

Volume 3, Special Issue, Number 1

ISSN 1944-656X H

ISSN 1944-6578 O

BUSINESS STUDIES JOURNAL

Special Issue Number 1

Tommy J. Robertson, Jr.
Sam Houston State 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 execute a publication permission agreement and assume all liabilities. Neither the DreamCatchers Group nor Allied Academies is responsible for the content of the individual manuscripts. Any omissions or errors are the sole responsibility of the authors. The Editorial Board is responsible for the selection of manuscripts for publication from among those submitted for consideration. The Publishers accept final manuscripts in digital form and 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 communicating with the *Journal*, should contact the Executive Director of the Allied Academies at info@alliedacademies.org.

Copyright 2011 by the DreamCatchers Group, LLC, Arden NC, USA

EDITORIAL BOARD MEMBERS

Ismet Anitsal
Tennessee Tech University
Cookeville, Tennessee

Thomas M. Box
Pittsburg State University
Pittsburg, Kansas

Susan Conners
Purdue University Calumet
Hammond, Indiana

Ramaswamy Ganesan
King Saud University
Riyadh, Saudi Arabia

Jeff Jewell
Lipscomb University
Nashville, Tennessee

Vivek Shankar Natarajan
Lamar University
Beaumont, Texas

Durga Prasad Samontaray
King Saud University
Riyadh, Saudi Arabia

Brian A. Vander Schee
Aurora University
Aurora, Illinois

Santanu Borah
University of North Alabama
Florence, Alabama

Steven V. Cates
Kaplan University
Phoenix, Arizona

Carolyn Gardner
Kutztown University
Kutztown, Pennsylvania

Lewis Hershey
Fayetteville State University
Fayetteville, North Carolina

Marvin P. Ludlum
University of Central Oklahoma
Edmond, Oklahoma

Sanjay Rajagopal
Western Carolina University
Cullowhee, North Carolina

David Smarsh
International Academy of Genius
Monterrey, California

Daisy Wang
University of Tennessee Martin
Martin, Tennessee

TABLE OF CONTENTS

EDITORIAL BOARD MEMBERS.....	III
LETTER FROM THE EDITOR.....	V
HEALTH INSURANCE FOR INTERNATIONAL STUDENTS: WHAT HAPPENS IN NEW ZEALAND AND AUSTRALIA?.....	1
Ershad Ali, AIS St Helens, Auckland, New Zealand	
Geetha Subramaniam, Victoria University of Wellington/Universiti Teknologi MARA	
TEACHING COMPLEX, INTEGRATED M.I.S. TOPICS IN A MULTI-SEMESTER SEQUENCE.....	13
Vance Etnyre, University of Houston – Clear Lake	
PREDICTING PRODUCTIVITY IN A COMPLEX LABOR MARKET: A SABERMETRIC ASSESSMENT OF FREE AGENCY ON MAJOR LEAGUE BASEBALL PLAYER PERFORMANCE.....	23
Brent C. Estes, Sam Houston State University	
REGULATION, CORPORATE GOVERNANCE ON FINANCIAL LEVERAGED COMPANIES MEXICO CASE.	59
Heriberto Garcia, Texas A&M International University	
DIVERSITY EDUCATION AND IMPROVED TEAM INTERACTIONS	79
Karen C. Kaser, University of Houston-Downtown	
Madeline Johnson, University of Houston-Downtown	
WORKING MOTHERS: WORK-LIFE BALANCE AND RELATIVE COGNITIVE EFFECTS ON CHILDREN.....	95
Erika Youngberg, Wartburg College	
STRATEGIES IN A MULTI-POLAR WORLD: OPPORTUNITY FOR APPLICATION OF PROJECT MANAGEMENT APPROACHES.....	109
Neha Purushottam, University of South Africa	
P.M. D. Rwelamila, University of South Africa	

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.

This is a Special Issue edited by Joey Robertson as a result of the Sam Houston State University conference held in April. We appreciate the opportunity to present the outstanding papers selected from the participants of that conference.

Tommy J. Robertson, Jr., Special Issue Editor
Sam Houston State University

HEALTH INSURANCE FOR INTERNATIONAL STUDENTS: WHAT HAPPENS IN NEW ZEALAND AND AUSTRALIA?

Ershad Ali, AIS St Helens, Auckland, New Zealand
Geetha Subramaniam, Victoria University of Wellington/
Universiti Teknologi MARA

ABSTRACT

Internationalization of education has been growing fast since the last decade where the countries such as USA, UK, Canada, Ireland, Australia and New Zealand became important study destinations in the global market. Traditionally, cost of education international students used to consider was the sum of tuition fee and living cost. However, insurance cost has been added as another component of education cost. Insurance cost is compulsory for international students to pay just like tuition fee. However, the fact is that the amount of premium payable and the benefits receivable varies from country to country. For example, New Zealand and Australia, are education exporters, and belong to similar education culture, however the costs and benefits of insurance for international students are different in both countries. Current literature focuses their analysis of the cost and benefits of insurance premium on international students mostly in individual countries. A comparative picture in this regard may contribute to make informed decision for all beneficiaries. This paper aims to compare the insurance cost of these two countries and to see how this difference has been impacting international students to choose study destination. Data from secondary sources such as government publications, statistical departments, research reports etc. of New Zealand and Australia were utilised. The paper found that the cost of insurance for international students in Australia is a little bit higher than that of New Zealand whereas the benefits of insurance received by international students in New Zealand is higher than that of Australia. However, although insurance cost is different, it has little impact on the students' decision to choose Australia or New Zealand as a study destination. Findings of the study might be beneficial for policy makers, educationists and researchers.

Key words: New Zealand, Australia, International Education; Insurance; Cost.

INTRODUCTION

Recently the number of international students has been increasing in education exporting countries such as New Zealand and Australia. It was worth at least USD \$30 billion in 1999 or about 3 percent of total trade in services in the Organization for Economic Co-operation and

Development (OECD) countries. In 1995, export education was responsible for NZD \$530 million in foreign exchange and by 2003 it was estimated that it created over 20,000 jobs and contributed NZD \$1.7 billion to the local economy in New Zealand. Export education is the top five largest exporters of New Zealand services, holding a value of NZD \$2.3 billion as at June 2008. On the other hand, in Australia export education contributed AUD \$17.2 billion in export income to the Australian economy in the year 2008-09, up from AUD \$14.0 billion in the previous financial year (Australian Education International, 2009).

One of the legal requirements for students to be eligible to study internationally is to have a medical insurance to cover their healthcare while studying overseas. Every country has its own regulation regarding this matter. Since 2004, all international students in New Zealand are required to have and maintain health and travel insurance for the proposed duration of study in New Zealand, under the Code of Practice for the Pastoral Care of International Students. Similarly in Australia, overseas students must obtain and maintain Overseas Student Health Cover (OSHC) over their period of their student visit for visa purposes. This paper addresses the cost effectiveness of the medical insurance for international students by comparing two countries: New Zealand and Australia. In particular, the paper explores whose' international students between New Zealand and Australia pay more for their health insurance. In addition, it also investigates which of the two countries – New Zealand or Australia – gives more value to the medical insurance for their students.

In following section of the paper, a brief description about New Zealand and Australian economy is presented in section 2; Rationale of the study is in section 3; findings in section 4 followed by conclusion and policy implications in section 5.

New Zealand at a Glance

International students choose New Zealand as a study destination mainly because: the English-speaking environment, safety, qualifications recognized globally, and the low cost. However, students from Europe, North America, South America and Australia (ESANA) more concerned with the overall experience of international education were more strongly attracted than Asian students by New Zealand's scenery, life style and culture. Students from Asian countries appeared relatively more concerned with education; getting good value for money and a high quality education. For example in 2007, out of the 2,677 international students 41% of students felt that New Zealand represented good value for money as an overseas study destination (Ministry of Education, 2008).

Australia at a Glance

Like New Zealand, Australia also has some important factors which influence the international students in choosing Australia as a study destination. Australian Education International (AEI) pointed out that Australia provides quality education and is an English speaking country. Australia perceived as safe and secure and also offers students the opportunity to experience a new culture or life style. In addition, Australia has relatively low course fee costs and cost of living. Australian's international education enrolment numbers have increased by 78

per cent over the five years to 2007. Australia is now the world's third most popular English-speaking destination for international students, and the fifth most popular overall (AEI 2008).

RATIONALE OF THE STUDY

Overseas students arrive in their study destination of their choice with variety of expectations, dreams and hopes, as well as fears, concern and anxiety. To become an international student is tough as well as mature decision, to experience new culture and to grow academically. Butcher and McGrath (2004) pointed that international students' lives are complex and can be difficult to understand. Their lives also combine a range of educational, psychological and social experiences. International students face a lot of stress while studying and adapting to the new culture, this includes language barriers, acculturative stress, and also home sickness. There is a perceived increase in mental health difficulties faced by international students; or, with an apparent increase in the number of international students with mental health difficulties.

Furthermore, not only international students experience anxiety and difficulties in assimilating to the process of enculturation including getting used to the language, they also experience distress in adapting to the community, such as discrimination. Biggs (2001) provides an extensive review of research examining beliefs about international students learning difficulties and provides evidence for misleading information based on stereotyping of incoming students' culture. There are a number of stereotypes leading to false assumptions made about students from so called "Asian" countries in relation to cross-cultural integration into "western" style classroom dynamics and cultures. Some of the problematic issues listed are difficulties in the transfer from 'passive' versus 'active' learning styles; no participation in argument and debate; frequent plagiarizing; and that "they" have difficulty adjusting to local learning environments and cultures. Some studies also have shown the correlates of perceived discrimination are exclusively negative and include increased stress, identity conflict, less academic satisfaction and greater psychological and socio-cultural adaptation problems (Berno & Ward, 2003; Leong & Ward, 2000).

Other studies also have suggested that international students experience more distress than their local peers (Mullins et al., 1995). Less than half of the students believed that New Zealanders had positive attitudes toward international students, and one in three believed that international students often experience discrimination in New Zealand. The actual incidence of discrimination was reported to be much less frequent, but New Zealand students were cited as the most common source of unfair treatment.

In Australia, the internationalization of Australian higher education has been one of the most successful initiatives in the implementation of cross-cultural matters. The internationalization of the academic program has proven so successful that currently 18 per cent of the student population in Australia consists of international students (IDP Education Australia, 2008). Whilst coming to a new and foreign country is often times an exciting and rich event, the experience can be constrained by uncertainty and disorientation of finding your way around new cultures and social expectations. Therefore, like New Zealand, Australian government also intervenes to help the international students embrace the experience academically as well as

culturally. The Australian government is concerned about the safety of international students in Australia and health care is one aspect of that safety (Department of Immigration and Citizenship, 2010). Australian Government has an Overseas Student Health Cover (OSHC) program in which it is mandatory to every student visa holder. OSHC can assist international students to meet the costs of medical and hospital care if needed when in Australia. OSHC will also pay limited benefits for pharmaceuticals and ambulance services.

Therefore, in New Zealand, compared to Australia, there has been an increasing role played by central government in the marketing and regulation of New Zealand's export education industry. However, the ongoing changes in the regulation of the industry recognize that looking after the needs of international students through the pastoral care of them is strategically important to the export education sector in particular and New Zealand in general. The mandatory Code of Practice for the Pastoral Care of International Students, enacted in 2001 and revised in 2003, effectively highlights three aspects of information, safety and care (Ministry of Education, 2008).

In New Zealand as well as in Australia, the government endorses and requires the international students to have and maintain health insurance while studying. Australian government makes this as one of the requirement to obtain the student visa for the international students to study in Australia. The government in New Zealand has introduced a compulsory Code of Practice for the Pastoral Care of International Students under the Ministry of Education Code of Practice, intended to create a safe environment for students. All schools and tertiary institutions must become a signatory to the Code in order to have international students. The Code deals with the welfare of international students (Asia 2000 Foundation, 2003).

FINDINGS AND DISCUSSIONS

This section aims to presents findings of the study. Analysis commences with the description of the health insurance providers and also the details of what each health insurance provider provides the students with, i.e. the coverage of the insurance. Comparisons then would be made based on the average cost of each health insurance provider in each country. This is followed by the analyses of the data based on the results of the finding. The research results are followed by a brief discussion of practical implications in each section.

In New Zealand, international education is now a very large industry. The number of educational institutions accepting international students is growing, especially in the primary and secondary areas. Total economic benefits to New Zealand position the industry in fifth place in terms of export earnings holding a value of NZD \$2.3 billion.

In New Zealand, the code of practice for the pastoral care of international students requires international students to obtain and maintain the health and travel insurance in order to continue to study in New Zealand. The requirement is mandatory and it is one of the education providers' conditions of enrolment. Due to the nature of factor determinants of health insurance, the sample is taken based on health insurance in the top five universities in New Zealand which are; The University of Auckland; University of Otago; University of Canterbury; Victoria University of Wellington and Massey University.

The findings identify the five health and travel insurance providers the Universities approved. Studentsafe - University insurance policy from Vero is the preferred health insurance coverage from all the five universities. However, it is found that each university has slightly different price for the a single student twelve months coverage. Hence, each price from each university of Studentsafe - University is be summed and averaged as shown in Table 1. The five health insurance providers are; Vero, Lumley General Insurance NZ, Southern Cross Travel Insurance, Uni-Care Ltd and Interglobal Insurance Co Ltd. Table 2 lists the five health insurance providers along with the minimum insurance policies the universities approved as well as the cost cover for single student for twelve months coverage.

Table 1: Studentsafe – University from Top Five Universities In New Zealand	
Studentsafe – University	Price NZD
Auckland University	528.58
Waikato University	529.20
Cantebury Univeristy	529.00
Otago university	500.00
Massey University	510.00
Average	519.356
Source: http://www.topuniversities.com/country-guides/new-zealand-2010	

Table 2: New Zealand Insurance Companies, Their Policies and Prices		
New Zealand insurance in big 5 universities in NZ	Policy Name	Price NZD
Vero	Studentsafe - University	\$519.36
Lumley General Insurance (OrbitProtect)	Orbit Protect Prime	\$454
Southern Cross Travel Insurance	Student Max	\$456
Uni-Care Travel Insurance	NZ Student Plan	\$506.20
Inter global Insurance Co Ltd	Student Care Plus	\$450
Source : Vero Lumley, Southren Cross, Uni-care, Inter Global- 2010		

With the premium New Zealand international students pay, the insurance coverage includes, doctors' bill, Pathology and X-ray, hospital and ambulance costs.

