internet commerce to the customer. *Management Science*, *45*(4), 533-542.

Keller, E. & B. Libai (n.d.). *A holistic approach to the measurement of WOM its impact on consumer's decisions*. Retrieved March 23, 2010, from http://www.slideshare.net/kellerfay/a-holistic-approach-to-the-measurement-of-wom

King, R. (2008, September) *How companies use Twitter to bolster their brands*. Retrieved November 27, 2009, from http://www.businessweek.com/technology/content/sep2008/tc2008095_320491.htm

Kuttner, R. (1998, May) The net: a market too perfect for profits. *BusinessWeek*, 20.

Lacy, S. (2008, December). *Time for E-Commerce 2.0.* Retrieved November 27, 2009, from http://www.businessweek.com/technology/content/dec2008/tc20081210_092729.htm

Lee, L. (1999, October). Clicks and mortar at Gap.com. *BusinessWeek*, 53-77.

Macaulay, L., K. Keeling, P. McGoldrick, G.Dafoulas, E. Kalaitzakis & D. Keeling (Summer 2009). Co-evolving e-tail and on-line communities. *International Journal of Electronic Commerce, 11*(4), 53–77.

MacMillan, D. (2009, October). Facebook banks on a little help from its friends. *BusinessWeek* , 48-49.

Martin, R. (2009). *Web 3.0: leveraging social networking*. Retrieved February 9, 2009, from http://www.dealerscope.com/article/there-right-ways-wrong-ways-401970/

Mazursky, D. & Y. Schul (2000). In the aftermath of invalidation: shaping judgment rules on learning that previous information was invalid. *Journal of Consumer Psychology, 9*(4), 213-222.

McCormick, A. (2007, January). Social sites cash in on users via etail. *New Media Age*, 1.

Moroz, Y. (2008, April). Social networking evolves into venue to target shoppers. *Retailing Today*, 31-32.

My Space Fact Sheet. (n.d.) Retrieved March 8, 2010, from http://www.myspace.com/pressroom?url=/facts+sheet/

Pande, S. (2008). *Social Networking: waiting to explode*. Retrieved February 5, 2009, from http://businesstoday.intoday.in/index.php?option=com_content&Itemid=1&task=view&id=8104&sectionid=25&issueid=41&page=archieve

Ratchford, B. T. (2001). The economics of consumer knowledge. *Journal of Consumer Research, 27*(4), 397-411.

Ratchford, B.T., D. Talukdar & M. Lee (2007). The impact of the internet on consumers' use of information sources for automobiles: a re-inquiry. *Journal of Consumer Research, 34*(1), 111-119.

Rubel, S. (2009, April). Who will rule the web once Twitter and Facebook fade? *Advertising Age,* 30.

Siegel, C. (2004) *Internet Marketing Foundations and Applications.* Boston: Houghton Mifflin Company..

Silverman, G. (2001). *The secrets of word of mouth marketing: how to trigger exponential sales through runaway word of mouth.* New York: Amacom.

Smith, N. (2009, October). Setting out your stall. *Consumer Etail,* 18-19.

Social Networking Websites Review. (n.d.) Retrieved March 24, 2010, from http://social-networking-websites-review.toptenreviews.com/

Solomon, M. (2009) *Consumer behavior buying having and being (Eigth Edition).* New Jersey: Pearson Prentice Hall.

Stern, A. & C. Wakabayashi (2007). Are you ready for Web 2.0 Marketing? *J@pan Inc*, 72, 6-9.

Thomas Jr., G. M. (2004). Building the buzz in the hive mind. *Journal of Consumer Behaviour, 4*(1), 64-72.

Twitter for businesses. (n.d.) Retrieved March 8, 2010, from http://twitter.com/about

Vascellaro, J. (2009, May) Twitter trips on its rapid growth. *The Wall Street Journal*, B1.

Wade, J. (2009). The new WILD WEST. *Risk Management, 56*(8), 26-31.

Wiese, B., J. Sauer & B. Ruttinger (2004). Consumers' use of written product information. *Ergonomics*, *47*(11), 1180–1194.

Zmuda, N. (2009, April). Online shopping goes from solo experience to social interaction. *Advertising Age*, 15.

USE OF CREDIT CHECKS IN EMPLOYEE SELECTION: LEGAL AND POLICY ISSUES FOR EMPLOYERS

Gerald E. Calvasina, Southern Utah University
Richard V. Calvasina, University of West Florida
Eugene J. Calvasina, Southern University

ABSTRACT

A large number of U.S. employers use credit checks in making employee selection decisions. A recent Society for Human Resource Management (SHRM) study reported that 47 percent of respondents only use credit background checks for job candidates in certain types of positions, for example, job candidates for positions with fiduciary and financial responsibilities (SHRM, 2010). Thirteen percent of those surveyed conduct credit checks on all candidates while 40 percent of the respondents in the SHRM study reported that they did not utilize credit checks on any job candidates (SHRM, 2010). In recent years, a broad coalition of opposition to their use has surfaced. The coalition includes advocacy groups like the Lawyers' Committee for Civil Rights Under the Law, the U.S. Equal Employment Opportunity Commission (EEOC), state legislatures, and the U.S. Congress (Maurer, 2010). The purpose of this paper is to examine the use of credit checks by employers in making employee selection decisions, the recent efforts to regulate employer use of credit histories in employee selection decisions, and the policy and practice issues for employers.

INTRODUCTION

Employers utilize a variety of tools to examine job applicants and candidates for promotion in making their decisions. Employers will typically contact references, verify educational or professional history, obtain a report on an individual's criminal history, and in certain situations, obtain a report on an individual's credit history (SHRM, 2010). The use of credit checks has come under increased scrutiny in recent years by a variety of influential individuals and organizations questioning the impact of their use in regard to their discriminatory impact and their validity and reliability in general.

As to the use of credit checks by employers, a recent Society for Human Resource Management (SHRM) study reported that 47 percent of respondents only use credit background checks for job candidates in certain types of positions, for example, job candidates for positions with fiduciary and financial responsibilities (SHRM, 2010). Thirteen percent conduct credit checks on all candidates while 40 percent of the respondents in the SHRM study reported that they did not

utilize credit checks on any job candidates (SHRM, 2010). The SHRM study also found that organizations conducted credit background checks on job candidates for a variety of positions (see Table 1). 91 percent of the companies surveyed checked the credit of job candidates for positions with fiduciary and financial responsibility (e.g., handling cash, banking, accounting, compliance, technology) (SHRM, 2010).

Table 1: Categories of Job Candidates That Organizations Conduct Credit Background Checks on Categories % of Organizations Conducting Checks	
Positions with Fiduciary & Financial Responsibility	91%
Candidates for Senior Executive Positions	46%
Candidates with access to highly confidential information	34%
Candidates who will have access to company or other property or in a position of financial trust	30%
Positions for which state law requires a background check	11%
Candidates who will have security responsibilities	9%
Positions involving national defense & homeland security	8%
Safety sensitive positions	5%
Candidates who will work with children, the elderly, the disabled & other vulnerable populations	3%
Candidates who will work in health care or with access to drugs	3%
Other	4%
Source: SHRM (2010). Background Checking: Conducting Credit Background Checks	

The SHRM study also found that 65% of the organizations in their study reported they gave candidates the opportunity to explain the results before a decision to hire or fire is made if information discovered in the credit check might have an adverse effect on an employment decision (SHRM, 2010). Another 22% of the companies surveyed would allow the candidate to explain after the decision to hire or not hire had been made. Only 13% of respondents reported that they would not at any time offer the candidate the opportunity to explain the results (HRM, 2010). The respondents in the SHRM study reported a variety of negative information that would adversely affect their decision to extend a job offer (see Table 2).

Table 2: Negative Information That Would Most Likely Affect Decision to Not Extend a Job Offer	
Current outstanding judgment(s) (e.g., lawsuit filed in court)	64%
Accounts in debt collection	49%
Bankruptcy	25%
High debt-to-income ratio	18%

Table 2: Negative Information That Would Most Likely Affect Decision to Not Extend a Job Offer	
Foreclosure	11%
Tax liens	10%
Education-related debt	2%
Medical debt	1%
Other	3%
Source: SHRM (2010). Background Checking: Conducting Credit Background Checks	

The most frequently cited negative information in Table 2 was the presence of a current outstanding judgment(s) (e.g., lawsuit filed in court) that was reported by 64% of respondents (SHRM, 2010). Table 2 presents all the types of information reported by respondents with the percentage of respondents that would use that type of information.

There are four primary reasons reported organizations in the SHRM study utilizing credit checks. They include: (1.) to reduce/prevent theft and embezzlement, or other criminal activity by (54%) of respondents; (2.) to reduce legal liability for negligent hiring (27%) of respondents; (3.) to assess the overall trustworthiness of the job candidate by (12%)of respondents; and (4.) to comply with applicable state law requiring a check for a particular position by (7%) (SHRM, 2010). These reported reasons are widely cited in practitioner literature and the popular press. The following two quotes are often observed:

Table 3: Often Observed Quotes
"When you think about it, people who have good credit keep their promises and are responsible, so it made sense that if the credit was good, the honesty would be better"(Babcock, 2003).
"The consideration of credit history information can not only be useful in determining whether the potential hire has the skills and responsibility necessary for a particular job, but also whether the individual is qualified to handle money" (Bates, 2009).

Another underlying reason for the increased use of background and credit checks are reports in the literature on the increased propensity of job applicants to provide inaccurate and often times false information in their resumes and job application forms. Accu-Screen Inc. reported "spikes" in "resume falsification data" that they concluded are associated with "economic downturns and weak labor markets" (Minton-Eversole, 2008). In other studies cited by Minton-Eversole, reports of up to 73 percent of individuals conducting background checks identifying lies in information submitted by job applicants (Minton-Eversole, 2008). The propensity for job applicants to submit inaccurate and false information when applying for jobs is not new. In a 2003 HRMagazine article, the author cited studies that reported finding 44 percent of applicants lied about their work histories, 41 percent about their education, and 23 percent falsified credentials or licenses (Babcock, 2003).

The suspect reliability of information being supplied by job applicants to employers and the increased concern associated with negligent hiring are strong rationale to supporting the search for more accurate information on which to base hiring and promoting decisions.

Barbara R. Arnwine, Executive Director Lawyers' Committee for Civil Rights Under Law, testified at a 2006 meeting of the Equal Employment Opportunity Commission (EEOC) meeting on race and color discrimination also noted the wide spread use of credit checks by employers in both the public and private sector (Arnwine, 2006). Adam T. Klein's statement at a May 2007 meeting of the (EEOC) reiterated Arnwine's observations and cited 1996 and 2003 SHRM studies that demonstrate that the use of credit checks and the practice of investigating backgrounds of potential employees has been on the rise in recent years. Klein went on to note that "a substantial and, in recent years, increasing number of employers are screening out job applicants for having a negative credit history" (Klein, 2007).