For all the five health insurance providers, coverage for doctors' bills are one hundred percent which means the health insurance companies would reimburse all reasonable expenses

from doctors' bills. This also applies for Pathology and X-ray examinations students need to undertake within the period of coverage. The insurance providers would also reimburse students' claims for hospital. Some other insurance has specific criteria or requirement in which the students could only claim bills for only either public or private hospitals stays. In this case, specifically for these five insurance companies, students do not have to worry about choosing a hospital. The students have the options to choose to stay in private or public hospitals for hospital care. Ambulance and prescription medicines expense are also covered in all five insurance companies.

International students also covered for dental expenses. However, there are different regulations for different companies. Uni – Care Ltd, NZ Student Plan does not cover the cost of dental expense. The coverage of dental treatment is only for the treatment of injury teeth, the initial consultation for the relief of sudden and acute pain using antibiotics, temporary dressings or extraction. However insurance does not pay for elective treatment, oral surgery or Normal Maintenance. Vero, Studentsafe – University and Southern Cross Travel Insurance, Student Max cover NZD \$500 per twelve month period. Lumley, Orbit Protect Prime, cover NZD \$1,500 per twelve month period. Interglobal Insurance Co Ltd, Student Care Plus, cover NZD \$2,400 per twelve month period.

The five health insurance providers for international students in New Zealand also reimburse all reasonable amounts of expenses for optical. The company would only cover for a visit to an optometrist including the cost of spectacle frames, prescription lenses and contact lenses if the optical aids are lost, stolen or damaged; or require new lenses as a result of a change in vision. For Studentsafe – University and NZ Student Plan will reimburse up to NZD \$300 per twelve month period. Orbit Protect Prime cover NZD \$250 per twelve month period. Student Max and Student Care Plus cover NZD \$350 and \$400 per twelve month period, respectively.

Four out of five health insurance providers reimburse treatment cost for alternative treatment by an alternative medical provider if the treatment is recommended by a registered medical practitioner, this includes, chiropractors, acupuncturists, osteopaths, podiatrists, dieticians, and nutritionists provided they are registered members of a recognised professional body for that type of Alternative Medical Treatment provider. Student Care Plus is the only policy that does not cover for an alternative treatment. Studentsafe – University and NZ Student Plan cover up to NZD \$500 per twelve month period. Orbit Protect Prime cover up to NZD \$300 per one year period and also Student Max policy cover up to NZD \$200 per one year period of cover.

Three out of five health insurance companies for international students in New Zealand are willing to reimburse up to NZD \$20,000 per one year period for the treatment of mental illness. This Medical Expenses incurred for the treatment of depression, stress, anxiety, mental or nervous disorder, suicide or attempted suicide or self injury. Student Care Plus only reimburse up to NZD \$2,500 per twelve month coverage and Orbit Protect Prime does not include this into their policy. Moreover, only Studentsafe – University and NZ Student Plan have coverage for continuing treatment. They cover up to NZD \$20,000 per one year coverage. Continuing medical expenses provides any costs covered from the date of the first valid claim relating to the Injury or sickness when following the repatriation to students Country of Origin and provided the students' claim has been accepted by the insurance providers. Only Studentsafe – University and

NZ Student Plan have coverage up to NZD \$10,000 per one year period for repatriation due to mental illness. None of the other providers cover this policy.

Only three out of five insurance companies; Orbit Protect Prime, Student Max and Student Care Plus provide evacuation or return home in their policy. Evacuation or return home applies if the students become disabled while in New Zealand, during the period of insurance and agree to return to your country of origin. However, the companies who provide this in their policy will reimburse all the reasonable expense if the following conditions are met; the registered medical practitioner who attends the students at the time of the disablement provides written advice that the return or evacuation is necessary. The return or evacuation is supported by the insurer's medical advice and if is considered necessary. The companies agree to the destination that the student returns or is evacuated to. The travelling expenses that the students incur are of the same standard or fare class as those originally selected by students for the students' trip (unless a fare upgrade is agreed in writing) and also of the students already have a return ticket between New Zealand and the country of origin.

International students also get the benefit of getting cash allowance whilst in hospital up to NZD \$10,000 per year of coverage. If the students are hospitalised due to injury or sickness overseas or in New Zealand, the insurer would pay \$100 for every 24 hours you are in hospital, provided that the students are hospitalised because of a disablement that occurs or first arises during the period of insurance and for at least 24 hours. Orbit Protect Prime, Student Max, NZ Student Plan and also Student Care Plus have this in their policy of coverage for international students. Furthermore, Vero's Studentsafe – University policy is the only policy that covers incidental hospital expenses, in which they are willing to reimburse up to NZD \$2,000 per twelve month period with no limit of the coverage.

Furthermore, only Student Care Plus from Interglobal Insurance Co Ltd, covers maternity services for up to NZD \$6,000 and immigration X-ray for NZD \$50 per twelve month period of coverage. Student Max from Southern Cross Travel Insurance is the only insurer that includes medical treatment after journey to country of origin. The policy covers up to NZD \$10,000 per year of insurance coverage.

We found that the internationalisation of Australian higher education has been one of the most successful initiatives in the implementation of cross-cultural matters. The fact that international students make up a large proportion of Australian universities today is becoming an expectancy rather than an exception. The internationalisation of the academic program has proven so successful that currently 18 per cent of the student population in Australia consist of international students (IDP Education Australia, 2002). Australia export education contributed AUD \$17.2 billion in export income to the Australian economy in the year 2008-2009. Export Education is the third largest export. Factor determinant for health insurance in Australia is greatly determined by the Department of Immigration and Citizenship.

Australia has a very specific and strict regulation for the students to maintain a health insurance while they are studying in the country called the Overseas Student Health Cover (OSHC). International students will need to buy OSHC before they enter Australia which covers them from point of arrival. Health Insurance is required for the international students to obtain a valid student visa. There are five insurance companies in Australia offering Overseas Students Health Coverage as at July 2008 stated in the Department of Health and Ageing. The

OSHC will help pay for any medical or hospital care students may need while studying in Australia. Table 3 shows the five health insurance providers along with the minimum insurance policies the universities approve as well as the cost cover for single student for a twelve month coverage.

Table 3: Australia Insurance Companies and Prices	
Insurance Companies in Australia	Price AUD
Australian Health Management OSHC	\$374
Bupa Australia	\$385
Medibank Private	\$388
OSHC Worldcare	\$390
NIB OSHC	\$388
Source: Australia Health Management, Bupa, Medibank, Worldcare	

With the premium Australian international students pay, the insurance coverage will contribute towards the cost of most prescription medicines, and an ambulance in an emergency. However, OSHC does not cover dental, optical or physiotherapy.

For all the five health insurance providers, coverage for doctors' bills are one hundred percent which means, the health insurance companies would reimburse all reasonable expenses from doctors' bills for the treatment in a Doctor's surgery or at home by a General Practitioner (GP) or anywhere outside a hospital. One hundred percent is the coverage of the published Medical Benefit Schedule (MBS) fee or the amount as determined by the Federal Government for standard GP consultations. For other out of hospital services, 85 per cent of the published MBS fee will be reimbursed or the amount as determined by the Federal Government and the students would have to pay the difference. The doctors' bills for the treatment in a hospital one hundred percent of the MBS fee would be reimburse.

The entire health insurance provider for the international students who study in Australia also, will cover the cost of prescription medicine up to AUD \$300 per twelve month period of coverage. For medicines and other prescription items prescribed by the doctor the students would have to pay a set amount towards the cost and the insurer would pay the rest up to a maximum of \$50 per item. Students needs to note that benefits are only payable on pharmacy items that are prescription only and prescribed by a medical practitioner and are essential to treat a particular illness, injury, or condition. No benefits are payable on over the counter medicines, vitamins or herbal medicines. Students will also need to pay the Pharmacist first and then claim it back from the insurer. Overseas student may face significant out-of-pocket costs if need treatment with high cost pharmaceuticals, particularly oncology treatment.

Table 4: Health Insurance Coverage for International Students in Australia

Insurance in AUSTRALIA	Doctors' bills	Pathology and X rays	Hospitals	Ambulance	Prescription medicines
Australian Health Management OSHC	100%	100%	Private/Public	100%	\$300/year
Bupa Australia	100%	100%	Private/Public	100%	\$300/year
Medibank Private	100%	100%	Private/Public	100%	\$300/year
OSHC Worldcare	100%	100%	Private/Public	100%	\$300/year
NIB OSHC	100%	100%	Private/Public	100%	\$300/year
Source: Australia Health Management, Bupa, Medibank, Worldcare					

The five insurance companies were selected from each country and the cost of single student with twelve month coverage was also found for each of the company to be compared. The price of the insurance the students need to pay is average for each country. This is followed by converting the average cost of each country health insurance cost to a common currency; USD. Comparison for the two countries then could be conducted.

The average cost of the health insurance in New Zealand is NZD \$477.11, the exchange rate as at November 10, 2010 was 0.779, in which equals to USD \$371. On the other hand, in Australia, the average cost of health insurance for international students is AUS \$385. The Australian dollar was higher by .004 than the American dollar, resulting higher price to those who earns and hold American dollar to come to Australia than to come to New Zealand. After the conversion it is seen proves the hypothesis otherwise. The result was New Zealand provides slightly cheaper cost for their international students, for twelve month coverage of a single student. Moreover, New Zealand also turns out to give more value to their fellow international students who are studying in the country. These results were drawn by comparing the coverage of health insurance provides to the international students with the price of the insurance.

CONCLUSION AND POLICY IMPLICATIONS

Export education has expanded rapidly around the world. Export education has become one of the majors export earnings in some countries including Australia and New Zealand. Export education is the top five largest exporters of New Zealand services, holding a value of NZD \$2.3 billion as at June 2008. On the other hand, in Australia export education contributed AUD \$17.2 billion in export income to the Australian economy in the year 2008-09 and is the top three largest exporters of Australia. As international trade in education services is continuing to grow, this multi billion industry needs more attention and protection from the government. The government keeps continue to expand its research in order to make sure that the rapid growth is not at the expense of the quality of the production itself, i.e. education. This means that

the international students also continue to be well cared for and the politics of this industry does not jeopardize the international reputation. For the health and safety of international students, the government endorses regulations and policies, such as Code of Practice for the Pastoral Care of International Students in New Zealand and Overseas Student Health Cover (OSHC) in Australia.

The health insurance allows and help students to get through the hard time that they face. For international students has become one of the legal requirements for students to be eligible to study internationally is to have a medical insurance to cover their healthcare while studying overseas. For New Zealand the requirement of health insurance is mandatory and it is one of education providers' conditions of enrolment. Similarly, in Australia international students need to obtain the health insurance for their visa purposes. Although there is a different purpose in the importance of international students getting health insurance, it is compulsory for international students to have and maintain health insurance in both countries; New Zealand and Australia.

Finally, it is clear from the above analysis that New Zealand has a better health insurance as the cost is cheaper and also gives more value for the international students. This results due to lower exchange rate against American dollar. As in today's globalized era, people have an increased accessibility to go outside their comfort zone and explore and this advantage of internationalization makes the impossible dream easier to reach, including studying abroad. For some people studying abroad is necessary to gain and expand extensive experience as well not only in enculturation perspective but also academically – to be able to survive such rapid development of globalization. This internationalization evokes the expansion of export education around the world and has become one of the majors export earnings for many countries including New Zealand and Australia.

REFERENCES

- AEI (2003). Why choose Australia? Insights from a survey of international students who commenced study in 2000. AEI – The Australian Government International Education Network, Canberra.
- Asia 2000 Foundation (2003). The Export Education Industry: Challenges for New Zealand. An Asia Occasional Paper, 8 April 2003. 6 November 2010. <http://www.asia2000.org.nz/about/issues>
- Australia or New Zealand; Student Care World Wide Medical & Travel Insurance. (2009). Retrieved November 18th 2010 from <http://www.studentcare.biz/products>
- Australian Education International (AEI) (2007). 2006 International Student Survey – Report of the consolidated results from the four education sectors in Australia. AEI – The Australian Government International Education Network, Canberra.
- Berno, T., & Ward, C. (2003). The cross-cultural and educational adaptation of Asian students in New Zealand. Report for Asia 2000.
- Biggs, J. (2001). Teaching International Students. In J. Biggs, Teaching for quality learning at university. What the student does. Buckingham: Open University Press, pp. 121-140.
- Butcher, A. and McGrath, T. (2004). International Students in New Zealand: Needs and responses. *International Education Journal* , 5(4) Massey University

- Export Education Statistic; IDP. (2008). Retrieved November 19 from http://www.idp.com/research/statistics/education_export_statistics.aspx
- Leong, C.-H., & Ward, C. (2000). Identity conflict in sojourners. *International Journal of Intercultural Relations*, 24, 763-776.
- Ministry of Education (2008). Code of Practice for the Pastoral Care of International Students, Revised. Wellington: Ministry of Education. 6 November, 2010.
- Ministry of Education; Research Publication. (2008). Retrieved November 6, 2010 from <http://www.minedu.govt.nz/NZEducation/EducationPolicies/InternationalEducation/ResearchAndStatistics/Publications.aspx>.
- Mullins, G., Quintrell, N., & Hancock, L. (1995). The experiences of international and local students at three Australian universities. *Higher Education Research and Development*, 14, 201-231.
- Student cover Summary; Lumley Insurance company New Zealand. (2010). Retrieved February 15, 2011 from <http://www.orbitprotect.com/>
- Student Premium; Lumley insurance company New Zealand. (2010). Retrieved February 15, 2011 from <http://www.orbitprotect.com/>
- Student safe international policy wording for international students studying in New Zealand; Vero Insurance New Zealand Limited. (2010). Retrieved February 15, 2011 from <http://www.studentassist.co.nz/>
- Study in New Zealand/Student Visa/Health Requirements. (n. d). Retrieved February 15, 2011 from <http://www.studyingnewzealand.com/>
- Top Universities. (2010). Retrieved February 15 2011 from <http://www.topuniversities.com/>

TEACHING COMPLEX, INTEGRATED M.I.S. TOPICS IN A MULTI-SEMESTER SEQUENCE

Vance Etnyre, University of Houston – Clear Lake

ABSTRACT

Many subject areas are too complex to be taught in just one or two courses. This paper will show how a whole-parts-whole paradigm can be used within a multi-semester structure to teach MIS students how to deal with the details of complex systems. In such a paradigm, the entire subject area is covered in an introductory course, each of the sub-disciplines is presented in substantial detail in the “parts” phase of the paradigm, and later all topics are integrated back into the whole subject area.