CURRENT FEDERAL REGULATION OF CREDIT CHECKS

The primary regulation of employer use of credit checks in the employee selection process comes from the Fair Credit Reporting Act (FCRA). FCRA (15 U.S.C. § 1681 et seq.) was enacted in 1996 and most recently amended by the Title X of the Wall Street Reform and Consumer Protection Act, Public Law 111-203. Employment provisions associated with employer use of credit reports in the selection process are posted at the Federal Trade Commission's (FTC) web site http://www.ftc.gov/ . One key provision for employers begins with the requirement for employers to get permission from an individual before requesting a copy of that individual's credit report from a credit reporting company. This cannot be accomplished by simply requiring an applicant to sign his or her application for employment. The notice and authorization must be on a stand-alone document. If an employer utilizes the information from the credit report to take an "adverse action" such as a denial of employment or a promotion, a decision to terminate the employee or a decision to reassign them, the employer is required to give the individual a copy of the report and a document called "A Summary of Your Rights Under the Fair Credit Reporting Act (ftc.gov/bcp/edu/pubs/consumer/credit/cre35.pdf) (FTC Facts, 2010). Employers can communicate with candidates in adverse action situations orally, in writing, or electronically and the notice must include the following:

Table 4: FCRA Requirement
The name, address, and phone number of the company that supplied the credit report or background information; a statement that the company that supplied the information didn't make the decision to take the adverse action and can't give you any specific reasons for it; and a notice of your right to dispute the accuracy or completeness of any information in your report and to get an additional free report from the company that supplied the credit or other background information if you ask for it within 60 days (FTC, 2010).

Failure to comply with FCRA requirements can lead to litigation initiated by the FTC, other federal agencies, states and individuals. Two companies recently settled complaints initiated by fired workers and rejected job applicants under FCRA. The companies, Quality Terminal Services, LLC and Rail Terminal Services, LLC agreed to b $53,000 and $24,000 in civil penalties (FTC, 2009). In both cases, the companies conducted background checks that included credit reports supplied by a consumer reporting agency. The employers allegedly took adverse action against the applicants and employees and failed to provide the employees and applicants with pre-adverse action notices and adverse action notices as required by the FCRA (FTC, 2009).

EMERGING ISSUES

In recent years, a broad coalition of opposition to the use of credit checks as a part of employee selection has surfaced. The coalition includes the U.S. Equal Employment Opportunity Commission (EEOC), advocacy groups like the Lawyers' Committee for Civil Rights Under the Law, state legislatures, and the U.S. Congress (Maurer, 2010).

The EEOC's involvement in this emerging issue is not new. The agency's official position posted on its web site is:

Table 5: EEOC's Official Position

Title VII prohibits an employment practice that disproportionately screens out racial minorities, women, or another protected group unless the practice is job related and consistent with business necessity. Thus, if an employer's use of credit information disproportionately excludes African-American and Hispanic candidates, the practice would be unlawful unless the employer could establish that the practice is needed for it to operate safely or efficiently (EEOC, 2010).

In the EEOC v. United Virginia Bank/Seaboard Nat'l case, the court determined that credit checks were appropriate for certain positions, such as where the employee handles large amounts of cash even though the bank's credit check policy disproportionately screened out African-American job applicants. The bank in this case was able to use a business necessity defense to the practice because, according to the court, the bank had a business need to conduct pre-employment credit checks because employees handle large amounts of cash (EEOC v. United Virginia Bank/Seaboard Nat'l, 1977 WL 15340, 21 FEP Cases 1392 (E.D. Va. 1977). The position of the EEOC on the use of credit checks has been consistent with a similar opinion being expressed in a February 14, 2005 opinion letter from EEOC Assistant Legal Counsel Dianna B. Johnston. In this opinion letter, Johnston cited a 1974 case, United States v. City of Chicago, that held that a police department could use financial information in background checks of applicants only if using the information did not have an "adverse impact" or is job related and consistent with business necessity(Johnston, 2005). Recently, in EEOC v. Freeman, the EEOC "initiated litigation against

a national employer alleging that the company engaged in a pattern or practice of unlawful discrimination by refusing to hire a class of black, Hispanic, and male job applicants across the United States based upon sex, race and national origin due to the company's use of credit checks, as well as criminal history checks" (Lewis, 2010).

In addition to initiating litigation, in February of 2007 the EEOC initiated the E-RACE Initiative "to bring a fresh, 21st century approach to combating racism, which remains the most frequent claim filed with the agency" (EEOC Press Release, 2007). In the press release announcing the launching of the initiative, the EEOC made reference to studies that "some employers make selection decisions based on names, arrest and conviction records, employment and personality tests, and credit scores—all of which may disparately impact people of color (EEOC Press Release, 2007).

In May of 2007, attorney Adam T. Klein made an important presentation at an EEOC meeting in regard to the debate associated with employer use of credit checks of job applicants (Klein, 2007). Two of the most relevant questions Klein addressed for employers in his statement were (1) Do Employee Credit Checks Have a Disparate Impact by Race? and (2) Are Credit Checks Job-Related and Consistent With Business Necessity? (Klein, 2007). To the first question, Klein provided a great deal of empirical support for his conclusion that the answer is a resounding yes. Citing studies by Freddie Mac and others, Klein concluded that "there is a correlation between the quality of one's credit record and one's race" (Klein, 2007). Klein also concluded that "the correlation between credit record and race is only exacerbated by the fact that various credit "problems" correlate with race" (Klein, 2007). Problems identified by Klein include the fact that certain jobs (migratory work or low paying service jobs) are a minus for an individual's credit record, bankruptcy filing, and lending discrimination in general which have all been shown to contribute to poor credit ratings for African Americans (Klein, 2007).

Are credit checks job-related and consistent with business necessity? Klein presents a two part analysis in responding to this question, concluding that under current legal standards first developed by the U.S. Supreme Court in Griggs v. Duke Power Co. and later in Albemarle Paper Co. v. Moody that the burden of proof that employers should be required to demonstrate to defend the practice of employee credit checks is significant. According to Klein, to defend the use of credit checks, "an employer would have to prove that it undertook a "meaningful study" that "validates" that credit record "bear{s} a demonstrable relationship to successful performance" (Klein, 2007). As to whether credit is job related and consistent with business necessity, Klein states "there is a complete absence of evidence that employee credit checks are job-related at all, much less consistent with business necessity, for any job" (Klein, 2007). He goes on to note, that in addition to the lack of evidence to support the validity of credit checks predicting job performance, he notes that "there is substantial evidence that the credit records that employers check are based on factors substantially unrelated to any aspect of the performance of any job" (Klein, 2007).

Further, the reliability of the information supplied by credit reporting companies has been found to be inaccurate on numerous occasions (EPIC, 2008). The Electronic Privacy Information

Center (EPIC) cited a 1998 study done by US Public Interest Research Group (USPIRG) that found that 29% of credit reports contained serious inaccuracies including false judgments and false delinquency notices and that overall, 70% of reports "had some type of error" (EPIC, 2008). While many organizations base their rationale for using credit checks on the notion of reducing or preventing theft and embezzlement or to assess the trustworthiness of job candidates, Klein argues that "there is simply no support for the proposition that applicant (or incumbent employee) credit score or history correlates to a heightened risk for theft" and that "African American applicants are more likely to have bad credit" (Klein, 2007). Klein's position is supported by Ben Arnoldy. In a 2007 article, Arnoldy states that "so far, there's a lack of data supporting a relationship between bad credit and theft by employees" (Arnoldy, 2007). Arnoldy cites a 2004 study published by two Eastern Kentucky professors that found a person's credit history is not a good predictor of job performance or turnover (Arnoldy, 2007, & SIOP, 2004).

STATE LEGISLATIVE INITIATIVES

As of this writing, four states have enacted legislation limiting the use of credit checks by employers in making selection decisions. On August 10, 2010, Illinois Governor Pat Quinn signed the "Employee Credit Privacy Act" Public Act 096-1426. The effective date for the statute is January 1, 2011. The meat of the statute is in section 10 of the act:

Table 6: Section 10 Illinois Public Act 096-1426

"Except as provided in this Section, an employer shall not do any of the following: Fail or refuse to hire or recruit, discharge, or otherwise discriminate against an individual with respect to employment, compensation, or a term, condition, or privilege of employment because of the individual's credit history or credit report" (Illinois Public Act 096-1426, 2010).

While the term employer in the statute is broadly construed, the act does provide exceptions that allows organizations like banks and credit unions or other similar business, companies authorized to engage in any kind of insurance or surety business pursuant to the Illinois Insurance Code, state law enforcement agencies including the Department of Corrections, state or local government agencies , or any entity that is defined as a debt collector under federal or State statute to utilize credit check information when a satisfactory credit history is a bona fide occupational requirement for the job. Some of the specific circumstances that the act notes as bona fide include duties of a position that include custody of or unsupervised access to cash or marketable assets valued at $2,500 or more, management positions that involve setting the direction or control of a business, positions that involve access to personal or confidential information, or the employee's or applicant's credit history is otherwise require by or exempt under federal or State law (Section 10, Illinois Public Act 096-1426, 2010). In signing the bill, Governor Quinn was quoted as stating

that it will put a stop to the practice of denying jobs and promotions "based on information that is not an indicator of a person's character or ability to do a job well" (Fishman, 2010).

Three other states, Hawaii, Washington, and Oregon also have laws on the books similar to Illinois, and according to an Associated Press report, lawmakers in several states and the District of Columbia advanced proposals in 2010 to prohibit employers from doing credit checks on most job applicants (Associated Press, 2010). The primary arguments proponents of these bills are advancing include potential discriminatory impact of employers' use of credit check information in the current economic climate. Representative Jack Franks, a sponsor of the Illinois statute stated in regard to the need for the law, "it's our neighbors, our families, our friends, we all know people who have lost a job through no fault of their own and have struggled to pay bills" (Associated Press, 2010). State Senator Diane Rosenbaum in Oregon noted that lawmakers in Oregon heard from a credit reporting agency official that "there was no indication of a link between [a} person's credit history and their job performance or the likelihood of the person committing fraud" as "very compelling" in generating support for the Oregon law (Associated Press, 2010).

Table 7: State Legislatures Considering Legislation to Limit Employer Use of Credit Checks in 2010

California	New Jersey
Connecticut	New York
Georgia	Ohio
Indiana	Oklahoma
Louisiana	Pennsylvania
Maryland	South Carolina
Michigan	Vermont
Missouri	Wisconsin
Minnesota	District of Columbia
Missouri	

Source: National Conference of State Legislatures (NCSL), Use of Credit Information in Employment 2010 Legislation, (NCSL, 2010).

While the state initiatives limiting the use of credit check information have generated a great deal of attention from employers, credit reporting agencies, and human resource professionals, none of the statutes imposes an out-right ban on the use of credit checks and in fact, all provide for the generally accepted situations that courts and the EEOC have permitted so far.

U.S. CONGRESS INITIATIVES

Representative Steve Cohen (D-TN) proposed H.R. 3149 the Equal Employment for All Act in July of 2009. This piece of legislation was recently part of the discussion at a May meeting of a U.S. House subcommittee on Financial Intuitions and Consumer Credit. The focus of the hearing was on the "Use of Credit Information Beyond Lending: Issues and Reform Proposals (HR Issues Update, 2010). Representative Cohen's proposal would amend the Fair Credit Reporting Act to limit the use of consumer credit checks for prospective and current employees for the purposes of making adverse employment decisions (HR Issues Update, 2010). While Cohen's proposal does state that it would "prohibit a current or prospective employer from using a consumer report or an investigative consumer report", it does include in general terms most of the exceptions as to employers and selected jobs that using credit check information would be permissible in making selection decisions (H.R. 3149, 2010).