In the capstone MIS course, this structure greatly reduces the amount of time spent in the first half of the system development life cycle, thus allowing more time for complicated implementation and integration issues. This structure also forces students in the capstone MIS course to depend on the work product of other students in the introductory course. While this dependence may be frustrating, it teaches students in both courses the importance of clear communication in the documentation they produce.

INTRODUCTION AND BACKGROUND

Many subject areas are too complex to be taught in just one or two courses. Because complex subject areas involve interrelated sub-disciplines, education in these areas often is based on a “whole-parts-whole” paradigm (Etnyre, 2008). In such a paradigm, the entire subject area is covered in an introductory course dealing with fundamental concepts and principles. Each of the sub-disciplines is introduced in this initial course and relationships between the sub-disciplines are established. Cases and projects might be used at this level, but because the course itself is introductory, there are limits to the depth of material which can be presented in these cases and projects.

In the “parts” phase of the paradigm, each of the sub-disciplines is presented in substantial detail. Relationships between the sub-disciplines are still recognized in this phase, but the emphasis is on the detailed working of each of the sub-disciplines. After each sub-discipline has been covered in substantial detail, all topics are integrated back into the whole subject area. This is often done in a “capstone” course, designed specifically to bring together the various sub-disciplines in a meaningful, integrated way.

Management Information Systems is a complex subject area which is well suited to the whole-parts-whole paradigm. Teaching MIS students to participate effectively in information

system projects can be done at different levels. At an abstract level, students can be shown logical models for developing information system projects. The logical models will help students organize information about real problems, but not prepare students create working solutions for real problems. If a program intends to prepare students for the challenges which its graduates will face in the professional work environment, the program must go beyond the abstract level and deal with the hands-on details of real world issues. The level of detail is appropriate for the “parts” phase of the whole-parts-whole paradigm.

Most information system curricula include a capstone course which covers system design and project management topics. If the capstone course is taught at an abstract level, where students learn to represent information problems with logical (box-and-arrow) models, students will learn how to organize information, but will not be prepared to create working solutions for real problems. Too often, these capstone courses start from scratch in introducing cases to portray the important elements of the course. Within a one semester course, it is very difficult to start from scratch, get to a level of detail needed to create real solutions and complete a project.

If planned properly, the whole-parts-whole paradigm can be used within a multi-semester structure to teach students how to deal with the details of complex systems. This paper will present a framework for completing complex MIS projects by using a structured, multi-semester sequence.

Common Elements Within the Whole-Parts-Whole Approach

Within the MIS area, programming considerations, database considerations, networks and telecommunications are prevalent at all levels. Teaching through cases, projects, and role-playing has been a common practice in many MIS courses, especially in the basic Management Information Systems (MIS) course and the Systems Analysis and Design (SAD) course. (Kirs, 1994) describes teaching SAD through role-playing between instructor and students, such that they acted as personnel of a software development company. (Nance, 1998) used group projects to improve students’ soft skills such as teamwork, group development, and project management. In teaching project management, (Rob, 2003) focused on students’ role-playing as project managers as well as on-time delivery of project documentation.

Project-Based Learning is an instructional method that uses complex, realistic projects to enhance learning experiences. The projects used in this paradigm should be authentic, and also allow students to identify with specific business or organizational procedures. They should be realistic, and yet adhere to a curricular framework (Rob and Etnyre, 2009). Selected projects should allow teachers to create tasks and roles similar to those found in the real world. Selected projects should have sufficient depth, duration, and complexity to challenge students and guide them towards an awareness of real-world problems and structures (Etnyre, 2007), and (Rob, 2006). Project-based learning should lead to a collaborative environment which enhances student learning through interactions with other students. It should provide improved

understanding of subject matters, help develop communication skills, enhance planning and teamwork, and provide opportunities to take responsibility (Rob and Etnyre, 2009). Project-based learning allows students to perform effectively in situations which require multiple skills, judgment, and experiences (Wells, 2002).

Many researchers including (Rob, 2006) and (Wells, 2002) state that successful learning through a group project requires strategic organization of a course and group project in the following key areas:

- Planning for the course
- Setting goals and expectations
- Types of group project
- Selection of the project
- Selection of project group or team
- Monitoring and control of tasks
- ASSESSMENT

A Working Example

University of Houston – Clear Lake (UHCL) utilizes multiple courses in a whole-parts-whole structure to overcome the difficulties inherent in single course strategies. The structure used at UHCL is shown below in figure 1.

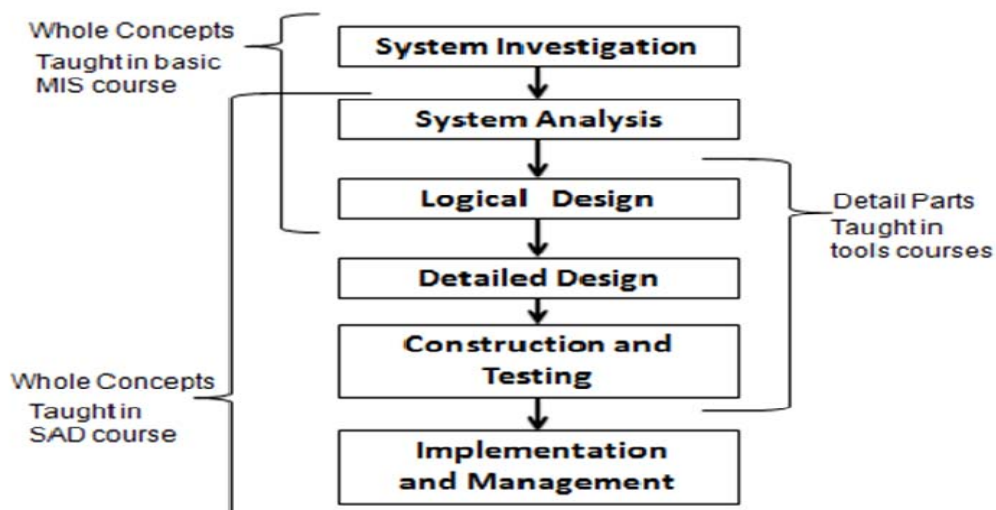
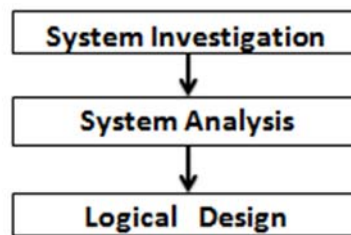


Figure 1 – System Development Life Cycle by courses

Level 1: Introductory Course

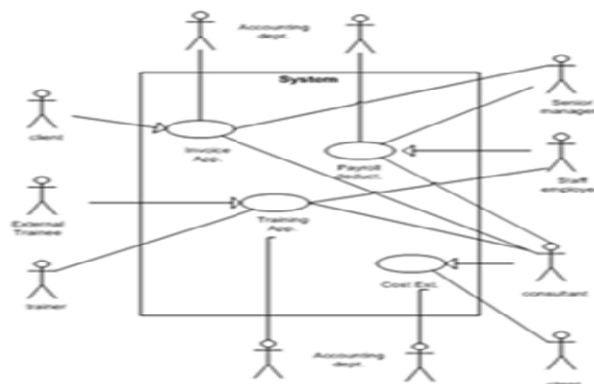
Basic concepts of information systems are taught in an introductory course which is taken by students during their first semester in the MIS program. This course requires students to take a case, complete the investigation phase, and prepare discuss logical design considerations for the case. Students are not required to build or test components because they have not yet received proper instruction on building and testing information system components. Students are required to perform steps which are generally included in the investigation phase of the System Development Life Cycle (SDLC). Each student in the basic MIS course is required to create a System Requirements Document.

Figure 2 – Topics Covered in Introductory MIS Course



Students are then placed on teams and given training in team organization and team process skills. Students are introduced to the use of logical design tools to represent components of information systems. In the figure below, a Use Case diagram is used to represent aspects of an information system problem. At the introductory level, there are serious limits on the depth of coverage which can be included. These and other tools are used to create a report and presentation of the results of the systems analysis phase of the project.

Figure 3 -- Combined Use Case Diagram

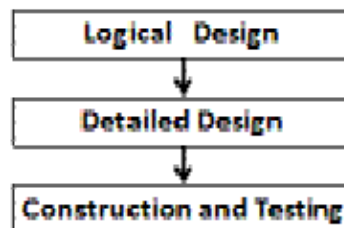


Students from many disciplines within the School of Business take this basic MIS course. Questionnaires administered at the end of the semester indicate that students from disciplines outside of MIS find this course to a valuable supplement to their own curricula.

Level 2 – “Tools” Courses

After taking the basic MIS course, MIS students are directed to take one or more “tools” courses in Application Development, Database Design, and Computer networking. In the Application Development area, the courses enable MIS students to complete complex programming problems in Windows-based and Web-based environments. MIS students are required to create and test complex modules utilizing advanced program development tools.

Figure 4 – Concepts covered in the “Parts” courses



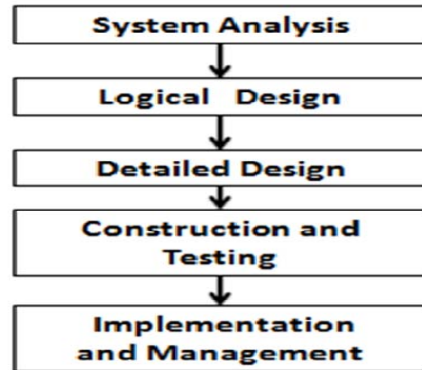
In the Computer Networking area, students are required to learn how components of computer networks function and how these components can be configured into logical and physical networks. They learn the commonly adopted protocols needed to connect logical segments together into working systems. In the Database Design area, students learn how to determine logical data structures needed to support integrated applications. They learn how to turn logical requirements into functioning databases which can be used to support complex application environments.

Level 3 – Capstone Course

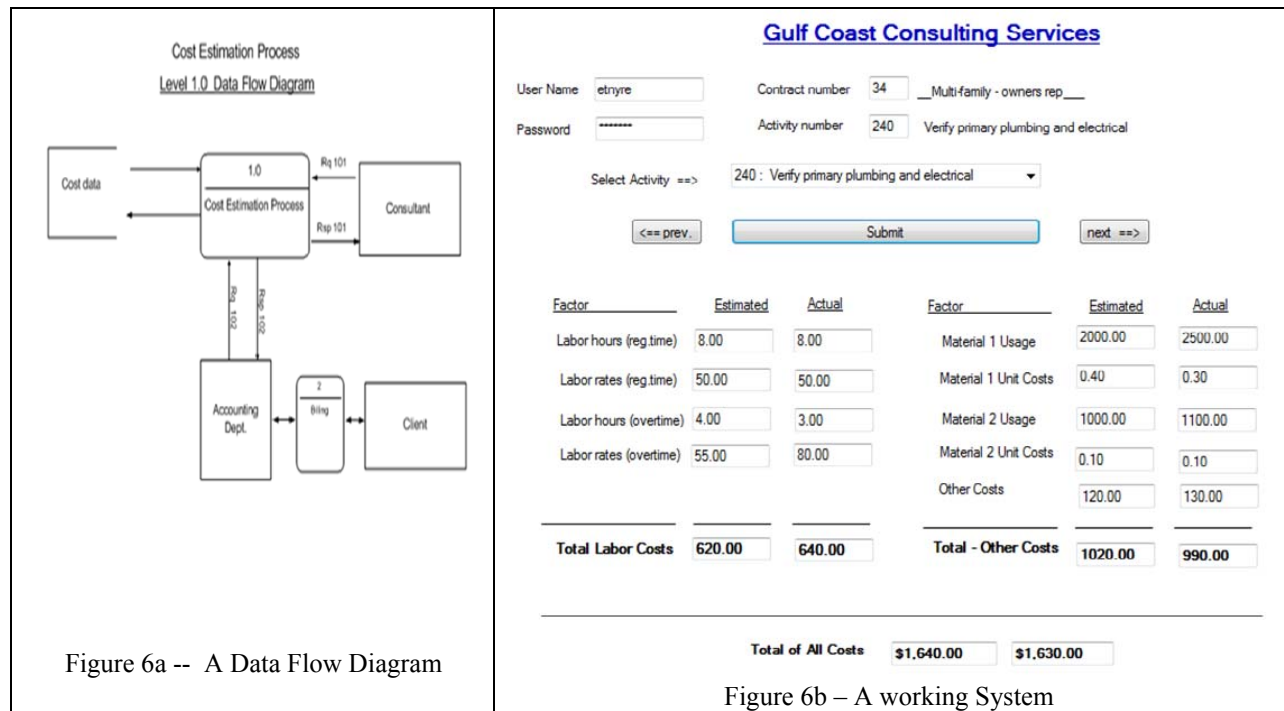
After completing the “tools” courses, students are directed to take a capstone course. The capstone course begins where the initial course ended. Students review requirements documents and logical design considerations from a selected section of the initial course. They are then required to apply the tools they learned in the “parts” courses and integrate this knowledge into a detailed design, construction, testing process and implementation of a solution to the case. Students are expected to gain knowledge on current tools and techniques used to implement complex projects in the SAD course. This would include for completing the feasibility study,

project plan, data-flow diagrams, entity- relationship diagrams, program design, and user interface design.

Figure 5 – Concepts covered in the Capstone course



Students are guided in the use of these tools to complete the assigned projects. The figures below show the level of detail which can be brought to a project if the Investigation, System Analysis and Logical design phases have already been completed.

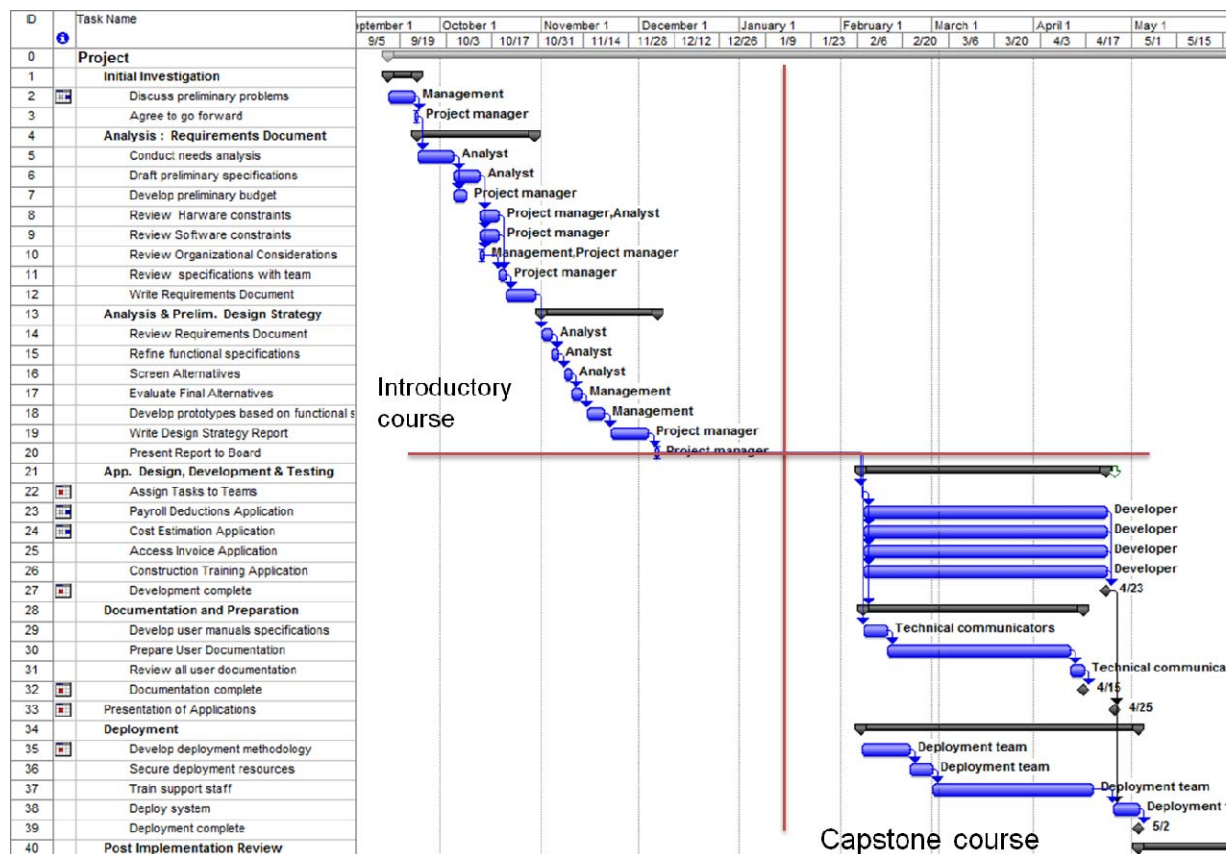


IMPLEMENTING MULTI-SEMESTER GROUP PROJECTS

Multi-semester group projects are a key component of the whole-parts-whole paradigm at UHCL. Completing all phases of a complicated project is very challenging for very good students and infeasible for others. If, however, the first three phases of the SDLC have already been completed, a well organized and motivated team of students should be able to review the first phases and finish the final phases. It is important to realize that the group which produced the system analysis report in the introductory course is completely different from the group which completes the project.

Figure 7 below shows a Gantt Chart for a project with 40 tasks based on a particular case called Gulf Coast Consulting Services. This case was used in the introductory course in the Fall of 2010 and in the Spring of 2011 in the capstone SAD course. The first 20 tasks were completed within the introductory MIS class during the Fall of 2010. The next 20 activities in this multi-semester project are being handled by teams in the capstone System Analysis and Design course during the current Spring 2011 semester.

Figure 7 – Gantt Chart for Gulf Coast case



In the portion of the combined chart which represents the capstone course, there are four concurrent tasks, each of which lasts for most of the current semester. This is because the case specified four different sets of application requirements and there are four teams in the capstone SAD class – one for each set of application requirements. The current project is one of several complex projects which have been developed at UHCL for this purpose. It should be noted that no student in the current SAD class worked on this particular project when they took the introductory MIS course, but every student in the current SAD class worked on a project which was very similar to the current project. This means that students in the SAD class must work on an unfamiliar project with information provided by a different group of students.

Students in the capstone course state that they would prefer working on the same project they worked on when they took the basic MIS class. They unanimously accept the fact, however, that system designers and system implementers often work on projects which were defined by others. They accept the fact that working with requirements documents and analysis reports written by other people is just part of the job. This fact that they have to depend on the documents produced by others for the requirements of the system has a subtle, but substantial benefit. Students in the capstone SAD class develop a much greater appreciation for the importance of clear, efficient and precise communication than they had when they prepared those documents in the introductory course. The two most frequent questions asked by students in the capstone course are 1) “Why didn’t they include additional specific detail in their documentation” and 2) “Why did they include so much useless information?” The answer to both questions is the same – “They did their best - did you know enough to do it better when you took that class?” The most frequently asked question in the introductory course is “How soon can we see how our work is used in the capstone course?”

CONCLUSIONS

The whole-parts-whole paradigm can be used effectively within a multi-semester structure to teach students how to deal with the details of complex systems. Most information system curricula include an introductory course with a broad scope and very limited depth. Most information system curricula also include capstone course which capstone covers system design and project management topics. Too often, these course start from scratch in introducing cases to portray the important elements of the included topics. By utilizing project-based learning within a whole-parts-whole structure, curriculum designers can effectively utilize materials produced within the introductory course to allow the capstone course to continue from where the introductory course ended. This greatly reduces the amount of time spent in the first half of the system development life cycle, thus allowing more time for complicated implementation and integration issues.

This structure allows students in the introductory course to see where their work on the initial phase of a project will fit into the overall life cycle of the project. It also gives students incentive to learn the skills taught in the tools courses. The structure forces students in the capstone SAD course to depend on the work product of other students in the introductory course. While this dependence may be frustrating, it teaches students in both courses the importance of clear communication in the documentation they produce.

REFERENCES

- Etnyre, V.A. (2002), " New Techniques to Extend the Scope of Project Management", *Proceedings of the Society for the Advancement of Information Systems*, March 2002.
- Etnyre, V.A., and Cook, K.O., (2005) "Tools for Teaching Web Programming" *Proceedings of the 2005 Meeting of Association of Business Information Systems*, March 2005.
- Etnyre, V.A. (2005), "Assessment Techniques for Information Systems Courses" *Proceedings of the 2005 Meeting of Organizational Systems Research Association*, March 2005.
- Etnyre, V.A. (2008), "Best Methods for Teaching Principles of Management Information Systems" *Proceedings of the Association of Business Information Systems Annual Conference*, March 2008.
- Etnyre, V.A., and Cook, K.O., (2008)" Determining Best Methods for Developing Programming courses" *Proceedings of the Association of Business Information Systems Annual Conference*, March 2008).
- Etnyre, V.A., and Rob, M.A. (2009)," Integrating Team Building, Online Collaboration and Project Based Learning within the MIS Curriculum" *Proceedings of the 2009 General Business Conference*, (April 2009).
- Kirs, P. J. (1994). "A Role-Playing Approach to the Instruction of Information Systems Analysis and Design courses," *Journal of Education for Business*, Vol. 69, Issue 6, July/August, 1994.
- Nance, W. D. "Experiences with an Innovative Approach for Improving Information Systems Students' Teamwork and Project Management Capabilities," *ACM Proceedings of the 1998 conference on Computer Personnel Research*, 1998, pp. 145–151.
- Rob, M. A. (2003),"The Management of Teaching IT Project Management," *Journal of Informatics Education and Research*, Vol. 5, No. 2, 2003, pp. 15-27.
- Rob, M. A. (2006), "Development of Project Documentation: Key Ingredient in Teaching Systems Analysis and Design," *Issues in Information Systems*, Volume VII, No.1, 2006, pp. 83-87.
- Rob, M. A., and Etnyre, V.A. (2009), "Project-Based Learning: An Assessment of Team Building across the MIS Curriculum" *Journal of International Business Education* Vol. 4, 2009.
- Wells, C. E. *Teaching Teamwork in Information Systems*, Ideal Group Publishing, 2002, pp. 1-24.

PREDICTING PRODUCTIVITY IN A COMPLEX LABOR MARKET: A SABERMETRIC ASSESSMENT OF FREE AGENCY ON MAJOR LEAGUE BASEBALL PLAYER PERFORMANCE

Brent C. Estes, Sam Houston State University

ABSTRACT

This study analyzed Major League Baseball player performance using sabermetric measurements of offensive productivity in order to determine how player production was impacted as a result of free agency. The theoretical framework for this research is based on two competing theories of social and organizational behavior: J. S. Adams' Equity Theory and Victor Vroom's Expectancy Theory. Both equity theory and expectancy theory were developed to predict worker performance under conditions of inequity in terms of under-reward and over-reward. In conjunction with both theories, this study assumed the following: (1) that players in the final year of their contracts, just prior to becoming eligible for free agency, perceived inequitable conditions of under-reward, and (2) that players who signed a new multi-year free agent contract perceived inequitable conditions of over-reward in the first year of a new contract. Sabermetric measurements, OPS, Runs Created, and Win Shares, were utilized to assess performance improvements or decrements for players in each of the following three years: (1) pre-option year- the year prior to a player becoming a free agent, (2) option year- the last year of a player's contract, and (3) post-option year- the first year of a player's new contract. Subjects consisted of Major League Baseball free-agents who signed multi-year contracts of at least two years or more with a their current team or another major league franchise between the years of 1976 and 2003 ($n = 234$). In order to qualify for inclusion, players must have had a minimum of 250 at-bats in each of the three individual years being examined: pre-option year, option year, and post-option year. Covariates, age and team winning percentage, were incorporated into this study in an attempt to control for specific factors thought to impact individual player performance. Results of multivariate analyses of variance (MANOVA) revealed that free agency had a significant impact on each of the three performance measures. Follow-up univariate analyses of variance (ANOVA) indicated that player performance significantly declined for each of the dependent variables following free agency. When controlling for age, multivariate analyses of covariance (MANCOVA) revealed no significant effects with regards to the impact of free agency on player performance. When controlling for team winning percentage, however, multivariate and univariate analyses indicated that post-option year team winning percentage significantly affected the impact of free

agency on player productivity. For each of the dependent variables, significant findings were consistent with expectancy theory predictions.

INTRODUCTION

Free agency and performance in professional baseball are relevant topics given the current state of the industry. Over the last thirty years, Major League Baseball's labor market has experienced significant changes that are affecting teams both on and off-the-field. Since the inception of free agency in 1976, owners have been offering players guaranteed multiyear contracts. Prior to 1976, during the reserve era, virtually all major league players had single-season non-guaranteed contracts (Lehn, 1982). As a result of free agency, eligible players are no longer doomed to spend their playing days at the mercy of team owners. Tenured players are now rewarded with financial and job security (Kahn, 1993).

Free agency has altered the landscape of baseball indefinitely. For the majority of professional baseball's existence, the balance of negotiating power between players and teams favored ownership (Zimbalist, 1992b). By stopping the restriction of player mobility, free agency drastically changed baseball's labor market in terms of contract negotiations and competitive balance. Free agency ensured that teams were no longer just competing against each other on the playing field but also in contract negotiations with prospective players. This new form of market structure opened the door to bidding wars and guaranteed multiyear contracts. It has also shaped the current economic and organizational trends that trouble owners today. For example, in order for teams to attract and sign players, owners must be willing to offer security in the form of guaranteed long-term contracts. If one team does not, most assuredly, other teams will (Scully, 1989). Once decisions are made to sign free agents, the question then becomes: How long should a player's contract be? This question opens the door to age-old concerns of disincentives associated with long-term contracts. Previous research (Alchain & Demsetz, 1962; Hill & Spellman, 1983; Holmstrom, 1979) has highlighted some of the issues and problems associated with multi-year labor contracts. Indeed, the literature has drawn attention to the fact that productivity often suffers as a result of long-term job security. In particular, allegations of production declines due to long-term job security have been associated with seniority rights, professional athletes, and in the academic institution of tenure (Krautmann, 1990).

Specific to baseball, Ahlstrom, Si, and Kennelly (1999), Lehn (1982), Scroggins (1993), and Woolway (1997) found statistically significant evidence of worker disincentives associated with multi-year contracts. On the other hand, studies conducted by Krautmann (1990), Marburger (2003), Maxcy (1997), and Maxcy, Fort, and Krautmann (2002) found no significant evidence of player shirking in connection with long-term contracts. Unfortunately, the theoretical framework surrounding employee performance is no less conflicting.

Much of the academic literature involving shirking centers on economic concerns of marginal productivity theory, property rights, and wage differentials. The current study deviated

from the economic research by examining two general theories of social behavior in order to determine which is more applicable to baseball free agent research. Equity theory and expectancy theory were chosen because of their prior use in free agent performance studies and their contradictions in behavior predictions. Previous attempts to decipher which theory could be best used to predict behavior outcomes in terms of player performance have been inconclusive.

According to equity theory of job motivation research (Adams, 1963b; Adams & Jacobsen 1964; Adams & Rosenbaum 1962; Andrews 1967; Arrowood 1961; Goodman and Friedman 1968, 1969; Pritchard et al. 1972), when individuals perceive inequity as a result of under-reward, they will be motivated to reduce their performance. On the other hand, expectancy theory research (Gavin, 1970; Georgopoulos, Mahoney, & Jones, 1957; Goodman, Rose, & Furcon, 1970; Hackman & Porter, 1968; Lawler, 1966; Lawler & Porter, 1967, Porter & Lawler, 1968) supports the notion that when individuals perceive inequity as a result of under-reward, they will be motivated to improve performance.