Table 8: Exceptions in H.R. 3149

[employment] (1) which requires a national security or Federal Deposit Insurance Corporation (FDIC) clearance; (2) with a state or local government agency which otherwise requires use of a consumer report; or (3) in a supervisory, managerial, professional, or executive position at a financial institution (H.R. 3149, 2010).

Amendments to the Fair Credit Reporting Act (FCRA) included in "The Wall Street Reform and Consumer Protection Act of 2009" signed into law by President Obama on July 21, 2010 also may impact employer use of credit information in making employment decisions. The impact of H.R. 4173's amendments to FCRA are not yet clear because the Federal Trade Commission (FTC) has not clarified language in the bill and updated its guidance and publications. At the FTC's web site, as of this writing, the primary guidance for employers was last updated and published in May of 2010. One initial report from an employment screening services practitioner is that the FCRA amendments in H.R. 4173 will require employers to provide "a copy of the credit report obtained by the employer to their employee, and further explain to them what was wrong with the report that resulted in the withdrawal of the employment offer" (Hassani, 2010). Also, prior to the Senate and House Conference version of the bill becoming law, Senator Diane Feinstein submitted SA 3795 which would have amended the Senate version of the bill and FCRA. Senator Feinstein's amendment would have included a "General Prohibition" on the use of credit reports for employment purposes or adverse actions, with limited exceptions. The amendment was ordered "to lie on the table" and would not be considered further by the Senate (SA 3795, 2010). This is further evidence that legislators at all levels of government are joining the bandwagon on this issue and that employers should be alert as new legislation progresses through the legislative process.

POLICY AND PRACTICE SUGGESTIONS FOR EMPLOYERS

Basic EEOC guidance with respect to the use of employment test and selection procedures has been relatively consistent over time. With respect to the use of credit checks in the selection process, current EEOC Chairman Stuart J. Ishimaru has been described as "a vocal critic of employee background checks, calling for the agency to issue guidelines within the next 12 to 18 months on how to carry out background checks in a nondiscriminatory manner"(Maurer, 2010). Ishimaru has also stated "the issue of relying on credit checks in employment decisions remains an issue of concern for the EEOC and is likely to be raised more frequently in the coming years because of the ease of access to credit history information" (Lewis, 2010). Jackson Lewis believes that the EEOC "has made it clear" – "that an employer should be able to establish credit history information is essential to the particular job in question, in addition to ensuring that it does not exclude an individual from employment opportunity reflexively because of criminal or credit history" (Lewis, 2010). Specific EEOC guidance includes the best practices suggestions in Table 9:

Table 9: Employer Best Practices for Testing and Selection

Employers should administer tests and other selection procedures without regard to race, color, national origin, sex, religion, age (40 or older), or disability.
Employers should ensure that employment tests and other selection procedures are properly validated for the positions and purposes for which they are used. The test or selection procedure must be job-related and its results appropriate for the employer's purpose. While a test vendor's documentation supporting the validity of a test may be helpful, the employer is still responsible for ensuring that its tests are valid under UGESP.
If a selection procedure screens out a protected group, the employer should determine whether there is an equally effective alternative selection procedure that has less adverse impact and, if so, adopt the alternative procedure. For example, if the selection procedure is a test, the employer should determine whether another test would predict job performance but not disproportionately exclude the protected group.
To ensure that a test or selection procedure remains predictive of success in a job, employers should keep abreast of changes in job requirements and should update the test specifications or selection procedures accordingly.
Employers should ensure that tests and selection procedures are not adopted casually by managers who know little about these processes. A test or selection procedure can be an effective management tool, but no test or selection procedure should be implemented without an understanding of its effectiveness and limitations for the organization, its appropriateness for a specific job, and whether it can be appropriately administered and scored.
For further background on experiences and challenges encountered by employers, employees, and job seekers in testing, see the testimony from the Commission's meeting on testing, located on the EEOC's public web site at: http://www.eeoc.gov/abouteeoc/meetings/5-16-07/index.html (EEOC, 2008).

Bottom line for best practice for employers – "use credit information for employment purposes only if the credit information is job related – make individualized decisions – and not impose a per se disqualification standard unless required by law to do so" (Lewis, 2010). Nick Fishman advises that in the current economic environment, use credit information as a "red flag" and "not to automatically exclude a candidate" (Fishman, 2010, A). If there are problems with a candidate's credit report, given the current economic environment and the often suspect reliability of credit report information, "give the candidate a chance to explain" (Fishman, 2010, A).

In addition to following EEOC best practice advice, employers utilizing credit reports as part of employee selection, must be sure to comply with the provisions of FCRA. Non-compliance can get expensive as noted in recent FTC settlement agreements with companies that did not follow proper notice procedures when taking adverse actions in employee selection. With recent amendments to FCRA, employers utilizing credit checks are advised to be alert for changes in policy and procedures forthcoming from the FTC.

Another important source of information for employers using credit checks will be EEOC communications. As noted above, the current Chairman is not a proponent of the use of credit checks in employment decision making and has identified their use as an issue of concern for the EEOC. Employers must be alert for new guidelines with respect to the use of credit checks in the near future. At the local level, employers in those states where legislation is being considered to limit the use of credit information in employment, again, be alert for legislative action. The drive at the state level is in part being driven by the down economy and, with unemployment levels and economic growth still plaguing many cities and states, the prospect for new state laws remains alive. At the federal level, employers should also monitor the progress of Representative Cohen's Equal Employment for All Act as it moves through congress.

REFERENCES

Arnoldy, Ben (2007). The spread of the credit check as civil rights issue, *Christian Science Monitor*, January 18, downloaded 8/27/2010 from http://www.csmonitor.com/207/0118/p01s03-ussc.html.

Arnwine, Barbara R. (2006). Statement at EEOC meeting on race and color discrimination, April 19, 2006, downloaded 11/6/2009 from http://www.eeoc.gov/abouteeoc/metings/4-19-06/foreman.html .

Associated Press (2010). Ban on credit checks on potential hires stalls in D.C., Md, downloaded 8/26/2010 from http://www.washingtontimes.com/news/2010/jun/9/ban-credit-checks-..

Babcock, Pamela (2003). Spotting lies, *HRMagazine*, October Vol. 48, # 10, pp. 46-52.

Bates, Steve (2009). Caution urged on legislation to limit credit checks on job prospects, HR News, downloaded 8/19/2010 from http://www.shrm.org/about/news/Pages/CreditChecksonJobProspects.aspx.

EEOC (2010). Title VII: Employer use of credit checks, downloaded 8/19/2010 from http://www.eeoc.gov/eeoc/foia/letters/2010/titlevii-employer-creditck.html.

EEOC (2008). Employment tests and selection procedures, the U.S. equal employment opportunity commission, downloaded 8/19/2010 from http://www.eeoc.gov/policy/docs/factemployment_procedures.html.

EEOC Press Release (2007). EEOC Takes new approach to fighting racism and colorism in the 21st century workplace, downloaded 8/25/2010 from http://www.eeoc.gov/eeoc/newsroom/release/archive/2-28-07.html.

EEOC v. United Virginia Bank/Seaboard Nat'l, 1977 WL 15340, 21 FEP Cases 1392 (E.D. Va. 1977).

EPIC, (2008). The fair credit reporting act (FCRA) and the privacy of your credit report, EPIC – Electronic Privacy Information Center, downloaded 11/6/2010 from http://epic.org/privacy /fcra/ .

Fishman, Nick (2010). Illinois employers banned from credit reports (most of the time), downloaded 8/26/2010 from http://www.employeescreen.com/iqblog/illinois-employers-can-no-longer-use-employment-credit-reports-most-of-the-time/ .

Fishman, Nick (2010, A). Credit reports: the value (and risk) to hr professionals, TLNT, downloaded 8/28/2010 from http://www.tlnt.com/2010/07/21/credit-reports-the-value-and-risk-to-hr-professionals/ .

FTC Facts (2010). FTC Facts for consumers, Employment background checks and credit reports, downloaded 8/27/2010 from http://www.ftc.gov.

FTC (2009). Two companies pay civil penalties to settle FTC charges; failed to give required notices to fired workers and rejected job applicants, downloaded 8/19/2010 from http://www.ftc.gov/opa/2009/08/qts.shtm .

Hassani, Reem (2010). New federal legislation to affect pre-employment credit checks, downloaded from http://hire4integrity.premieress.com/blog-0/bid/40669/New-Federal-L...

HR Issues Update (2010). House examines use of credit information in employment, downloaded 8/19/2010 from http://www.shrm.org/Advocacy/GovernmentAffairsNews/HRIssues..

H.R. 3149 (2010. Equal employment for all act, downloaded 8/27/2010 from http://www.govtrack.us/congress/bill.xpd?bill=h111-3149&tab=summary.

H.R. 4173-737 (2010). The Wall Street reform and consumer protection act of 2009, public law No. 111-203, Section1100F, use of consumer reports downloaded 8/27/2010 from http://thomas.loc.gov/cgi-bin/query/z?c111:H.R.4173.

Illinois Public Act 096-1426 (2010). Employee Credit Privacy Act.

Johnston, Dianna (2005). Title VII credit reports – response to e-mail inquiry "is it okay for an employer to decline employment due wholly or partly due to your credit report", downloaded 11/6/2009 from http://www.eeoc.gov/foia/letters/2005/titleii_credit _reports.html.

Klein, Adam T. (2007). Statement on May 16, 2007 meeting of the U.S. equal employment opportunity commission on employment testing and screening, downloaded 8/19/2010 from http://www.eeoc.gov/eeoc/meetings/archive/5-16-07/klein.html.

Lewis, Jackson (2010). New Oregon credit check law warrants nationwide review of employer practices, downloaded 7/9/2010 from http://www.shrm.org/LegalIssues/StateandLocalResources/Pages/NE...

Maurer, Roy (2010). Federal lawmakers, enforcers set sights on background screening, SHRM, downloaded 8/19/2010 from http://www.shrm.org/LegalIssues/FederalResources/Pages/BackgroundScreening.aspx .

Minton-Eversole, Theresa (2008). Background screens even more crucial during economic slump, SHRM, downloaded 8/19/2010 from http://www.shrm.org/hrdisciplines/staffingmanagement/Articles/Pages...

NCSL, (2010). Use of credit information in employment 2010 legislation, downloaded 8/27/2010 from http://www.ncsl.org/default.aspx?tabid=19825.

SA 3795, (2010). Feinstein amendment SA 3795, *Congressional Record, Senate Proceedings*, page S3106, May 4, 2010. Final action downloaded 8/27/2010 from http://thomas.loc.gov/cgi-bin/query/z?r111:S04MY0-0033 .

SHRM (2010). Background checking: conducting credit background checks, downloaded 8/19/2010 from http://www.shrm.org/Research/SurveyFindings/Articles/Pages/BackgroundChecking.aspx .

SIOP (2004). Credit history not a good predictor of job performance or turnover, Society for Industrial and Organizational Psychology (SIOP), 1/16/2004, downloaded from http://.newswise.com/articles/view/502792?print-article .