In the case of Major League Baseball, free-agent performance has often been associated with expectancy theory predictions. The actual research regarding equity theory and expectancy theory predictions of free-agent performance (Ahlstrom, Si, & Kennelly, 1999; Duchon & Jago, 1981; Harder, 1991; Lord & Hohenfeld, 1979; Sturman & Thibodeau, 2001; Werner & Mero, 1999), however, is contradictory and inconclusive.

INDUSTRY RELEVANCE

According to current Executive Vice President and Chief Operating Officer for Minor League Baseball and former General Manager of the Houston Astros, Tim Purpura, it is important for an organization to analyze and understand all aspects of player behavior and performance, especially as it relates signing and resigning players. Mr. Purpura added that free agency does affect the productivity of some players. "There is some legitimacy to the idea of player [shirking]. Some players excel in their walk year. It's just human nature (for players to over-perform in hopes of securing a financially lucrative contract)." Mr. Purpura used the example of a doctoral student who exerts a tremendous amount of effort and hard work writing a dissertation in order to receive a degree. "It is the same principle. [The student] is unlikely to maintain the same drive and focus after [he or she] graduates and receives the reward." When asked how organizations could account for this perceived problem, Mr. Purpura mentioned his personal strategy. "You always analyze the situation. You look at a player's history, from the first time they are arbitration eligible and see how they performed when they are first able to make serious money in the game." Furthermore, Mr. Purpura suggested that while each individual is different, understanding how players performed in similar situations in the past could be the key to ascertaining how they will perform in the future (T. Purpura, personal communication, August 23, 2005).

In the wake of Curt Flood's monumental antitrust suit against Major League Baseball challenging the legality of its reserve clause, the door to the modern era of free agency was opened. Although Flood lost his legal battle with Major League Baseball and was denied free agency, an impartial arbiter, Peter Seitz, ultimately awarded veteran major league players the right to become free agents and negotiate their services with other teams (Pappas, 2002). On the eve of Flood's court decision and Seitz's ruling, legendary Oakland A's owner Charles O. Finley, in an attempt to counter what appeared to be an inevitable change of baseball's labor practices, actually proposed that teams sign all players to one-year contracts enabling them to become free agents. Like most of Finley's ideas about how to revolutionize the game of baseball, (orange balls instead of white ones- Finley thought that hitters would be able to see the orange color better, especially at night, thus creating more offense and ultimately more excitement for the fans; two strikes and three balls instead of three strikes and four balls- one of Finley's attempts to speed up the game; a pitch clock for pitchers- another attempt to make a nine inning game shorter) it was quickly dismissed by his fellow owners. Finley rationalized his radical proposal of free agency by suggesting that players who signed guaranteed multi-year contracts would lose incentive to be productive. Finley argued that his idea would actually create lower salaries if players competed for jobs on a yearly basis instead of teams competing for a few players each year. In addition, Mr. Finley maintained that under his free agency proposal, owners would be able to better evaluate and control the level of productivity they were paying for each year (Kindred, 1996).

Three decades later, Charles Finley's idea of annual free agency exists in its original form, a proposal. One can only speculate as to how baseball would change given a different labor agreement centered on a seasonal "pay-for-play" performance context. Should it be assumed that there would be a difference in player performance based solely on the length of contracts? In a utopian society, one not influenced by money, pride, or prestige, one could legitimately argue that performance and productivity would remain the same regardless if players signed single-year contracts or multi-year agreements. Yet, the axiom that exists today in Major League Baseball is that players increase effort and productivity in their "option year" with expectations of benefiting financially with a new, more potentially lucrative contract as a result of their additional production. Larry Lucchino, President and Chief Executive Officer of the Boston Red Sox, said that players' performance is affected by free agency and that his beliefs are shared among many front office personnel throughout the league (Grad, 1998). Current New York Mets General Manager and former Chief Executive Officer of the San Diego Padres and General Manager of the Oakland Athletics, Sandy Alderson agrees. Mr. Alderson said:

"[The axiom] is true to the best of my recollection, or at least that's been my impression based on the brief time that I've been in the game. I think there is a certain amount of human nature involved. I'm not sure that this is unique to baseball. There is a general belief that people who have more security are less

motivated than those who have less security. Whether that's true or not, is anybody's guess. It might be a myth. Generally speaking, I think there are things that happen in the course of a player's free agent year that lead to a better result. For example, I can tell you in my experience with the Padres this year, there are players in their free agent years who do not want to go on the disabled list under any circumstances. Whereas, there are other players who are similar medically who, for whatever reason, go on the disabled list. I think there is a greater awareness of the consequences of their performance, of their physical conditions, of their attitudes. As they get closer to free agency they have much more concern about what those market variables are and how they are going to be perceived in that market. Players who are on the front end of a multiyear contract are less concerned and probably not concerned at all" (S. Alderson, personal communication, September 1, 2005).

With the inclusion of guaranteed multi-year contracts in the game, questions regarding incentives and motivation become relevant. It is not definitively known what impact, if any, these long-term contracts have on player productivity and performance. Many baseball insiders ascribe to the notion that long-term contracts negatively affect motivation as it relates to performance. According to Scott Proefrock, Assistant General Manager of the Philadelphia Phillies, long-term contracts in connection with free agency has a significant impact on some players. Proefrock said:

"Long-term contracts definitely take away the carrot (in reference to providing monetary incentives for players to maintain a consistent level of productivity). You are dealing with human beings so it's hard to make generalizations about [their behavior], but it's human nature. You almost expect it (S. Proefrock, personal communication, August 23, 2005).

However, actual research regarding shirking in relation to multi-year labor contracts in baseball is conflicting and contradictory (Marburger, 2003).

It is critical for team owners and general managers to 1) understand factors which affect player performance and 2) be able to effectively assess performance as it relates to winning games. The ability to accurately measure performance will allow an organization to determine the value of an individual player and estimate his potential for future contributions. In turn, an organization will be more equipped and better prepared to make decisions regarding player contracts and free agent signings. How can a team owner attempting to maximize profits afford to pay a player more than the value he produced for the team? In short, he cannot.

While it is impossible to measure the individual effort of players anticipating the potential rewards of free agency, it is possible to formulate reasonable conclusions regarding the

impact of free agency on player productivity. These inferences can be made by examining past performance leading up to and following free agency. Any dramatic changes in player productivity just prior to or shortly after this time period could suggest that the player's performance was influenced to some extent by his free agent status.

Identifying and acknowledging situations in which players are most likely to alter outputs, such as instances of perceived inequity consistent with pre and post free agency, would be beneficial in understanding player behavior as it relates to free agency and its impact relative to performance. In the same manner that prior management, organizational psychology, and economic research has addressed issues of employee performance and productivity declines among workers, there is still a need in the business literature to examine these concerns specific to sport.

Past research looking at changes in player performance as a result of free agency has utilized much of the same methodology. However, most studies examining performance disparities within baseball, and sport, in general, have been theoretically framed within an economic context. Issues of marginal revenue productivity, salary, and value are often components of shirking research. While the economic perspective of player performance is certainly valuable, it is not the focus of this research. This study addressed performance concerns using proven social and organizational behavior theories in an attempt to predict how Major League Baseball player performance is affected by perceptions of inequity.

The rationale for the current study stems from the need for owners to understand how free agency positively or negatively influences player performance. In an attempt to better understand the impact of free agency on player productivity, this research looked at competing hypotheses of equity theory and expectancy theory predictions of player performance as determined using sabermetric measures. The present study contributes to existing professional research literature by providing answers to the following questions: 1) How does post option year performance differ from option year performance? 2) Does player productivity improve or decline as a result of free agency contracts? 3) Does post option year player performance support equity theory predictions or expectancy theory predictions?

It was important to conduct this research because the answers to the aforementioned questions should prove useful in determining if a free-agent should be signed, and if so, for how long. In particular, the use of sabermetrics provides an actual measurement of a player's complete individual contribution to his team which allows for the interpretation of a more definitive value assessment.

The implications for this research could extend far beyond the sport. Confirmation of expectancy theory predictions, on average, player performance declines following free agency and the signing of multi-year contracts, could support arguments for one year contracts and annual salary negotiations and arguments against long-term job security associated with, for example, government employees and tenured professors (Woolway, 1997). Confirmation of

equity theory predictions, however, could confirm the belief that worker productivity does not suffer as a result of long-term labor contracts.

RESEARCH HYPOTHESES

The following hypotheses were established as the basis for the current research study. Fourteen general hypotheses comparing equity theory and expectancy theory predictions within two general and six specific research questions are presented.

General Research Question:

Does free agency affect MLB player performance?

<i>Statistical Null Hypothesis :</i>	<i>Free agency does not affect Major League Baseball player performance.</i>
<i>Equity Theory Hypothesis:</i>	<i>Free agency negatively affects player performance in terms of initial declines in productivity as a result of perceived inequity.</i>
<i>Expectancy Theory Hypothesis</i>	<i>Free agency positively affects player performance in terms of initial improvements in productivity as a result of perceived inequity.</i>

Specific Research Question One:

Are there significant mean differences in productivity, as measured by OPS, Runs Created, and Win Shares, from players' pre-option year to option year?

<i>Equity Theory H1:</i>	<i>Offensive productivity will decline in the option year when compared to the previous (pre-option) year.</i>
<i>Expectancy Theory H1:</i>	<i>Offensive productivity will improve in the option year when compared to the previous (pre-option) year.</i>

Specific Research Question Two:

Are there significant mean differences in productivity, as measured by OPS, Runs Created, and Win Shares, from players' option year to post-option year?

<i>Equity Theory H2:</i>	<i>Offensive productivity will improve in the first year of a new contract when compared to the previous (option) year.</i>
<i>Expectancy Theory H2:</i>	<i>Offensive productivity will decline in the first year of a new contract when compared to the previous (option) year.</i>

Specific Research Question Three:

Are there significant mean differences in productivity, as measured by OPS, Runs Created, and Win Shares, from players' pre-option year to option year, after removing the effects of age?

Equity Theory H3: Offensive productivity will decline in the option year when compared to the previous (pre-option) year.

Expectancy Theory H3: Offensive productivity will improve in the option year when compared to the previous (pre-option) year.

Specific Research Question Four:

Are there significant mean differences in productivity, as measured by OPS, Runs Created, and Win Shares, from players' option year to post-option year, after removing the effects of age?

Equity Theory H4: Offensive productivity will improve in the first year of a new contract when compared to the previous (option) year.

Expectancy Theory H4: Offensive productivity will decline in the first year of a new contract when compared to the previous (option) year.

Specific Research Question Five:

Are there significant mean differences in productivity, as measured by OPS, Runs Created, and Win Shares, from players' pre-option year to option year, after removing the effects of team winning percentage?

Equity Theory H5: Offensive productivity will decline in the option year when compared to the previous (pre-option) year.

Expectancy Theory H5: Offensive productivity will improve in the option year when compared to the previous (pre-option) year.

Specific Research Question Six:

Are there significant mean differences in productivity, as measured by OPS, Runs Created, and Win Shares, from players' option year to post-option year, after removing the effects of team winning percentage?

Equity Theory H6: Offensive productivity will improve in the first year of a new contract when compared to the previous (option) year.

Expectancy Theory H6: Offensive productivity will decline in the first year of a new contract when compared to the previous (option) year.

The purpose of examining competing hypotheses is to support the validity of one theory over the other with respect to predicting player performance behavior in Major League Baseball. Harder (1991) noted that several theories have been proposed to explain the link between motivation and performance in organizations. Equity theory and expectancy theory are among the most widely used social behavior theories to predict how individuals will perform under perceived conditions of inequity (Harder, 1991). Specific to the topic of free agency, several studies have tried to ascertain which approach is more applicable to understanding how players will perform. The research (Ahlstrom, Si, & Kennelly, 1999; Duchon & Jago, 1981; Harder, 1991; Lord & Hohenfeld, 1979; Sturman & Thibodeau, 2001; Werner & Mero, 1999) examining these two theories in conjunction with free agent performance is conflicting. There are several reasons for the inconsistent results, two of which can be explained by the researchers' use of limited data and questionable performance measures.

LIMITATIONS

The study will be subject to the following limitations:

- 1) This research will focus exclusively on United States major league professional baseball players and the results may not be representative of other professional players in minor leagues or international associations.
- 2) Certain free-agents who changed teams may have experienced performance improvements or declines as a result of park factors (i.e. shorter/longer fences; smaller/larger alleys).
- 3) Some players may experience natural declines in performance due to age or injuries.

ASSUMPTIONS

The following assumptions will be made regarding the proposed study:

- 1) Major League Baseball Players, in their free agent year, perceive themselves as under-rewarded in terms of monetary compensation when compared to referent others. This assumption is based on players playing out the remaining year of their long-term contracts and believing that they deserve a raise in pay based on what referent players are now making.
- 2) Major League Baseball Players perceive themselves as over-rewarded in the year following a new multi-year contract when compared to referent others. This

assumption is based on guaranteed money for services not yet rendered. In others words, at the beginning of a new multi-year contract, most players are promised compensation for future years regardless of effort, performance, or even injury. Thus, in the pay-for-performance context of professional baseball, players perceive over-reward.

An important objective of this study was to provide support for equity theory or expectancy theory relative to predicting performance of Major League Baseball players. Achieving this objective necessitates examining tenets of both theories. If this study only used equity theory as the framework for this research, but the results did not support equity theory's predictions, then all the reader would be able to infer is that this research disproved a theory, thus limiting its interpretive and practical value. By examining the two theories which predict opposite performance results, the results should provide definitive support for equity or expectancy theory with respect to predicting performance of Major League Baseball players. Support for one of the two theories and the establishment of a clear framework will allow future researchers to build on this study in order to enhance future contributions to the business literature.

JUSTIFICATION FOR THE USE OF SABERMETRICS

With respect to the current study, sabermetrics offers a multi-dimensional method of assessing player performance superior to the one-dimensional traditional measures used in previous studies. As research has proven, the old and new statistics can paint vastly different pictures of a player (Bialik, 2003; Estes & Shaheen, 2010). For instance, when assessing the 2003 offensive performance of White Sox designated hitter, Frank Thomas, the traditional measurement of batting average reveals that the likely future hall-of-famer hit just .267, 43 points off his career mark, indicating a decline in offensive production. However, by the measure of OPS, Thomas returned to his superstar form of the late 1990s, ranking 6th in the American League.

The utility of equity theory and expectancy theory is to accurately predict performance. If performance is not measured correctly, then the predictions are not reliable and should not be used to make knowledgeable and informed conclusions as to the motivational force of certain players. Since the validity of this study depends on accurate assessments of performance, it is reasonable to infer that consistent multi-dimensional measurements should be used. The current study utilizes sabermetrics as a measurement tool to determine various aspects of player performance.

Specifically, this study used three sabermetric measurements to assess performance effects of free agents: OPS, Runs Created, and Win Shares. These particular sabermetric measures will account for all offensive aspects of the game without compromising the value of individual production. OPS measures a hitter's propensity to get on base and his ability to hit for

power and average, Runs Created measures a player's total offensive contribution in terms of runs, and Win Shares measures a player's contribution to his team in terms of wins.

According to James (1987), there are four basic criteria on which the usefulness of a statistic should be judged: 1) importance- does the statistic measure something significant to winning?, 2) reliability- is it truly representative of ability?, 3) intelligibility- can the average baseball fan understand this information?, and 4) construction- can the elements be combined in order to be cohesive? Ultimately, the predictive value of sabermetrics is what makes them superior to other performance measures. While predictions are admittedly imperfect, there are ways of increasing their accuracy by relying on the proper statistics (Gillette, 1993). For example, both OPS and Runs Created have a strong positive correlation with the number of runs teams score. In fact, according to the research (Birnbaum, 1999; Blau, 1999; James, 1984) if you add the number of Runs Created estimates for every member of a team, they accurately predict, with little error, both the Runs Created estimate for the team and the actual number of runs the team scored. In addition, Runs Created estimates tend to be in line with runs and RBI totals for individual players.

EQUITY THEORY

J. S. Adams formulated an equity theory of job motivation in 1963. Adams' theory is based on the idea that people are motivated by "inequity." According to Adams (1965), a person perceives inequity to exist when that person believes that the ratio of his or her outcomes to inputs differs from the ratio of a referent other's outcomes to inputs. More specifically, the theory states that individuals hold perceptions about the number and value of the contributions they make to their work. These contributions are usually referred to as inputs. For example, people may consider the education and training they bring to their jobs, the number of hours they work, and how hard they try to perform when they are at their jobs (Pinder, 1984). Different people tend to pay attention to different inputs, and there is a tendency for people to place greater emphasis upon those inputs which they themselves have to offer (Cummings, 1980).

Outcomes are defined as the "positive and negative consequences that the scrutineer perceives a participant has received in the course of his relationship with another." The participant's outcomes are equal to the rewards that he obtains from the relationship minus the costs that he incurs (Walster, Walster, & Berscheid, 1978). In relation to work, outcomes can include pay, rewards intrinsic to the job, fringe benefits, job satisfaction, and status (Adams, 1965). However, as mentioned by Herzberg, Mausner, and Snyderman (1959), outcomes can also be negative. Poor working conditions, monotony, fate uncertainty, and overall job dissatisfaction are just a few examples of negative outcomes.

According to equity theorists (Adams, 1963a, 1965; Walster, Walster, & Berscheid, 1978) equity is characterized as a social comparison process used to establish what is fair and reasonable in an exchange. In fact, social comparison theory predicts that people attempt to

compare their beliefs and attitudes with other individuals whom they perceive as being similar to themselves (Festinger, 1954). Specifically, people tend to compare themselves with three types of others: (1) people with whom they are in an actual association, (2) people they admire and look up to, and (3) people they perceive to be very similar, or very different, from themselves along some dimension (Walster, Walster, & Berscheid, 1978).

During the social comparison process, inputs and outcomes are considered in ratio terms rather than absolute terms. When the ratio is in balance, (i.e., inputs and outcomes between an individual and a comparative referent are equal), the individual perceives equity. Inequity is perceived when the ratio is out of balance. When an individual perceives that his or her inputs are equal to the referent and his or her outcomes are lower, or that his or her inputs are greater and outcomes are equal, a tension results and inequity is felt (Scholl, 2000). In fact, Adams (1963a) noted that the tension is especially strong when the referent's outcomes are perceived as higher than our own, while that person's inputs are simultaneously perceived to be lower.

Equity theorists (Adams, 1963a, 1965; Walster, Walster, & Berscheid, 1978) maintain that individuals who encounter inequitable circumstances experience dissatisfaction and will be motivated to restore equity or reduce inequity. The strength of motivation to do so will vary directly with the magnitude of inequity experienced. According to Harder (1991), the restoration of equity can be accomplished in one of several ways. Outcomes and inputs can be altered, objectively or psychologically; comparative referents can be changed; or the individual can withdraw from the situation. Adams (1965) proposed that individuals reduce or eliminate inequity by altering inputs such as their performance.

EXPECTANCY THEORY

Perhaps the most popular theory of work motivation among organizational scientists in recent years is Valence-Instrumentality-Expectancy Theory (VIE Theory) or Expectancy Theory (Locke, 1975). The theory was developed in the 1960s by a researcher named Victor Vroom. Vroom's theory and its derivatives are based on predicting behaviors and explaining decision-making processes based on motivational forces and value perception. Vroom's model of work motivation is drawn from "instrumentality" conceptualizations from Peak's (1955) Instrumentality Theory which hypothesizes that an individual's attitude toward an outcome depends on his perceptions of relationships (instrumentalities) between that outcome and the attainment of various other consequences toward which he feels differing degrees of liking or disliking (valence). In addition to instrumentality and valence, Vroom introduces the concept of expectancy into his model for work motivation (Graen, 1969).

According to Expectancy Theory of motivation (Vroom, 1964; Porter & Lawler, 1968), individuals make decisions to perform based on cognitive concepts of subjective probabilities. Further, these cognitions are representative of an individual's perception of the likelihood that effort will lead to performance and performance will lead to desired outcomes. Specifically,

Vroom's theory assumes that "the choices made by a person among alternative courses of action are lawfully related to psychological events occurring contemporaneously with the behavior" (1964).

The purpose of Expectancy Theory is to understand motivation in organizations and how individuals make decisions regarding various behavioral alternatives (Mitchell & Biglan, 1971; Nadler & Lawler, 1977; Porter & Lawler, 1968; Vroom, 1964). As Nadler & Lawler (1977) point out, Expectancy Theory focuses on a number of specific assumptions about the causes of behavior in organizations. The assumptions are as follows: (1) behavior is determined by a combination of forces in the individual and forces in the environment, (2) people make decisions about their own behavior in organizations, and (3) different people have different types of needs, desires and goals which can influence performance.

Vroom's Expectancy Theory or VIE Theory (1964) is based on three perceptions, valence, instrumentality, and expectancy, each of which individually can influence an individual's motivation, but which together can have a more powerful affect. Valence refers to affective orientations (value) toward particular outcomes. An outcome is said to be positively valent for an individual if he or she prefers attaining it to not attaining it. An outcome which a person would prefer to avoid is said to be negatively valent. An outcome can be perceived as having value in itself or because of its instrumentality in achieving other valued ends. Valence is a function of an individual's needs, goals, values and sources of motivation (Vroom, 1964).

Expectancy theorists (Porter & Lawler, 1968; Vroom, 1964) define instrumentality as the personal belief that first-level outcomes lead to second level outcomes. In other words, if an individual believes that a high level of performance is instrumental for the attainment of other outcomes that he expects will be rewarding (such as a pay increase, for example), and/or if he believes that a high performance level will be instrumental for avoiding other outcomes that he wishes to avoid (such as being fired), then that individual will place a high valence upon performing well. When individuals perceive that valued rewards follow all levels of performance, then instrumentality is low (Pinder, 1984).

Expectancy is defined as "a momentary belief concerning the likelihood that a particular act will be followed by a particular outcome" (Vroom, 1964). This belief, or perception, is generally based on an individual's past experience, self efficacy, and the perceived difficulty of the performance standard or goal (Porter & Lawler, 1968).

Vroom (1964) suggests that expectancies, instrumentalities, and valences interact psychologically within an individual's beliefs to create a motivational force which in turn influences behavior. Further, Vroom maintains that when deciding among behavioral options, individuals select the option with the greatest motivation forces. Vroom's theory can be summarized as follows:

$$\text{Motivation Forces} = \text{Expectancy} \times \text{Instrumentality} \times \text{Valence}$$

METHODOLOGY

The study was comprehensive in that it examined performance data over a 28 year period. In addition, it is one of the first academic research studies to use sabermetrics exclusively to assess performance. This potentially ground breaking study provides a foundation for future research involving sabermetrics. The following sections outline the research methodology used in this study.

Selection of Subjects

Subjects for this study consisted of Major League Baseball free-agents who signed multi-year contracts of at least two years or more with a their current team or another major league franchise between the years of 1976 and 2003 (n = 234). In order to qualify for inclusion, players must have had a minimum of 250 at-bats in each of the three individual years being examined: pre-option year, option year, and post-option year. The minimum number of at-bats standard helps ensure that results are not skewed due to incomplete or limited performance data. This number of at-bats roughly constitutes half of a season's worth of production. Also, in order to be eligible for this study, players cannot play for more than one team in any season between their pre and post option years.

Measurements

The study examined secondary performance data of Major League Baseball players using three categories of sabermetric measurement. The first measure used was On-Base Percentage plus Slugging Average (OPS). OPS is a measure of a player's ability to get on base (on-base percentage) and the ability to advance runners (slugging average). This metric is now considered to be a mainstream statistic given that it is easy to calculate and is known to be an excellent predictor of runs scored. OPS is calculated by simply adding a player's on-base percentage to his slugging average.

$$\text{OPS} = (\text{H} + \text{BB} + \text{HBP}) / (\text{AB} + \text{BB} + \text{HBP} + \text{SF}) + (\text{H} + 2\text{B} + (2 * 3\text{B}) + (3 * \text{HR})) / \text{AB}$$

H = hits

BB = walks

HBP = hit by pitch

SF = sacrifice fly

2B = doubles

3B = triples

HR = home runs

AB = at bats

The second measure used in the study was Runs Created (RC). This metric was developed by Bill James as a method for taking a hitter's component offensive contribution and figuring out how many of his team runs he was personally responsible for. Runs Created is thought of by many sabermetricians as the definitive evaluation metric because it measures a player's true purpose in playing baseball, doing things to create runs for his team while avoiding things that create outs. Further, runs created has proven to be an excellent predictor of total runs scored for each team. Adding the total number of runs created for each player on a team usually predicts, with reasonable accuracy, a team's total number of runs scored in a season.

Runs Created attempts to quantify offensive production in terms of an individual player's contribution to runs scored. With relation to the actual statistical formula, strong emphasis is placed on a hitter's ability to get on base via hits or walks. In addition, a player is rewarded for advancing bases through steals or extra base hits. It stands to reason that a player can not score unless he is on base, and the closer that player is to home, the greater his chances are for scoring. This particular metric also penalizes players who do things that prevent themselves or their teammates from scoring, such as grounding into double plays or getting caught stealing. The following equation represents the Runs Created measurement:

$$RC = \frac{(H+BB+HBP-CS-GIDP)(TB+.26(BB-IBB+HBP)+.52(SH+SF+SB))}{AB+BB+HBP+SH+SF}$$

H = hits

BB = walks

HBP = hit by pitch

SF = sacrifice fly

AB = at bats

CS = caught stealing

GIDP = grounded into double play

TB = total bases

IBB = intentional walk

SH = sacrifice hits

SB = stolen bases

The third sabermetric measure used in this study was Win Shares (WS). Also developed by Bill James, Win Shares measures a player's contribution to his team in terms of wins. Aside from being the newest metric used in this study, Win Shares is also the most exhaustive. Although the Win Shares methodology is complex, its result is simple: one number that allows comparisons among infielders, outfielders, catchers, starters, and relievers between different teams and across different eras. The process begins with determining the number of games a team won and assigning credit to players, proportionally based on their statistics.

In his book *Win Shares*, James introduces a short-form method for calculating Win Shares as well as a long method. The short form method of Win Shares is:

$$WS = \frac{RC - (O\text{uts}/12)}{3}$$

Pitching and defense contributions receive 52% of the Win Shares and hitting contributions receive 48% of the Win Shares. This metric also adjusts for ballpark effects for hitters. It has been proven more difficult to score runs in certain parks, such as Dodger Stadium, than others, such as Coors Field, due to conditions such as altitude, fence depth, and the overall size differential of today's stadiums (James & Henzler, 2002). Win Shares accounts for this effect.

Win Shares is a primary measure of contribution and not necessarily talent. Players who "over-perform" in one year receive full credit for their efforts toward winning games for their team, regardless if they are never able to match that level of performance again. For example, in 1996, Brady Anderson of the Baltimore Orioles hit fifty home runs, a remarkable feat for any player. However, from 1988 to 1995, Anderson averaged only seven home runs per year, and from 1997 to the last year of his career in 2002, he averaged only twelve. Regardless of Anderson's one year wonderment, under the Win Shares system of player evaluation, players are only measured by what they do on the field, not what they should or should not be able to do based on talent and five-tool potential. Baseball traditionalists tend to evaluate players based on scouting reports and situation dependent statistics, opening the door to misjudgment and subjective error. Win Shares offers an objective approach to assessing player productivity.

Collectively, OPS, Runs Created, and Win Shares offer a more in-depth and complete assessment of player performance than the traditional statistics. Traditional statistics such as batting average and runs batted in break down offensive production into individual ability encompassing basic categories of hitting, running, and throwing. Sabermetric measures evaluate offensive performance based on a more inclusive approach meant to measure not only a player's individual ability, but also his collective value in terms of his contribution to helping his team score runs and win games.

Stevens (2002) suggests that in order to obtain meaningful multivariate quantitative data that provides a more complete and precise understanding of the phenomenon under study, researchers should rely on the most comprehensive measures available. Since the purpose of this study was to determine how free agency impacts players' overall performance, it was appropriate to use comprehensive sabermetric measures.

Procedures

The collection of secondary data for this study was accomplished in three phases. In the first phase, a sample was drawn from a population of Major League Baseball Players active sometime between 1976 and 2003. Selection of subjects was based on players' free agent status, number of at-bats, and length of free agent contracts. Free agent filings were obtained via the 1977-2004 editions of *The Sporting News Guide*. From that list of free agents, those who did not meet the predetermined criteria for contract length, team exclusivity, and number of at-bats were eliminated from the study. The remaining free agents make-up the sample used for statistical analysis.