DEVELOPING COLLABORATION SKILLS: A MIXED TEMPERAMENT APPROACH TO TEAMWORK

David W. Nickels, University of North Alabama
Joan B. Parris, University of North Alabama
Carol H. Gossett, University of North Alabama
Paulette A. Alexander, University of North Alabama

ABSTRACT

Successful teamwork requires collaboration and the application of interpersonal and communication skills. Research shows that interpersonal and communications skills are highly desired for information systems graduates by employers. Research also shows that there is value in having students participate in teamwork projects while in school to develop more effective interpersonal and communications skills and understand collaborative processes. Organizing teams by mixing personality temperaments introduces an additional aspect of diversity providing a context where students are challenged to strengthen interpersonal and group dynamic skills. This paper presents an analysis of student experiences in using David Keirsey's temperaments assessment (available at no cost online at www.keirsey.com) as the basis for team membership assignments in both online and regular classroom settings. The feedback collected through student reflections on the personality temperament assessment experience reveals that this self-discovery process is an important step for students in developing better interpersonal and communication skills that they will need to be successful in their careers.

INTRODUCTION

Information Systems (IS) literature contains extensive evidence that prospective employers of graduates from IS programs have high expectations for graduates' interpersonal and communications skills (Abraham et al., 2006; Albin & Otto, 1987; Bell & Richter, 1987; Bullen et al, 2009; Watson, et al., 1990). College professors know that adding teamwork projects to students' coursework has the potential to provide them with opportunities to enhance those skills through experience in team environments with diverse members. This exploratory study focuses on the personality temperament aspect of diversity. The writers of this article have both investigated and introduced the use of a personality temperament assessment method for building more diverse

student teams in both online distance learning classes and traditional face-to-face IS classes, with a goal of producing better-functioning teams and IS students who are better prepared to communicate and work well with fellow employees in the workplace after graduation. While other disciplines recognize and value teamwork skills (Mohamed & Lashine, 2003; Landrum & Harrold, 2003; O'Brien & Deans, 1995), the present focus is on IS—the teaching discipline of the authors. This exploratory study within an IS environment is an expanded and updated version of "Building Better Teams in both Online and Regular Classes by Mixing Personality Temperaments" previously published in *The Journal of Learning in Higher Education* (2007).

BACKGROUND

Over the last two decades, multiple researchers have reported the finding that communications skills are deemed critical for employers seeking new IS hires (Albin & Otto, 1987; Bell & Richter, 1987; Bullen et al., 2009; Watson, et al., 1990). Bailey & Stefaniak (2000), Doke & Williams (1999) and Van Slyke, Kittner & Cheney (1998) have written about the need for Information Systems graduates to develop their interpersonal and communications skills in order to meet industry's needs. A graduate's ability to think critically, write, and work effectively in teams is demanded by employers (Gruba & Al-Mahmood, 2004).

These communications skills have been placed at a comparable level of importance with technical skills by some authors. Verbick and Todd observe that "While a solid technological base is desirable when hiring a computer lab consultant, communication and interpersonal skills are far more crucial than programming expertise" (Verbick & Todd, 2003, p. 225). In terms of criticality, ranking communication skills higher than technical skills in systems development was also found in a study by Ehie in 2002. He stated that "employers are looking for graduates with good communications and people skills….Although technical-oriented skills were considered important, business-oriented skills were considered more important in hiring MIS graduates" (Ehie, 2002, p. 154). In essence, mastering communication skills allows the students to communicate their specialized knowledge and collaborate with others to support the mission of the organization or business at which they are employed (Baugh & Davis, 2008).

Evidence that IS academicians have widely recognized that need is represented by its inclusion along with team skills in the recommended exit characteristics of IS graduates in the IS 2002 Model Curriculum and Guidelines for Undergraduate Degree Programs in Information Systems (Gorgone et al., 2002). Despite the fact that communications skills in IS graduates have been recognized as a critical characteristic for new IS hires, those skills have been reported by prospective employers of IS-related program graduates to be frequently lacking (Abraham et al., 2006). In addition, it has been observed that IS academics place a lower priority on the development of communications skills than do IS professionals (Lee et al., 2002).

Confirming the critical importance of these skills, the Computing Accreditation Commission of ABET, Inc. specifically addresses this issue in its accrediting guidelines for computing programs. Two of ten explicit IS program outcomes directly address the need for IS programs to enable students to achieve effective communication and teamwork skills by graduation. Specifically, those outcomes are: "(d) An ability to function effectively on teams to accomplish a common goal" and "(f) An ability to communicate effectively with a range of audiences" (ABET, 2009).

Students who successfully participate in teamwork projects while in school are equipped to strengthen key communication skills to help them not only to survive but to excel in their future careers. Crawford and Williams (2002) provide a clear delineation of the needed skills: "Gets along well with others, a team player, good communication skills, a focus on reality over theory, motivation." It is likely that these skills can be acquired better through interactive team activities rather than passive, straight lecture formats. Hackbarth (1996) concluded that students' learning the importance of sharing and working collaboratively may very well be more important than learning prescribed subject matter.

STRATEGIES FOR ASSIGNMENT OF TEAM MEMBERS IN CLASSES

Teamwork is definitely an important part of a student's training while in school. The present research focuses on the question "how should class teams be formed for teamwork projects?" For years, a variety of methods have been used by teachers in traditional classes for team selections, including the following: (1) The students self-select their teams (sign up for the teams), (2) The teacher assigns the team members based on who he/she thinks will be good leaders and good followers, and (3) The teacher uses some randomization routine to form teams.

Based on many years of collective teaching experience, the authors of the present paper have independently concluded that flaws exist with each of the typical team-member assignment methods. Self-selecting by students for teams is not the best method for selecting team memberships because students are most likely to want to be on teams with their friends and with people of similar interests and work ethic, often resulting in one-dimensional teams with everyone thinking of the same solutions, agreeing quickly with decisions because of friendships, or being frustrated by failure of friends to properly perform. Teachers assigning teams often do not have the knowledge of leadership and other traits of all students in the class, rendering the approach of making careful assignments ineffective. Randomization in creating teams is often viewed as more closely mimicking the workplace situation and potentially offers some opportunities for students to experience workgroup diversity.

As an alternative to the standard team assignment models, these authors have used an approach whereby students are assigned to teams based on diversity of personality types. That teams made up of a variety of personality types are often more powerful because the members have different ways of looking at problems and their solutions has been confirmed in research.

Heterogeneity among team members in personality type has been found to be an important determinant of team performance (Bradley & Hebert, 1997; Gorla & Lam, 2004; Neuman, Wagner & Christiansen, 1999; White, 1984). Specifically, this research has shown that teams composed of members with diverse personality types are better performing than teams with members lacking this diversity. Neuman, Wagner, and Christiansen concluded that "a team will be more effective when the personalities of its members are diverse and each member contributes unique attributes to the team" (p. 40).

ASSESSMENT OF TEMPERAMENTS OF CLASS MEMBERS

The strategy employed in this exploratory study involves having students complete a personality temperament assessment prior to team formation. Stokes (2001, p. 24) suggests that "Identifying temperaments helps in understanding why individuals process and respond to the same situations differently." There are many good temperament studies and tests available for use, but the Myers-Briggs Type Indicator (MBTI) and the Keirsey Temperament Sorter have been identified as the most popular instruments (Francis, Robbins, & Craig, 2007). The MBTI is widely acknowledged as the most frequently administered personality type assessment instrument. While some have questioned the validity of the MBTI, others have found strong support for its construct validity (Carlson, 1985; Thompson & Borello, 1986). Strong positive correlations between assessments of personality type by the MBTI and the Keirsey Temperament Sorter have also been found (Kelly & Jugovic, 2001), and these assessment methodologies have been identified as measuring the same constructs (Quinn, Lewis, & Fischer, 1992; Tucker & Gillespie, 1993). In addition, the Keirsey Temperament Sorter is available for student access at no cost online (Keirsey, 2010). Therefore, the present authors have selected the Keirsey Temperament sorter as the tool for engaging students in an understanding of team dynamics, for studying personality types, and for assigning members to teams. Before beginning teamwork, students learn that:

> "…people are different from each other, and that no amount of getting after them is going to change them. Nor is there any reason to change them, because the differences are probably good, not bad" (Keirsey, 2010).

Keirsey (2010) identifies four main temperament groups: Guardians, Artisans, Idealists, and Rationals (Table 1). According to Keirsey (2010), "…it is important to understand that the four temperaments are not simply arbitrary collections of characteristics, but spring from an interaction of the two basic dimensions of human behavior: our communication and our action, our words and our deeds, or, simply, what we say and what we do." The four temperaments have been further subdivided by Keirsey into "Character Types." Keirsey identifies four types of Artisans, four types

of Guardians, four types of Rationals, and four types of Idealists as indicated in Table 1 (Keirsey, 2010).

Keirsey's Guardians are estimated to make up 40-45% of the world's population. All Gardians, according to Keirsey (2010), share the following core characteristics:

- Guardians pride themselves on being dependable, helpful, and hard-working.
- Guardians make loyal mates, responsible parents, and stabilizing leaders.
- Guardians tend to be dutiful, cautious, humble, and focused on credentials and traditions.
- Guardians are concerned citizens who trust authority, join groups, seek security, prize gratitude, and dream of meting out justice.

Keirsey's Artisans make up 35%-40% of the population. All Artisans, according to Keirsey (2010), share the following core characteristics:

- Artisans tend to be fun-loving, optimistic, realistic, and focused on the here and now
- Artisans pride themselves on being unconventional, bold, and spontaneous.
- Artisans make playful mates, creative parents, and troubleshooting leaders.
- Artisans are excitable, trust their impulses, want to make a splash, seek stimulation, prize freedom, and dream of mastering action skills.

Eight to ten percent of the population is estimated to be Idealists by Keirsey (2010). All Idealists, according to Keirsey (2010), share the following core characteristics:

- Idealists are enthusiastic, they trust their intuition, yearn for romance, seek their true self, prize meaningful relationships, and dream of attaining wisdom.
- Idealists pride themselves on being loving, kindhearted, and authentic.
- Idealists tend to be giving, trusting, spiritual, and they are focused on personal journeys and human potentials.
- Idealists make intense mates, nurturing parents, and inspirational leaders.

The smallest percentage of the population (5% to 7%) is Rational (Keirsey, 2010). All Rationals, according to Keirsey (2010), share the following core characteristics:

- Rationals tend to be pragmatic, skeptical, self-contained, and focused on problem-solving and systems analysis.
- Rationals pride themselves on being ingenious, independent, and strong willed.
- Rationals make reasonable mates, individualizing parents, and strategic leaders.

- Rationals are even-tempered, they trust logic, yearn for achievement, seek knowledge, prize technology, and dream of understanding how the world works.

Table 1: A Summary of Keirsey's Four Temperament Categories and Subcategories (Keirsey, 2010)

Keirsey's Four Temperaments:	Keirsey's Four Subcategories Within Each Temperament:	Characteristics of Keirsey's Four Temperaments:
Guardian	Inspector	Guardians: • Concrete in communicating and cooperative in implementing goals • Can become highly skilled in logistics • They are often supervising and inspecting or supplying and protecting
	Protector	
	Provider	
	Supervisor	
Artisan	Composer	Artisans: • Concrete in communicating and utilitarian in implementing goals • Can become highly skilled in tactical variation • Usually promoting and operating or displaying and composing
	Crafter	
	Performer	
	Promoter	
Idealist	Champion	Idealists: • Abstract in communicating and cooperative in implementing goals • Can become highly skilled in diplomatic integration • Usually teaching and counseling or conferring and tutoring
	Counselor	
	Healer	
	Teacher	
Rational	Architect	Rationals: • Abstract in communicating and utilitarian in implementing goals • Can become highly skilled in strategic analysis • Involved in marshalling and planning
	Fieldmarshal	
	Inventor	
	Mastermind	

In the research design for this study, students first determine their individual personality by taking the online Keirsey Temperament Sorter II (Keirsey, 2010). The students then compare their personal results with the Keirsey Website dialog that describes their temperament types (Keirsey, 2010). The results within the four main temperament categories are free, and if the students want in-depth sub-temperament group information they can order and pay for that information. However, rather than asking students to pay for additional information, students in the classes are asked to study the four sub-temperament groups within their main temperament category and suggest which group they think they fit into the best.

ASSIGNMENT OF STUDENTS TO TEAMS BASED ON THE TEMPERAMENT ASSESSMENT

To facilitate the learning process for students, following the online assessment each student in the classes writes a short, one-page reflective paper on his or her assessment of the accuracy of the temperament identified in the results from the online questionnaire. In their papers, the students are asked to address ways in which the Keirsey Temperament results compare favorably or unfavorably with their view of their real temperaments. The papers are posted to an online discussion board within the course's learning management system (such as Blackboard or WebCT) for online distance learning classes, or they can be discussed in informal presentations in regular face-to-face classes.

Once the students have a better understanding of the characteristics of their own temperaments, they are now ready to put their "gifts" to good use in teamwork exercises. The writers of this article have used teams for business case studies, for use in critiquing research project plans, and for critiquing research surveys or questionnaires. There is ample evidence from the literature on personality impacts on team performance to support the proposition that in team performance, the personality mix among team members does, indeed, matter (for example, see Barrick, et al., 1998, and Harrison, et al., 2002). A student needing help in evaluating a research survey that will be used in a research project will produce a stronger, more powerful survey instrument if it has been evaluated by others from different viewpoints and if that feedback is applied.

In providing a means for organizing teams utilizing personality temperaments, the professor must first determine how many students in the class fall into the four main Keirsey temperament categories of Guardian, Artisan, Idealist, and Rational (Keirsey, 2010). Teams should have a variety of personality temperaments and include all four temperaments if possible. However, since Guardians make up about 40-45% and Artisans make up 35-40% of the population (Keirsey, 2010), it is often necessary to have extra Guardians and/or Artisans on the team. For example, a typical five-member team might have two Guardian slots, one Artisan slot, one Idealist slot, and one Rational slot. Or another team may have one Guardian slot, two Artisan slots, and one slot each for an Idealist and a Rational.

Occasionally, depending on the temperament makeup of the class, it might be necessary to break one of the temperament categories down into the temperament sub-categories and have a five-member team such as this: one Guardian slot – subcategory of Supervisor, one Guardian slot – subcategory of Provider, one Guardian slot – subcategory of Protector, one Artisan slot, and one Idealist OR Rational slot. As an alternative to the typical methods of team formation detailed previously, teachers may prefer to make their own team assignments based on the temperament assessment results.

RESEARCH METHODOLOGY

The present research assesses student response to the use of a formal process of identifying student personality type as a basis for team formation. Collectively, the writers of this article have extensive experience with using mixed student personality temperaments as a method of team selection in a variety of student learning settings and are driven by a belief that students need to experience successes in teamwork situations. The mixed temperament approach to the team member assignment process has been used in high school and in university undergraduate and graduate classes. Of interest in the present research is the potential impact of the use of the Keirsey Temperament Sorter assessment process as the basis for assigning members to teams. The overall goals of the temperament assessment include improved understanding of the behavior of self and others in the team assignment environment and successful completion of the actual team assignment. This exploratory study analyzes reflective papers of 64 students in a convenience sample from multiple classes during multiple semesters taught by two of the four authors of this paper. The students include both graduate and undergraduate students in IS courses designed for students with IS concentrations, majors, or minors. All students in the subject classes were introduced to the Keirsey Temperament Sorter, completed the online questionnaire, received results, and performed a self analysis as described below. The reflective self analyses were the basis of an independent content analysis performed by three of the authors reviewing all of the responses and responding to these questions:

1. Did the students agree with the results of the temperament sorter?

2. To what extent did the students agree with the results of the temperament sorter?

3. What were the key traits upon which the students based their agreement (or disagreement), giving evidence of their buy-in?

To identify the answers to these questions, the narrative text provided by students participating in this exercise from multiple classes over multiple semesters was pooled into four files (one for each personality type) populated by student narratives based on the students' assessed personality type. Next, a content analysis was performed on the individual text files by three of these researchers/authors to identify perceptions of accuracy and level of agreement (or disagreement). Content analysis is a commonly used and important qualitative research analytical technique (Cohen, Manion & Morrison, 2007; Krippendorff, 2004).

The researchers conducting the content analysis used color highlighting within the word processing software to select positive statements of agreement with the temperament sorter results by the students. The researchers used a different color highlighting to select statements of

disagreement with the temperament sorter results. Another color highlighting was used to select student comments about their key traits as they related to the temperament sorter results. The content that was highlighted was then counted by each of the three authors and tallied by the four main Keirsey temperament categories of Guardian, Artisan, Idealist, or Rational. Then, the three researchers' results were totaled and compared. With minimal differences found among the totals of the three researchers, the averages of the three researchers' results were then determined for each category.

RESEARCH RESULTS

Based on the Keirsey temperament assessment, the distribution of personality types in the study sample as compared with the population as a whole is reported in Table 2. Differences in the distribution might be attributed to possible bias introduced by the students' review of the temperament definitions prior to answering the questions on the instrument. In a self-reporting instrument such as the Keirsey Temperament Sorter II, there is always the possibility of bias by students answering the questions in a manner that they think their friends or some mentor would likely answer. The results in Table 2 show an unusually high number of students in the Keirsey Idealist and Rational categories compared to Keirsey's population projections. It is important to remember that these students in the study were students in information systems and may have higher or lower concentration of traits in certain temperaments. These differences in distribution percentages for the four temperaments are addressed in the Research Results section below.

Table 2. Distribution of Personality Types (Sample data and Keirsey, 2010)

Distribution of Personality Types			
Personality Type	Number in Study Sample	Percent in Sample	Percent of Population at Large
Guardians	33	52%	40-45%
Artisans	9	14%	35-40%
Idealists	12	19%	8-10%
Rationals	10	16%	5-7%
TOTAL	64	100%	

In relation to the question of the students' perception of the accuracy of the temperament sorter assessment of their personality types, the students in this study overwhelmingly agreed (92 percent, as shown in Table 3) that the Keirsey assessment was accurate in describing their personality temperaments. The content analysis revealed affirmative terms from the students such as "I agree," "a perfect match," "is correct," "I concur," and "100% true." Among the four Keirsey

assessment types, 94% of the assessed Guardians, 100% of the assessed Artisans, 92% of the assessed Idealists, and 80% of the assessed Rationals agreed with the results.

While no empirical attempt has yet been made to explain the differences between the temperament types assessed in this study and Keirsey's population projections, it is interesting to note that the sample contains a high percentage of Rationals (16%), which is three times greater than the general population expectations of between 5-7%. Because of the nature of the work in the IS field, it is likely that a higher number of Rationals might be attracted to the field. Many of the characteristics desired in IS professionals are those found in Keirsey's descriptions of the Rationals. For example, Keirsey (2010) described Rationals as "…focused on problem-solving and systems analysis." The focus of this study on IS students may also explain the lower than normal percentage of Artisan temperaments in the study. It is possible that very few of the terms used by Keirsey to describe the Artisans would be used in describing most IS professionals, and students with Artisan temperaments might not be as attracted to the IS careers as other temperament groups.

Table 3. Distribution of Personality Types (Sample data)

Responses of Agreement Reported by Keirsey Assessment Personality Types

Personality Type	Number in Study Sample	Number Agreeing with the Result	Percent Expressing Agreement
Guardians	33	31	94%
Artisans	9	9	100%
Idealists	12	11	92%
Rationals	10	8	80%
TOTAL	64	59	92%

The content analysis also revealed that the majority of the students did "buy in" to the self-discovery aspect, based on traits which they self-identified as confirmatory to the assessment results. Several common descriptive terms within each temperament category indicated that the students were benefiting from the self-discovery aspect of the assignment. For example, 67% of the students in the Rational category confirmed that they had strong characteristics of leadership and thrived on setting objectives and accomplishing goals. One interesting pattern that was indicated by the researchers' content analysis coding involved only 33% of the Rational students, but it clearly indicated a trend that some students in this category prefer to work alone. "Curiosity" and a love for "figuring things out" were indicated by 33% of the Rationals.

Of the Idealists in the study, 83% indicated that they enjoy helping others. Fifty percent of the Idealists mentioned that they were very ethical people who held themselves to strict standards of personal integrity. There was a strong desire (75%) among the Idealists to be inspirational to others and to encourage cooperation among others.

Ninety percent of the Artisans in the study confirmed that they enjoyed creating and doing things with their hands. The hands-on work covered several areas such as art, music, and working with tools. Sixty percent of the Artisans described in a variety of terms that they would always do whatever it takes to get the job done.

Of the Guardians in the study, 30% indicated that they were comfortable being "in charge," "in control," or "taking the lead" in group activities. Sixty-one percent of the Guardians discussed the fact that they liked order and smooth operations. According to 30% of the Guardians, they like to have fun but they know when to be serious and get their work done. A smaller percentage (24%) of the Guardians mentioned that they were "serious" about their jobs, school projects, and extracurricular activities work. An even smaller percentage (15%) considered themselves to be "reserved" and "quiet." Thirty percent of the Guardians were not fond of change. Guardians tend to think of themselves as hard workers as indicated by 42% of those in the study.

In each of the assessed temperament categories, the students identified their own behaviors and traits with remarkable insight. It was also interesting to note that they even demonstrated the category by their actions in writing the narratives. For example, the Rationals as a group had a common trait that was clearly indicated in the content analysis coding for their descriptions of their temperament results: their analyses were shorter than the other categories and many simply responded as if to a very structured question. The content analysis reviewers observed that the Guardians, on the other hand, generally gave longer responses, noting more than three unique traits or behaviors on average in support of their identification with the category. In addition, the Guardians elaborated far more extensively than the Rationals, including personal examples, sub-category identification, and often repeating the same trait in multiple ways. The Guardians also frequently included indications of how they have developed over time and how they might apply these findings to their own situations.

By contrast, the smaller percentile two categories—Idealists and Artisans—averaged about 2 unique traits in each description. The unique traits expressed by those students were strikingly similar to the descriptions provided by Keirsey. Different between them, however, was the style adopted to describe their traits and behaviors. For example, half of the Idealists began their narratives with a statement of what idealists are and the other half began with some form of "I am an Idealist." Most of the assessed Idealists personalized with very descriptive words and phrases, expressing feelings and attitudes. Almost all of the Artisans began with a reference to their finding that they fit into this particular category. The narrative responses for most of the Artisans appeared to reflect an attitude of "living in the here and now." That is, they seemed intent on accepting the finding and building an argument to support the assessed result, rather than analyzing reasons to agree or disagree.