Once the sample of free agents was determined, the second phase involved recording the sabermetric data of OPS, Runs Created, and Win Shares for each of the subjects in (1) the year prior to the option year, (2) the actual option year, and (3) the year following the option year or the first year of a player's new contract.

In the third phase, option year sabermetric performance data for qualified free agents was compared with (1) pre-option year performance and (2) post-option year performance in order to detect improvements or declines in productivity. The results should be consistent with either expectancy theory predictions- (1) option year performance will improve compared to pre-option year performance and (2) post-option year performance will decline when compared to option year performance, or equity theory predictions- (1) option year performance will decline when compared to pre-option year performance and (2) post-option year performance will improve when compared to option year performance.

Research Design

This research represents a longitudinal study assessing variations in performance associated with inequitable perceptions initiated by the expectancy and realization of free agency. Statistical significance of the three dependent variables (OPS, Runs Created, and Win Shares) was determined by repeated measures multivariate analysis of variance (MANOVA) and multivariate analysis of covariance (MANCOVA), to test if performance differences exist within the subjects before and after the independent variable, free agency. The MANOVA and MANCOVA were computed to test the two null hypotheses stating that there will be no significant differences in performance with respect to pre-option year/option year and option year/post-option year comparisons.

Stevens (2002), mentions four statistical reasons for preferring a multivariate analysis: (1) multivariate analysis controls for inflated overall type I error rate, (2) multivariate analysis incorporates the important information of the correlations among the variable or subscales right into the statistics, (3) subscale scores may cancel out an overall significant difference but the multivariate analysis reflects the significant differences of individual subscales, and (4) small

differences on several of the variables may combine to produce a reliable overall difference, making multivariate tests more powerful.

A repeated measures design allows for the study of a phenomenon across time. Pedhazur (1982), states that this design is particularly important in studies involving changes in learning, fatigue, forgetting, performance, and aging. According to Thomas and Nelson (1996), there are some problems associated with repeated measures designs. Two problems mentioned by the researchers in particular, with the potential to adversely affect this study, include (1) practice effects and (2) fatigue. Practice effects refer to the possibility of subjects performing better at tasks (dependent variables) as a result of repeated trials in addition to the treatment. Specific to this study, players may increase productivity from pre-option year to option year simply as a result of natural progression due to increased number of at-bats and not as a result of inequity perceptions associated with free agency. Fatigue refers to subjects' decline in performance over time. Specific to this study, player performance may be more indicative of factors contributing to fatigue such as age or injury and less an indication of free agency's affect on player motivation and performance. According to a study conducted by Schulz, Musa, Staszewski, and Siegler (1994), the average Major League Baseball player's production begins to decline at age 28.

While practice effects may not be controlled for in this particular study, it does become a limitation of the research worth noting. However, in order to control for the potential problem of fatigue, this study included a covariate. Subjects' age was used as the covariate. By controlling for age, this study sought to account for declines in performance due to fatigue and normal degeneration of skills. According to Stevens (2002), the inclusion of covariates will result in greater reduction in error, ultimately improving the chances of rejecting a null hypothesis that is really false.

Another aspect of the game of baseball that could potentially affect offensive production is a player's team. While sabermetrics only examines individual productivity, the team dynamic could still factor in to how individuals perform. For example, players who play on winning teams who have a legitimate chance to make the playoffs and win the World Series may be more motivated to play at a higher level than a player on a weaker team, regardless of the player's free agent status or inequitable perception of rewards. In order to minimize these effects on the results of this study, a covariate assessing team winning percentage was used. This covariate was used to separate "winning teams" from "non-winning teams" in each of the three levels of the independent variable: pre-option year, option year, and post-option year. "Winning teams" were determined to be those who had a winning percentage above .550. Teams with winning percentages at or below .550 were considered "non-winning teams."

RESULTS

Descriptive Findings

A total of 234 different cases were analyzed for this study. Subjects were comprised of 188 different Major League Baseball players active sometime between 1976 and 2004. Thirty five players qualified at least twice for the study. Each player qualified based on his free agent status, the signing of a multi-year contract, and a predetermined at-bat minimum ($n = 250$) in each of the years being examined: pre-free agency, free agent year, and post-free agency. A total of 177 players changed teams at some point during the pre- and post-free agent years. Only 57 players remained with the same team throughout each of the three years. Fifty players, who otherwise qualified for the study based on their free agent status and number of at-bats, were eliminated because they played for two or more teams in a single season at some point during the pre- and post-free agent years. In-season player movement complicates the interpretation of player motivation and inequity perception as it translates into individual offensive performance.

Data for two of the dependent variables, Runs Created and Win Shares, was normalized for each player. For instance, Runs Created metrics were divided by players' number of at-bats and Win Shares metrics were divided by players' number of games played for each season. The average number of at-bats and games played for the subjects remained largely the same throughout the three time periods being examined. On average, players played in 131 games and totaled 467 at-bats in their pre-option year. In their option year, players averaged 134 games and 473 at-bats. During the post-option year, players averaged 131 games and 469 at-bats. The average age for the free agents in this study was 31. There were 188 (80.3%) first time free agents with an average age of 30, 35 (14.9%) second time free agents with an average age of 33, and 9 (3.8%) third time free agents with an average age of 36.

Besides age, another factor that could potentially affect player performance is team winning percentage. By controlling for the "team" dynamic, this study attempted to account for significant changes in winning that could possibly influence player motivation and performance. A "winning team" was considered to be one having a winning percentage above .550. As such, only 82 of the 234 players (35%) played on a winning team in their pre-option year. That number rose slightly in players' free agent year in that 99 players (42.3%) played on a winning team. However, according to the statistics, most free agents who signed new multi-year contracts did so at the cost of winning. Only 68 of the 234 free agents in this study (29%) played on a winning team in their post-option year.

OPS

The first component of sabermetric analysis used to assess the effect of free agency on player performance was OPS. The mean OPS for players in their pre-option year was .78359.

That number rose the following year, in the players' actual option year, to a mean of .79460. Following the signing of a new multi-year contract, however, players' mean OPS fell to .77340. These results can be seen in Table 1.

Table 1: Mean OPS Values for Players Before and After Free Agency			
	Mean	Std. Deviation	<i>N</i>
Pre-OPS	.78359	.106346	234
Option OPS	.79460	.114882	234
Post-OPS	.77340	.112992	234

Multivariate analysis of variance (MANOVA) with repeated measures was conducted to determine OPS performance differences across the three free agency time periods: the pre-free agency year, the free agency year, and the post-free agency year. The MANOVA results indicated that there were significant differences (Wilks' $F(2, 232) = 6.089, p < .01$) in the OPS performance means among the three free agent time periods. Table 2 shows the output from the multivariate tests.

Follow-up univariate analysis, reported in Table 3, revealed within-subjects OPS performance comparisons between pre-option and option years and option and post-option years. Differences between pre-option year and option year OPS were not significant, $F(1, 233) = 3.287, p = .071$. However, differences between option year and post-option year OPS were significant, $F(1, 233) = 12.131, p < .01$.

Table 2: MANOVA – Differences in OPS Performance by Free Agency			
Source	<i>df</i>	<i>F</i>	p
Wilks' Lambda	2	6.089	.003
Pillai's Trace	2	6.089	.003
Hotelling's Trace	2	6.089	.003

Table 3: ANOVA – Differences in OPS Performance Between Free Agency Time Periods			
Time	<i>df</i>	<i>F</i>	p
Pre-option vs. Option	1	3.287	.071
Option vs. Post-option	1	12.131	.001

Multiple analysis of covariance (MANCOVA) was conducted to determine the effect of free agency on player performance as measured by OPS while controlling for age and team winning percentage. The covariates adjusting for winning percentage were analyzed at three

levels: pre-option year team winning percentage, option year team winning percentage, and post-option year team winning percentage. Table 4 presents the results of the MANCOVA with respect to OPS.

The covariate age did not significantly influence the impact of free agency on OPS, Wilks' $F(2, 228)=2.424$, $p=.091$. Likewise, none of the winning percentage covariates (pre-option year team winning percentage: Wilks' $F(2, 228)=.253$, $p=.776$, option year team winning percentage: Wilks' $F(2, 228)=.371$, $p=.69$, post-option year team winning percentage: Wilks' $F(2, 228)=2.349$, $p=.098$) had a significant affect on the relationship between free agency and OPS production.

Table 4: MANCOVA – Differences in OPS Performance by Free Agency When Controlling for Age and Team Winning Percentage				
Covariate	Source	<i>df</i>	<i>F</i>	<i>p</i>
Age	Wilks' Lambda	2	2.424	.091
	Pillai's Trace	2	2.424	.091
	Hotelling's Trace	2	2.424	.091
Pre-Wins	Wilks' Lambda	2	.253	.776
	Pillai's Trace	2	.253	.776
	Hotelling's Trace	2	.253	.776
Option Wins	Wilks' Lambda	2	.371	.690
	Pillai's Trace	2	.371	.690
	Hotelling's Trace	2	.371	.690
Post-Wins	Wilks' Lambda	2	2.349	.098
	Pillai's Trace	2	2.349	.098
	Hotelling's Trace	2	2.349	.098

Runs Created

The second component of sabermetric analysis used to assess the effect of free agency on player performance was Runs Created. Runs Created values were normalized for subjects by dividing each player's value by his number of at-bats each season. The mean number of Runs Created/AB for players in their pre-option year was 0.15779. The last year of a player's contract, the option year, players increased their number of Runs Crated/AB to an average of 0.16587. That number dropped dramatically the following year to 0.15247. The mean number of Runs Created/AB in each option year can be seen in Table 5.

Table 5: Mean Runs Created Values for Players Before and After Free Agency

	Mean	Std. Deviation	<i>N</i>
Pre-RC	.15779	.046783	234
Option RC	.16587	.070198	234
Post-RC	.15247	.048354	234

As with OPS, multivariate analysis of variance (MANOVA) with repeated measures was conducted to determine if there were Runs Created performance differences across the three free agency time periods: the pre-free agency year, the actual free agency year, and the post-free agency year. The results indicated that there were significant differences (Wilks' $F(2,232)=5.571$, $p<.01$) in the Runs Created performance means across the three free agency time periods. Table 6 presents the results of the multivariate tests.

The multivariate tests were again followed up by univariate tests (ANOVA) in order to determine significant performance contrasts within-subjects among the free agency years. Analysis of variance revealed that performance disparities, as determined by measuring the number of runs a player created, between pre-option and options years were not significant, $F(1, 233)=3.472$, $p=.064$. The Runs Created performance differences between option and post-option years, however, were significant, $F(1, 233)=10.478$, $p<.01$. Table 7 demonstrates the within-subjects contrasts.

Table 6: MANOVA – Differences in Runs Created Performance by Free Agency

Source	<i>df</i>	<i>F</i>	<i>p</i>
Wilks' Lambda	2	5.571	.004
Pillai's Trace	2	5.571	.004
Hotelling's Trace	2	5.571	.004

Table 7: ANOVA – Differences in Runs Created Performance Between Free Agency Time Periods

Time	<i>df</i>	<i>F</i>	<i>p</i>
Pre-option vs. Option	1	3.472	.064
Option vs. Post-option	1	10.478	.001

Multiple analysis of covariance (MANCOVA) was conducted to determine the effect of free agency on player performance as measured by Runs Created while controlling for age and team winning percentage. Table 8 presents the results of the MANCOVA with respect to Runs Created. The findings indicated that age did not significantly influence the impact of free agency on the number of runs players created, Wilks' $F(2, 228)=2.147$, $p=.119$.

In addition, the multivariate tests revealed that none of the winning percentage covariates (pre-option year team winning percentage: Wilks' $F(2, 228)=.304$, $p=.738$, option year team winning percentage: Wilks' $F(2, 228)=.791$, $p=.455$, post-option year team winning percentage: Wilks' $F(2, 228)=1.863$, $p=.158$) had a significant affect on the relationship between free agency and Runs Created.

Table 8: MANCOVA – Differences in Runs Created Performance by Free Agency When Controlling for Age and Team Winning Percentage

Covariate	Source	<i>df</i>	<i>F</i>	<i>p</i>
Age	Wilks' Lambda	2	2.147	.119
	Pillai's Trace	2	2.147	.119
	Hotelling's Trace	2	2.147	.119
Pre-Wins	Wilks' Lambda	2	.304	.738
	Pillai's Trace	2	.304	.738
	Hotelling's Trace	2	.304	.738
Option Wins	Wilks' Lambda	2	.791	.455
	Pillai's Trace	2	.791	.455
	<i>Hotelling's Trace</i>	2	<i>.791</i>	.455
Post-Wins	Wilks' Lambda	2	2.349	.158
	Pillai's Trace	2	2.349	.158
	Hotelling's Trace	2	2.349	.158

Win Shares

The third component of sabermetric analysis used to assess the effect of free agency on player performance was Win Shares. Win Shares values were normalized for subjects by dividing each player's value by his number of games each season. The mean number of Win Shares/G for players in their pre-option year was 0.12296, followed by 0.12870 in their option year and 0.11133 in their post-option year. Each of the mean values, along with their standard deviations can be seen in Table 9.

Consistent with OPS and Runs Created, multivariate analysis of variance (MANOVA) with repeated measures was conducted to determine Win Shares performance differences across the three free agency time periods: the pre-free agency year, the actual free agency year, and the post-free agency year. MANOVA results indicated significant differences (Wilks'

$F(2,232)=16.717$, $p<.001$) in the Win Shares performance means across the three free agency time periods. Table 10 presents the results of the multivariate tests.

Table 9: Mean Win Share Values for Players Before and After Free Agency			
	Mean	Std. Deviation	<i>N</i>
Pre-WS	.12296	.044386	234
Option WS	.12870	.051726	234
Post-WS	.11133	.049516	234

The multivariate tests were again followed up by univariate tests (ANOVA), as shown in Table 11, in order to determine significant performance contrasts within-subjects among the free agency years. Analysis of variance found that performance disparities, as determined by measuring the number of wins a player was responsible for, between pre-option and options years were not significant, $F(1, 233)=3.374$, $p=.068$. The Win Shares performance differences between option and post-option years, however, were significant, $F(1, 233)=31.365$, $p<.001$.