As described in the discussion of results above, there is ample evidence that the students addressed in this study perceived a high degree of accuracy in their assessed temperament types.

These researchers believe this finding lends strong support for continuing this methodology in future efforts in building more effective student teams.

LIMITATIONS AND FUTURE RESEARCH

Data for this study is limited to reflections on a process made by students in IS classes for purposes other than this research paper. As with any exploratory study, a number of extraneous variables not controlled for in this study may have impacted the overall findings. These extraneous variables include demographic factors of age, gender, ethnicity, academic level classification, and academic major. The collection of demographic data in future studies would help control for these items. In addition, the results may have been impacted by differential conditions among multiple instructors and multiple course sections. Finally, the meta-communication among the students, both in person and via the electronic discussion board used to share student reflections on the process, may have produced a Hawthorne effect among the students who completed the Keirsey Temperament Sorter assignment after the majority of other students had completed their assignments and posted their reflective papers on the electronic discussion board.

The authors are also aware that personality type is only one of many dimensions of the team project experience. An additional dimension of interest is the learning style of the team members. Additional research is needed to determine the potential impact of learning styles on team performance. Further, interactions might be identified regarding the effects of learning styles and personality type.

Despite the aforementioned potential limitations, these authors believe that our initial beliefs were confirmed, at least on a preliminary basis, by the results of the study. To further investigate the value of the proposed mixed personality strategy for team member assignment, future study will be needed. Additional data is being collected in classes using this strategy to evaluate in detail the reactions of students at the end of a team project with diverse teams. Unsolicited anecdotal evidence to date suggests that students enthusiastically embrace the concept after the project is completed. The next stage of research will involve an investigation of learning outcome assessment associated with specific teamwork learning goals. As a corollary, this work will support continuous improvement and accreditation activities efforts within the academic department. Rubrics designed to assess learning outcomes will be used in the planned research as the basis for investigating several potential advantages to using a mix of student temperaments when building teams: (1) the student knows why he/she is on the team, (2) the student knows he/she has a role to fill on the team and that he/she is not just a generic member of the team, (3) the student knows that his/her opinion is important and that it is okay to think differently and have different ideas than all of the other team members, and (4) the student knows that the team has the potential to be a stronger team with a variety of personality temperaments represented.

CONCLUSION

From a professor's perspective, one of the most rewarding parts of using temperaments as a means of building better teams for teamwork projects in business classes is watching the students "step up to the plate" and fully appreciate their roles on the team. That process can be observed in face-to-face classrooms as teams meet and work on projects, and it can also be observed in discussion board activity within online distance learning classes. For example, one student with an assessed Guardian temperament displaying those characteristics wrote to teammates "It is due November 7 - so I am taking on this Guardian role (control) and asking that you read the attached and get your comments back to me by November 1."

Table 4: Example of team dialog on a WebCT course discussion board at the completion of a team case study project. The bold print areas tell the story.

Author: MATTHEW Date: Monday, November 7 2:41pm Ok Team, I have attached the final copy of the paper with the work cited page. Vanessa and I have looked over it one more time and I think the paper is ready to be turned in. **This was a great group to work with and I want to thank you for getting me all the information to me on time. I had so much information that it made putting the paper together very easy. So thanks again for being such a great group to work with.** Matt
Author: AMANDA Date: Monday, November 7 5:33pm I agree Matt. **I think we had a great group and I enjoyed working with all of you.** - Mandy
Author: KERRY Date: Monday, November 7 8:51pm **viva la group! it was my pleasure being on team 1.** good luck with the paper, -kerry
Author: VANESSA Date: Tuesday, November 8 8:21am **This has been a good group. I was wondering how it would go being on a team in an online class, but it worked out great! Thanks everyone!**

It is clear that prospective employers of IS graduates continue to express a strong desire for effective communication and interpersonal skills in prospective new hires. The challenge for IS educators in meeting this demand is to provide maximal opportunities for students to acquire those skills in preparation for their professional careers following graduation. There is confirmation in the research literature of the importance of personality type heterogeneity among team members

for high levels of performance. One strategy for enhancing student opportunities for communication and interpersonal skills development through participation in project teams is presented and discussed in this paper.

The content analysis of the student reflections on their personality assessment experience shows that, in the majority, students enrolled in the courses included in this study both agreed with the accuracy of the assessment results and "bought in" to the process. It may be concluded, then, that the previously detailed methodology of forming student teams is an effective strategy. In addition, this strategy represents what these authors believe is a step toward strengthening IS programs to better equip students with the communication and interpersonal skills needed to succeed in team environments in the workplace.

As a final observation, the desired experiences of team members are captured in the unsolicited dialog in Table 4, captured after a successful team project was completed. This represents the epitome of a successful project and a worthwhile goal for all team project experiences.

REFERENCES

ABET (2009). 2008-2009 criteria for accrediting computing programs – new criteria. Retrieved February 25, 2009 from: http://www.abet.org/Linked%20Documents-UPDATE/Criteria%20and%20PP/C001%2009-10%20CAC%20Criteria%2012-01-08.pdf

Abraham, T., Beath, C., Bullen, C., Gallagher, K., Goles, T., Kaiser, K., & Simon, J. (2006). IT workforce trends: Implications for IS programs. *Communications of the Association for Information Systems*, 17, 1147-1170.

Albin, M. & Otto, R .W. (1987). The CIS curriculum: what employers want from CIS and general business majors. *The Journal of Computer Information Systems*, 27, 15-19.

Bailey, J. L., & Stefaniak, G. (2000). Preparing the Information Technology Workforce for the New Millenium. *ACM SIGCPR.* Evanston, Illinois.

Barrick, M. R., Stewart, G. L., Neubert, M. J, & Mount, M. k. (1998). Relating member ability and personality to work team processes and team effectiveness. *Journal of Applied Psychology, 83*(3), 377-391.

Baugh, J., Davis, G., & Turchek, J. (2008). Emphasizing Communication Skills in the Curriculum for the Computer Information Systems Grad. *ISECON 2008, v25 (Phoenix, Arizona): 2553* (pp. 1-8). EDSIG.

Bell, J .D. & Richter, W.W. (1987). Needed: better communication from data processors. *Personnel*, 63, 20-26.

Bradley, J. & Hebert, F. (1997). The effect of personality type on team performance. *Journal of Management Development, 16*, 337-353.

Bullen, C. V., Abraham, T., Gallagher, K., Simon, J., & Zweig, P. (2009). IT workforce trends: Implications for curriculum and hiring. *Communications of the Association for Information Systems*, 24, 129-140.

Carlson, J. G. (1985). Recent assessments of the Myers-Briggs Type Indicator. *Journal of Personality Assessment, 49*, 356-365.

Cohen, L., Manion, L. & Morrison, K. (2007). *Research Methods in Education*. London: Routledge.

Crawford, G., & Williams, R. (2002). Interactive teaching and course content: are we teaching the right things in colleges of business? Florence, AL: University of North Alabama. Retrieved May 14, 2007, from: http://www2.una.edu/gcrawford/mk360/ paper.htm

Doke, E., & Williams, S. (1999). Knowledge and skill requirements for Information Systems professionals: An exploratory study . *Journal of Information Systems Education, Sprint* , 10-18.

Ehie, I. C. (2002). Developing a management information systems (MIS) curriculum: Perspectives from MIS practitioners. *Journal of Education for Business* , 151-159.

Francis, L. J., Robbins, M., & Craig, C. L. (2007). Two different operationalisations of psychological type: Comparing the Myers-Briggs Type Indicator and the Keirsey Temperament Sorter. In R. A. Degregorio (Ed.), *New developments in psychological testing* (pp. 119-138). New York, NY: Nova Science Publishers.

Gorla, N. & Lam, Y. (2004). Who should work with whom? Building effective software project teams. *Communications of the ACM, 47*(6), 79-82.

Gorgone, J. T., Davis, G. B., Valacich, J. S., Topi, H., Feinstein, D. L. & Longenecker, H. E. (2002). IS 2002 model curriculum and guidelines for undergraduate degree programs in information systems. *Communications of the Association for Information Systems*, 11, 1-52.

Gruba, P., & Al-Mahmood, R. (2004). Strategies for communication skills development. *ACE '04: Proceedings of the sixth conference on Australasian computing education - Volume 30.*

Hackbarth, S. (1996). *The educational technology handbook: a comprehensive guide—process and products for learning.* Englewood Cliffs, NJ: Educational Technology.

Harrison, D. A., Price, K. H., Gavin, J. H., & Florey, A. T (2002). Time, teams, and task performance: Changing effects of surface- and deep-level diversity on group functioning. *Academy of Management Journal, 45*(5), 1029-1045.

Kelly, K. R. & Jugovic, H. (2001). Concurrent validity of the online version of the Keirsey Temperament Sorter II. *Journal of Career Assessment, 9*(1), 49-59.

Keirsey, D. (2010). Different drummers. Retrieved June 8, 2010 from http://keirsey.com/Drummers.htmlKeirsey, D. (2010). The four temperaments. Retrieved June 8, 2010 from: http://keirsey.com/personalityKeirsey, D. (2010). The keirsey temperament sorter II. Retrieved June 8, 2010 from: http://www.advisorteam.com/temperament_sorterKrippendorf, K. (2004). *Content analysis: An introduction to its methodology*. Thousand Oaks, CA: Sage Publications.

Landrum, R, E., & Harrold, R. (2003). Faculty forum: What employers want from psychology graduates. *Teaching of Psychology, 30*(2), 131-153.

Lee, S., Koh, S., Yen, D. & Tang H. (2002). Perception gaps between IS academics and IS practitioners: An exploratory study. *Information & Management,* 40, 51-61.

Mohamed E. K. A, & Lashine, S. H. (2003). Accounting knowledge and skills and the challenges of a global business environment. *Managerial Finance, 29*(7), 3-16.

Neuman, G., Wagner, S., & Christiansen, N. (1999). The relationship between work-team personality composition and the work performance of teams. *Group & Organization Management*, 24, 28-45.

O'Brien, E. M., & Deans, K. R. (1995). The position of marketing education: A student versus employer perspective. *Marketing Intelligence & Planning, 13*(2), 47.

Quinn, M., Lewis, R., & Fischer, K. (1992). A cross correlation of the Myers-Briggs and Keirsey instruments. *Journal of College Student Development, 33*(3), 279-280.

Stokes, S. (2001). Temperament, learning styles, and demographic predictors of college student satisfaction in a digital learning environment. (Doctoral dissertation, The University of Alabama, 2001). *Dissertation Abstracts International*, 62, 03, 983.

Tucker, I. & Gillespie B. (1993). Correlations among three measures of personality type. *Perceptual and Motor Skills, 77* (2), 650.

Van Slyke, C., Kittner, M., & Cheney, P. (1998). Skill requirements for entry-level IS graduates: A report from industry. *Journal of Information Systems Education, Winter* , 7-11.

Verbick, T., & Todd, K. (2003). Tech-NO-Nerds: why the best student computer lab consultants are often not from the computer science department. *Proceedings of the 31st annual ACM SIGUCCS conference on User Services* (pp. 225-227). San Antonio, Texas: ACM.

Watson, H., Young, D., Miranda, S., Robichaux, B. & Seerley, R. (1990). Requisite Skills for new MIS Hires. *Data Base*, 21, 20-29.

White, K. (1984). MIS project teams: An investigation of cognitive style implications. *MIS Quarterly, 8*, 95-101.

PROACTIVE PERSONALITY: ORGANIZATION VS CAREER COMMITMENT

Leila Messara, Lebanese American University
Grace K. Dagher, Lebanese American University

ABSTRACT

Using a sample of 101 currently employed MBA students, the researchers assessed the relationship between proactive personality and the different types of commitment i.e. affective, continuance, normative and career. The results indicated that proactive personality is significantly positively related to affective, continuance, and career commitment. The study suggests that if employees with proactive orientation are empowered to make decisions like an entrepreneur, this will enhance their commitment to both career and organization.

INTRODUCTION

In these turbulent times, the struggle for corporate survival has added pressure on organizations to reconsider the role of individuals as key players and their capacity to revitalize the organizations. Researchers have agreed that individuals' personalities shape their behavior; we can therefore conclude that individuals with certain traits could help organizations with their efforts to adapt. One of such traits is proactive personality. According to Bateman and Crant (1993, p.105) proactive individuals "scan for opportunities, show initiative, take action, and persevere until they reach closure by bringing about change." However, if such individuals are needed for change, can we then count on their commitment to the organization, or, in other words, how committed are they? This prompted the researchers to investigate whether a relationship exists between proactive personality and the different types of commitment (Affective, continuous, normative, and career), especially since some organizations have identified proactive oriented behavior as a requirement in their hiring process (Campbell, 2000).

PROACTIVE PERSONALITY

In recent years, personality traits have become both popular and an accepted means for explaining individuals' behavior, i.e. actions, manners, targets, and purposes (Llewellyn and Wilson, 2003). This helps identify the reasons for individuals' different reactions to similar situations (Cooper, 1998). Ryckman defined Personality as the "dynamic and organized set of characteristics

of a person that uniquely influences his/her cognitions, motivations, and behaviors" (1982, p. 5). This concept represents behavioral and cognitive prototypes that have been proven stable through time and in different settings (Cattell, 1964). According to Bateman and Crant (1993) past research have considered proactive personality as a stable individual disposition.

Individuals with proactive oriented personality are somewhat unconstrained by situational factors and affect environmental change (Bateman and Grant, 1993).They recognize opportunities, show initiative, take action, and persist until meaningful positive change occur in their environment regardless of obstacles (Seibert, Kraimer, & Grant, 2001). Proactive individuals tend to set high standards and make use of all available resources toward achieving them (Grant, 1996). Crant defined proactive behavior as "taking initiative in improving current circumstances or creating new ones; it involves challenging the status quo rather than passively adapting to present conditions" (2000, p. 436). On the other hand, less proactive or reactive individuals tend to be passive, show little initiative, and are likely to adapt to situations rather than change their circumstances.

Past research has positively associated proactive behavior with entrepreneurship (e.g., Becherer & Maurer, 1999; Grant, 1996), individual and job performance (e.g. Grant, 1996; Ashford and Northcraft, 1992), career success (e.g. Seibert et al., 1999), and leadership (e.g. Crant and Bateman, 2000; Deluga, 1998). Although most of these studies indicated positive outcomes with proactive personality, nevertheless, a study by Bolino and Turnley (2005) linked it with job stress, work family conflict, and job overload which are negative outcomes.

Commitment

The definition of commitment in the literature seems inconsistent. However, in this research we define organizational commitment as the employee's goal to remain with the organization (Meyer & Allen, 1997). Organizational commitment has been positively linked to hours devoted to work, morale, absenteeism, intent to quit, performance of the organization (Silverthome, & Hung, 2006; Fernanado J. et al., 2005; Riketta, Chen, 2002) and the satisfaction of employees (Gallie and White 1993). Previous literature also indicated that organizational commitment and job performance have a direct relationship (Chan, D. 2006, Fernando J. et al., 2005, Vandenberghe, C. et al., 2004, Bishop J. W. et al., 2000), is positively related to the need for achievement (Lee, 1971; Patchen,1970), and job challenge (Buchman, 1974). Hence, maintaining highly committed personnel should be a priority in the minds of those responsible.

Meyer & Allen (1997) distinguished a three-component model of commitment and developed a scale to measure them which generally holds up across cultures (Sulimand, & ILes, 2000; Ko, Price, & Mueller, 1997). These are: (a) Affective commitment which involves the identification, involvement and emotional attachment with the organization leading to the sentiment of wanting to continue employment in the organization; (b) Continuance commitment which stands for profit coupled with continued participation on the one hand, and the cost associated with leaving

on the other hand (Kanter, 1968) creating a feeling of needing to continue employment; and (c) Normative commitment represents a feeling of obligation towards the organization i.e. a person ought to continue employment. Together, these components make up an employee's 'commitment profile'

Organization and job commitment have received a great deal of attention from researchers. However, few studies have examined career commitment in general, and in a non-western context in particular. Researchers have indicated the distinctiveness of career, organization and work commitment constructs; nevertheless, they have also indicated a correlation between them (Goulet and Singh, 2002; Morrow, 1983 &1993; Muller, Wallace, & Price, 1992; Wiener & Vardi, 1980). Career commitment reflects individual's commitment to a specific work and could relate to work outcomes (Ballout, 2009). According to Noordin, Williams and Zimmer (2002), Career commitment is reflected by the individual's identification with the career more than with the organization membership.

Career Commitment is the planned choice of a line of work and the belief that loyalty in this choice will surpass a particular job or organizational context (Morrow, 1993). According to Colarelli and Bishop (1990), career commitment measures not only the individual's identification of personal career goals and attachment to these goals but also measures the involvement in these goals. In this study, we adopt Blau's (1985, p. 278) definition of career commitment as "one's attitude toward one's profession or vocation".

HYPOTHESES

Proactive Personality and Commitment

An individual's predisposition is basically important in understanding his/her tendency toward certain action. A growing body of literature shows that a relationship exists among personality variables and attitude or behavior at work (Roberts and Hogan, 2001), and commitment to the organization is attitudinal and behavioral in nature.

Attitudinally, individuals identify with the organization and are committed to remain in order to pursue goals (Porter et al., (1974); while behaviorally, individuals are bound to the organization through diverse interest such as, seniority, pension, etc. (Becker, 1960).

Meyer and Allen (1997) argue that affective commitment is positively related to individuals' willingness to commit extra effort to their work; this is the kind of commitment that can be expected to be related to proactive orientation. We propose:

H1: Proactive personality is positively related to affective commitment

On the other hand, normatively committed employees attach themselves to the organization solely because they believe it is the right way to behave. It is based on the individual's personal obligation to act in a way to meet organizational goals and interests (Allen and Meyer, 1990; Wiener, 1982). Proactive individuals take action to influence positive change in their environment. They possess entrepreneurship initiatives which make them more likely to quit the organization to start their own businesses (Becherer and Maurer, 1999). Thus, we can predict that:

H2: Proactive personality is not related to normative commitment

A longitudinal study by Seibert, Grant and Kraimer (1999) found that proactive orientation is positively associated with innovation, self reported objective (salary and promotion), and subjective career satisfaction. Together, self reported objective (which are indicators of perceived cost/benefit, referred to by Meyer and Allen as continuance commitment) and subjective career satisfaction indicate career success. We can thus propose the following Hypotheses:

H3: Proactive personality is positively related to continuance commitment
H4: Proactive personality is positively related to career commitment

METHODOLOGY

Instruments

In this study, the researchers focused on understanding the relationship between proactive personality and the different types of commitment i.e. affective, continuance, normative and career. A five parts questionnaire was developed to include items to measure the three dimensions of organizational commitment, career commitment and proactive personality. To measure organizational commitment, the Component-model of Commitment developed by Meyer & Allen (1997) was used in this research for it was specifically designed to measure the three types of commitment to the organization; i.e. affective, continuance, and normative commitments. It is a multidimensional scale that is widely used and intensively tested (e.g. Culpepper, 2000; Jaros, 1997). It includes 24 items, 8 items per commitment type. Sample items: affective commitment "This organization has a great deal of personal meaning to me"; continuance commitment "Right now, staying with my organization is a matter of necessity as much as a desire"; normative commitment "Jumping from organization to organization does not seem at all unethical to me".
To measure career commitment the researchers used the scale developed by Blau (1985) consisting of eight items. Sample item "I definitely want a career for myself in this industry".

As for proactive personality, we used a 10 item scale developed by Seibert et al., (1999). Sample item "I am always looking for better ways to do things". All items were measured using a

7-point Likert scale ranging from 1 as strongly agree to 7 as strongly disagree. In addition to the scale's items we included demographic questions as well.

Sample

The sample was composed of employed MBA students attending an American University in Lebanon. The researchers distributed 140 questionnaires but only 101 completed the survey forming a 72% response rate. Of the sample, 53 were male and 48 female. The majority of the respondents were single and their ages were between 20 and 30 years old. As to their current position, 42 of the respondents have a supervisor position and 24 have a middle management position.

Hypothesis Testing Results

In accordance with previous results on the different types of commitment the reliability coefficient scores for the different types of commitment were consistent with the previous studies on commitment. Table 1 provides the means, standard deviation and coefficient alpha for the variables in this study.

Table 1: Mean, Standard Deviation, and Reliability coefficient for the different types of Commitment

Variables	Mean	SD	1	2	3	4	5	
1. Proactive Personality	2.31	0.87	**-0.88**					
2. Career comm	3.54	0.9	.356**	**-0.71**				
3. Continuance comm.	3.68	0.8	.326**	.212**	**-0.75**			
4. Affective comm.	3.07	0.96	.489**	.655**	.214**	**-0.74**		
5. Normative comm	3.64	0.62	.206*	.543**	.207*	.439**	**-0.73**	

* Correlation is significant at the .05 level
** Correlation is significant at the .01 level

In order to examine the predicted relationship between proactive personality and commitment i.e. affective, continuance, normative, and career, a Pearson correlation analysis was used. Data were analyzed using SPSS 17 statistical package. Hypothesis 1 predicted that proactive personality would be positively related to affective commitment. A significant positive association of $r=.509 (p<.01)$ was found between proactive personality and affective commitment; thus supporting the predicted relationship. Hypothesis 2 predicted that proactive personality would have no relation with normative commitment. A significant relation was found; thus H2 was not supported. Hypothesis 3 predicted that proactive personality would be positively related to

continuance commitment. A significant positive association of r=.364 (p<.01) was found between proactive personality and continuance commitment; thus supporting the predicted relationship. Hypothesis 4 predicted that proactive personality would be positively related to career commitment. A significant positive association of r=.356 (p<.01) was found between proactive personality and career commitment; thus supporting the predicted relationship. The results of the correlation analysis are provided below in Table 2.

Table 2: Correlation Results between Proactive personality and commitment (N=101)

	Career	Continuance	Affective	Normative
Proactive Personality	.356**	.326**	.489**	.206*

*Correlation is significant at the 0.05 level.
**Correlation is significant at the 0.01 level.

To further examine the proposed relations and to provide a complete understanding of these relations regression analysis was conducted. The regression results provided additional support to the results of the Pearson correlation. The results indicated that proactive personality significantly predicted the four types of commitment. Table 3 provides a detailed description of the regression results.

Table 3: Regression analysis results

Hypotheses	B	β	SE	R^2	T	Sig
H1: DV: Affective Commitment P- Proactive Personality	.564***	.489***	0.1	0.23	5.612	0
H2: DV: Normative Commitment P- Proactive Personality	.133*	.179*	0.07	0.02	1.819	0.07
H3: DV: Continuance Commitment P- Proactive Personality	.282***	.303***	0.08	0.08	3.174	0
H4: DV: Career Commitment P- Proactive Personality	.341***	.324***	0.148	0.1	3.429	0

*p<.1, **p<.05, ***p<.01

DISCUSSION AND CONCLUSION

A sample of 101 currently employed MBA students from an American university in Lebanon was surveyed in order to assess the relationship between proactive personality and affective, continuous, normative and career commitment. Our results show that proactive personality is significantly positively related to affective and continuance commitment. This could be the result

of our sample characteristic i.e. employed MBA students. In general, MBA students are young and as such might be either newly employed or has not been with the organization for a long time. This is in line with previous literature that found a positive relation between proactive personality and newcomer adaptation (Chan and Schmitt, 2000).

Our results also indicate a positive relation between proactive personality and career commitment. This is also in line with previous research that linked proactive orientation with entrepreneurship (e.g., Becherer & Maurer, 1999; Grant, 1996). In addition, although our results show a significant relationship between proactive personality and normative commitment, nevertheless, the r square value is 2% indicating a very weak relation between these variables.

In conclusion, the widely debated relationship between career commitment and organizational commitment remains controversial. While Aranya and Ferris (1984) suggest commitment to only one, Norris and Niebuhr (1983) and Bartol (1979) conversely see high commitment to both. Gouldner (1957), however, claims incompatibility.

As stipulated in our research, provided the empirical evidence that proactive personality was positively related to affective, continuance, and career commitment, and since previous literature has positively related proactive orientation to entrepreneurship, we can therefore conclude: if employees with proactive orientation are empowered to make decisions like an entrepreneur, this will enhance their commitment to both career and organization. According to Chatman et al., (1998), individuals whose values are congruent with the operating values of the organization are more likely to be committed to the organization.

LIMITATION AND FUTURE RESEARCH

Our results extend the literature on proactive personality and commitment. However, no study is without limitations. The first limitation is that data was collected from a single source thus the study can not be generalized. It is recommended that future research should examine whether our finding can be generalized beyond employed MBA students and other cultures. The second limitation is the demographic characteristic with regard to the age and the education level of our respondents, the majority of our sample was between 20-30 years old and pursuing their masters degree. Future research should collect data from different groups. The third limitation is the self-reported data. Future research should collect data from both employees and supervisors to have a better understanding of the employees' commitment to career and organization and how these are linked to proactive personality. Further studies could also examine variables that might mediate the relationship between proactive personality and career commitment such as motivation and job satisfaction. In addition, examining the moderating effect of gender, age, and experience on the relation between proactive personality and the commitment types may provide a better understanding of this type of relationships.

REFERENCES

Allen, N. J. & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology,* 63, 1-18.

Aranya, N. and Ferris, K.R. (1984). A reexamination of Accountants' Organizational – Professional Conflict, *Accounting Review,* 59, 1-14.

Ashford, S.J., & Northcraft, G.B. (1992). Conveying more (or less) than we realize: The role of impression management in feedback-seeking. *Organizational Behavior and Human Decision Processes,* 53, 310.–334.

Ballout, H.I. (2009). Career commitment and career success: moderating role of self-efficacy, *Career Development International*, 14 (7), 655-670.

Bartol, K.M. (1979). Professionalism as a Predictor of Organizational Commitment, Role Stress, and Turnover: A Multidimensional Approach, *Academy of Management Journal,* 22, 815-821.

Bateman, Thomas S., & J. Michael Crant (1993). "The Proactive Component of Organizational Behavior: A Measure and Correlates," *Journal of Organizational Behavior,* 14, 103-118.

Becherer,R.C.,& Maurer, J.G. (1999). The proactive personality disposition and entrepreneurial behavior among small company presidents, *Journal of Small Business Management,* 28-36.

Becker, H. S. (I960). Notes on the concept of commitment. *American Journal of Sociology*, 66, 32-40.

Bishop, J.W., Scott, K.D. & Burroughs, S.M. (2000). Support, commitment and employee outcomes in a team environment. *Journal of Management,* 26(6), 1113-1132.

Blau, G.J. (1985). The measurement and prediction of career commitment. *Journal of Occupational Psychology*, 58, 277-288.

Bolino,M.C.,& Turnley,W.H. (2005). The personal cost of citizenship behavior: the relationship between individual initiative and role-overload, job stress, and work-family conflict. *Journal of Applied Psychology,* 90(4), 740-748.

Buchman, B. (1974). Building organizational commitment: the socialization of managers in work organizations, *Administrative Science Quarterly*, 19, 533-546.

Campbell, D.J. (2000). The proactive employee: Managing workplace initiative. *Academy of Management Executive,* 14(3), 52.–66.

Cattell, R. B. (1964). Objective personality tests: A reply to Dr. Eysenck. *Occupational Psychology,* 38, 69-86.

Chan, D., & Schmitt, N. (2000). Interindividual differences in intraindividual changes in proactivity during organizational entry: A latent growth modeling approach to understanding newcomer adaptation. *Journal of Applied Psychology,* 85, 190-210.

Chatman, J.A., Polzer, J.T., Barsade, S.G., Neale, M.A. (1998), Being different yet feeling similar: the influence of demographic composition and organizational culture on work process and outcomes, *Administrative Science Quarterly*, 43, 749-80.

Chan. D (2006). Interaction Effects of Situational Judgment Effectiveness and Proactive Personality on Work Perceptions and Work Outcomes. *Journal of Applied Psychology,* 91(2), 475-481.

Chen, J., C. Silverthome & J. Hung (2006). Organization Communication, Job Stress, Organizational Commitment, and Job Performance of Accounting Professionals in Taiwan and America. *Leadership & Organization Development Journal,* 27 (4), 242-249.

Colarelli, S.M. and Bishop, R.C. (1990). Career commitment: Functions, correlates, and management, *Group & Organization Studies,* 15, 158-176.

Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin,* 124, 197–229.

Crant, J. M. (2000). Proactive behavior in organizations. *Journal of Management,* 26, 435-462.

Crant, M. J., & Bateman, T. S. (2000). Charismatic leadership viewed from above: The impact of proactive personality. *Journal of Organizational Behavior*, 21, 63-75.

Culpepper, R. A. (2000). A Test of Revised Scales for the Meyer and Allen (1991) Three- Component Commitment Construct, *Educational and Psychological Measurement,* 60 (4), 604-616.

Deluga, R. (1998). American presidential proactivity, charismatic leadership and rated performance. *Leadership Quarterly*, 9, 265.–291.

Fernando J., Jay P. M., and Greg W. M. (2005). A meta-analysis of the relationship between organizational commitment and salesperson job performance: 25 years of research, *Journal of Business Research,* 58,705-714.

Gallie, D., White, M. (1993). Employee Commitment and the Skills Revolution: First Findings from the Employment in Britain Survey. London: Policy Studies Institute.

Gouldner, A.W. (1957), Cosmopolitans and locals: toward an analysis of latent social roles, *Administrative Science Quarterly,* 2, 281-306.

Goulet, L.R. & Singh, P. (2002). Career commitment: A Reexamination and an extension, *Journal of Vocational Behavior*, 61, 73-91.

Grant, R.M. (1996). Toward a knowledge-based view of the firm, *Strategic Management Journal,* 17,109-22.

Jaros, S. J. (1997). An Assessment of Meyer and Allen's (1991) Three- Component Model of Organizational and Turnover Intentions, *Journal of Vocational Behavior,* 51 (3), 319-337.

Kanter, R. M. (1968). Commitment and social organization: a study of commitment mechanisms in Utopian communities, *American Sociological Review,* 33, 499-517.

Ko, J., J. L.Price & C. W. Mueller (1997). Assessment of Meyer and Allen's Three Component Model of Organizational Commitment in South Korea, *Journal of Applied Psychology,* 82 (6), 961-973.

Lee, Sang M. (1971). An empirical analysis of organizational identification, *Academy of Management Journal*, 14, 213-226.

Llewellyn, D and Wilson (2003). The controversial role of personality traits in entrepreneurial psychology, *K. Education + Training*, 45 (6).

Meyer, J. P. & Allen, N.J. (1997). *Commitment in the Workplace: Theory, Research, and Application.* Sage Publications, Thousand Oaks.

Morrow,P.C. (1993). *The Theory and Measurement of Work Commitment,* Jai Press Inc., 157-188.

Morrow, P.C. (1983) Concept redundancy in organizational research: The case of work commitment, *Academy of Management Review*, 8(3), 486-500.

Muller, C. W., Wallace, J.E., & Price, J.L. (1992). Employee Commitment: Resolving some issues. *Work and occupations,* 19(3), 211-236.

Noordin, F., Williams, T., & Zimmer, C. (2002). Career commitment in collectivist and individualist cultures: a comparative study, *International Journal of Human Resource Management,* 13(1), 35-54.

Norris, D.R.and Niebuh, R.E. (1983). Professionalism, Organizational Commitment and Job Satisfaction in Accounting Organization, *Accounting, Organizations, and Society*, 9, 49-59.

Patchen, M (1970). *Participation, Achievement, and Involvement on the Job*. Englewood Cliffs, N.J.: Prentice Hall.

Porter,L.W.,Steers, R.M.,Mowday,R.T.,& Boulian,P.V. (1974). Organizational commitment, job satisfaction, and turnover among psychiatric technicians, *Journal Of Applied Psychology,* 59,603-609.

Riketta, M. (2002).Attitudinal Organizational Commitment and Job Performance: A Meta-Analysis, *Journal of Organizational Behavior,* 23(3), 257-266.

Roberts, B. W., & Hogan, R. (Eds.). (2001). *Personality psychology in the workplace*.

Ryckman, R. (1982). *Theories of Personality*, (2nd ed.). Brooks-Cole, Monterey, CA.

Salgado, J. F. (1997). The five factor model of personality and job performance in the European Community. *Journal of Applied Psychology,* 80, 607-620.

Seibert,S.E., Crant, J.M.,& Kraimer, M.L. (1999). Proactive personality and career success, *Journal of Applied Research*, 416-427.

Seibert,S.E.,Kraimer, M.L. & Crant,J.M.(2001).What do proactive people do? A longitudinal model linking proactive personality and career success, *Personnel Psychology,* 850.

Sulimand,A.M. & P.A . Iles (2000).The Multi-Dimensional Nature of Organizational Commitment in a non-Western Context, *Journal of Management Development*. 9(1), 71-82.

Vandenberghe, C. , Bentein, K. & Stinglhamber, F. (2004), Affective commitment to the organization, supervisor, and work group: Antecedents and outcomes. *Journal of Vocational Behavior,* 64, 47-71.

Wiener, Y., & Vardi, Y. (1980). Relationships between job, organization, career commitments and work outcomes: An integrative approach, *Organizational Behavior and Human Performance,* 26, 81-96.

Wiener,Y.(1982). Commitment in organizations: A Normative View, *Academy of Management Review,* 7 (3), 418-428.