Table 10: MANOVA – Differences in Win Share Performance by Free Agency			
Source	<i>df</i>	<i>F</i>	p
Wilks' Lambda	2	16.717	.000
Pillai's Trace	2	16.717	.000
Hotelling's Trace	2	16.717	.000

Table 11: ANOVA – Differences in Win Share Performance Between Free Agency Time Periods			
Time	<i>df</i>	<i>F</i>	p
Pre-option vs. Option	1	3.374	.068
Option vs. Post-option	1	31.365	.000

Multiple analysis of covariance (MANCOVA) was conducted to determine the effect of free agency on player performance as measured by Win Shares while controlling for age and team winning percentage. Table 12 presents the findings of the MANCOVA with respect to Win

Shares. The results indicated that age did not significantly influence the impact of free agency on the number of Win Shares a player produce, Wilks' $F(2, 228)=2.193, p=.114$.

The results of the MANCOVA indicated that two of the winning percentage covariates, pre-option year team winning percentage, Wilks' $F(2, 228)=2.14, p=.12$, and option year team winning percentage, Wilks' $F(2, 228)=2.112, p=.123$, had no significant affect on the relationship between free agency and Win Shares. Post-option year team winning percentage did significantly influence the relationship between free agency and the number of Win Shares a player accounted for, Wilks' $F(2, 228)=4.477, p<.05$. Analysis of covariance (ANCOVA) was conducted on the dependent variable as a follow-up test to the MANCOVA. When controlling for pre-option year team winning percentage, within-subjects differences between pre-option year/option year Win Shares, $F(1, 229)=4.292, p<.05$, were significant. Differences between option year/post-option year Win Shares, $F(1, 229)=1.449, p=.230$, were not significant. Similarly, when controlling for option year team winning percentage, within-subjects differences between pre-option year/option year Win Shares, $F(1, 229)=4.037, p<.05$, were significant. Differences between option year/post-option year Win Shares, $F(1, 229)=2.187, p=.141$, were not significant. When controlling for post-option year team winning percentage, within-subjects differences between pre-option year/option year Win shares, $F(1, 229)=1.101, p=.295$, were not significant. However, Win Share differences between players' option year and post-option year, $F(1, 229)=8.562, p<.01$, were significant. Table 13 presents the results for the ANCOVA analyses.

Table 12: MANCOVA – Differences in Win Share Performance by Free Agency When Controlling for Age and Team Winning Percentage

Covariate	Source	<i>df</i>	<i>F</i>	<i>p</i>
Age	Wilks' Lambda	2	2.193	.114
	Pillai's Trace	2	2.193	.114
	Hotelling's Trace	2	2.193	.114
Pre-Wins	Wilks' Lambda	2	2.140	.120
	Pillai's Trace	2	2.140	.120
	Hotelling's Trace	2	2.140	.120
Option Wins	Wilks' Lambda	2	2.112	.123
	Pillai's Trace	2	2.112	.123
	Hotelling's Trace	2	2.112	.123
Post-Wins	Wilks' Lambda	2	4.477	.012
	Pillai's Trace	2	4.477	.012
	Hotelling's Trace	2	4.477	.012

Table 13: ANCOVA – Differences in Win Share Performance Between Free Agency Time Periods When Controlling for Team Winning Percentage

Covariate	Time	<i>df</i>	<i>F</i>	<i>p</i>
Pre-Wins	Pre-option vs. Option	1	4.292	.039
	Option vs. Post-option	1	1.449	.230
Option Wins	Pre-option vs. Option	1	4.037	.046
	Option vs. Post-option	1	2.187	.141
Post-Wins	Pre-option vs. Option	1	1.101	.295
	Option vs. Post-option	1	8.562	.004

Evaluation

The following section contains an evaluation of the results pertaining to the research questions and hypotheses specific to this study. Based on this evaluation and analysis, a decision was made whether to accept or reject the various hypotheses.

General research questions

The first General Research Question asked simply whether or not free agency affected the offensive performance of Major League Baseball players. According to each of the MANOVA analyses for the three dependent variables, the answer is yes. OPS, Runs Created, and Win Shares each had significant ($p < .01$) mean differences in terms of performance between pre and post-free agency. The second General Research Question asked “If free agency does impact offensive production, then how?” By examining the means alone, one can see a consistent pattern for each of the performance measures from one year to the next. According to the means for each dependent variable, offensive performance as measured by OPS, Runs Created, and Win Shares is higher in the last year of a player’s contract than the year before (pre-free agency) and the year after (post-free agency). If statistically significant, the findings would support expectancy theory predictions. The following sub-sections answer the specific research questions and discuss the significance of the mean differences across the three free agency time periods.

Research question one

Research Question One asked if there were significant mean differences in productivity, as measured by OPS, Runs Created, and Win Shares, from players’ pre-option year to option year. ANOVA analyses revealed no significant differences in OPS ($p = .071$), Runs Created ($p = .064$), or Win Shares ($p = .068$) in the last year of a player’s contract when compared to the

previous year at the .05 significance level. Therefore, the statistical null hypothesis of no difference in offensive productivity between pre-option year and option year is accepted. As a result, neither equity theory nor expectancy theory predictions are conclusive. It should be noted, however, that given the consistent improvement in mean values for each of the performance measures between the pre-option and option year and the relatively high *F*-values for each dependent variable, it is possible ($p < .10$) that the mean differences in performance are not due to random error. Results not due to error would be consistent with expectancy theory predictions: offensive productivity will improve in the option year when compared to the previous (pre-option) year.

Research question two

Research Question Two asked whether there were significant mean performance differences, as measured by OPS, Runs Created, and Win Shares, from players' option year to post-option year. Univariate tests of within-subjects contrasts uncovered significant declines in productivity for each performance measure, OPS ($p < .01$), Runs Created ($p < .01$), and Win Shares ($p < .001$), between the last year of a player's old contract (option year) and the first year of a player's new multi-year agreement (post-option year). Based on the results, the null hypothesis of no difference between option year and post-option year offensive production is rejected. These findings are consistent with expectancy theory predictions: offensive productivity will decline in the first year of a new contract when compared to the previous (option) year.

Research question three

The next four research questions attempted to determine whether external factors, such as age and team winning percentage, influenced the affect of free agency on performance. Research Question Three asked if there were significant mean differences in productivity, as measured by OPS, Runs Created, and Win Shares, from players' pre-option year to option year, after removing the effects of age. Univariate analyses showed no significant differences in OPS ($p = .631$), Runs Created ($p = .798$), or Win Shares ($p = .681$) in the last year of a player's contract when compared to the previous year. Therefore, the statistical null hypothesis of no difference in offensive productivity between pre-option year and option year, when controlling for age, is accepted. According to these findings, neither equity theory predictions nor expectancy theory predictions could be validated.

Research question four

Research Question Four sought to answer whether there were significant mean performance differences, as measured by OPS, Runs Created, and Win Shares, from players'

option year to post-option year, when controlling for age. Univariate analyses revealed no significant differences in OPS ($p=.088$), Runs Created ($p=.243$), or Win Shares ($p=.135$) in the last year of a player's contract when compared to the previous year, when removing the effects of age. As such, the statistical null hypothesis of no difference in offensive performance from one year to the next is accepted. Again, the results could not substantiate either equity theory predictions or expectancy theory predictions.

Research question five

Research Question Five attempted to determine if there were significant mean differences in productivity, as measured by OPS, Runs Created, and Win Shares, from players' pre-option year to option year, after removing the effects of team winning percentage. When controlling pre-option year team winning percentage, univariate analyses of within-subjects contrasts uncovered no significant differences in performance from the last year of a player's contract to the previous year for OPS ($p=.478$) or Runs Created ($p=.443$). The analysis did reveal, however, significant improvement in the number of Win Shares ($p<.05$) a player produced from his pre-option year to option year. When controlling for option year team winning percentage, univariate analysis indicated no significant change in performance for OPS ($p=.392$) and Runs Created ($p=.45$), but did reveal a significant change in performance from the pre-option year to the option year for Win Shares ($p<.05$). Controlling for post-option year team winning percentage revealed no significant mean differences in productivity for any of the performance measures, OPS ($p=.735$), Runs Created ($p=.161$), or Win Shares ($p=.295$), from the pre-option year to the option year. Based on these findings, the statistical null hypothesis of no difference in offensive productivity from one year to the next is rejected. In both cases, the significant findings for Win Shares are indicative of expectancy theory predictions: offensive productivity will improve in the option year when compared to the previous (pre-option) year.

Research question six

The last research question asked if there were significant mean differences in productivity, as measured by OPS, Runs Created, and Win Shares, from players' option year to post-option year, after removing the effects of team winning percentage. When controlling pre-option year team winning percentage, univariate analysis revealed no significance differences in offensive performance from option year to post-option year for any of the dependent variables, OPS ($p=.796$), Runs Created ($p=.501$), or Win Shares ($p=.23$). Likewise, when controlling for option year team winning percentage, univariate tests of within-subjects contrasts showed no significant changes in player productivity for OPS ($p=.637$), Runs Created ($p=.921$), or Win Shares ($p=.141$). Controlling for post-option year team winning percentage, on the other hand, uncovered significant declines in offensive performance from the last year of a player's old

contract to the first year of a player's new multi-year agreement for OPS ($p < .05$) and Win Shares ($p < .01$). In addition, the p-value for Runs Created, while not less than .05, actually equaled .05 ($p = .05$), thus making it worthy of mention. According to these findings, the statistical null hypothesis of no difference in offensive productivity from one year to the next is rejected. The significant findings for each performance measure are, again, consistent with expectancy theory predictions: offensive productivity will decline in the first year of a new contract when compared to the previous (option) year.

Summary

The actual results for this study were consistent with expectancy theory predictions. All significant findings supported expectancy hypotheses. In addition to affirming a clear theoretical framework, the current research demonstrated that offensive productivity declines following free agency and the signing of guaranteed multi-year contracts. Offensive productivity, in this study, refers to metrics: OPS, Runs Created, and Win Shares. Both individually and collectively, these comprehensive performance statistics measure the most fundamental offensive aspects of the game: hitting, getting on base, scoring, and winning. According to the statistical analysis conducted in this study, players experienced significant declines in each of the three sabermetric performance categories after signing new multi-year contracts. The significant results associated with declines in performance for all three of the measurements, OPS, Runs Created, and Win Shares, can be interpreted as substantial evidence that free agency affects a player's overall level of productivity, not just certain aspects, as past studies (Ahlstrom, Si, & Kennelly, 1999; Duchon & Jago, 1981; Harder, 1991; Lord & Hohenfeld, 1979; Sturman & Thibodeau, 2001; Werner & Mero, 1999) have claimed.

CONCLUSIONS

The current study was conducted in order to address specific worker performance issues in the context of sport, particularly, Major League Baseball. For decades, researchers have been trying to determine what impact, if any, free agency has on player performance. This particular subject matter is often a "hot topic" issue in many circles. Everyone from the casual fantasy baseball enthusiast to the millionaire team owners and general managers, in every place from the office water cooler to the inner-most bowels of Yankee Stadium, has analyzed the evidence, examined the statistics, studied the data, charted the trends, and concluded, well, nothing. Sure, some have their own personal opinion regarding the issue, but few have presented conclusive evidence as to determining the effect that free agency has on Major League Baseball player performance. The valid findings that do exist, mainly from academic research, are contradictory. One reason for the inconsistent results could be because the aforementioned "evidence" is derived from humans, and human behavior is often difficult to even understand, much less

predict. Or, perhaps the reason could be attributed to the fact that past research has not effectively qualified “performance” or accurately assessed “productivity.” This study agrees with the later idea.

The present study supports past research (Ahlstrom, Si, & Kennelly, 1999; Duchon & Jago, 1981; Harder, 1991) in that expectancy theory predictions are confirmed with respect to offensive player performance. While this study measured offensive productivity using sabermetrics and past research relied on traditional measures, the end results were the same: players experience performance decrements in connection with long-term contracts.

The practical and theoretical implications associated with the findings of this study are numerous. Utility of the results and their implications from an industry perspective could extend far beyond baseball. This study’s validation of expectancy theory predictions with respect to worker motivation and performance could support arguments against long-term job security, advocating for one year contracts and annual salary negotiations between organizations and employees. It is not known exactly what impact, if any, these findings could have on professional baseball as a business. However, the machine that is Major League Baseball, a multi-billion dollar sports entertainment commodity, probably dislikes any notion that suggests its handsomely compensated world-class athletes are underperforming due to a lack of motivation. It is unlikely that the average ticket buyer/products consumer would be very sympathetic toward millionaires who appear to perform less than their best. Aside from potentially sustaining another public relations “black eye” for a sport already marred by steroid allegations and labor strikes, significant evidence that players under-perform amid financial and job security assurances also stands to affect the bottom line, team revenues.

The academic implications for this study could prove useful to sport management researchers as well as research scholars in other areas of academia. The findings of this research create a framework which could serve as a foundation for future studies. For example, organizational behaviorists may be interested in this study’s findings regarding performance outcomes in relation to perceived reward; Motivation researchers could potentially utilize the findings of this study as a means to assess the “how” and “why” aspects of motivation in connection with worker performance; Economic theorists may be able to apply the results of this study toward a more definitive quantification of monetary rewards and their impact on perceptions and, subsequently, productivity. Each of these research areas is incorporated in the sport management literature as well. Thus, sport management researchers are able to utilize the results of this study in the context of several different academic areas.

The current research contributes to the sport management literature, specifically, by formally introducing a more comprehensive measurement of baseball player performance, sabermetrics. The present study serves as one of the first scholarly empirical research studies to solely utilize sabermetrics as a measure of player performance. Time will tell if this study was a pioneer in terms of its reliance on sabermetrics to assess productivity, or if it was another overstatement of the usefulness and validity of an alternative measurement. If sabermetrics are

embraced in the world of academia as they have been by the mainstream industry and media, then, perhaps, more research studies incorporating sabermetrics will follow.

From a practical perspective, one of the best justifications for conducting this line of research originates from a general misunderstanding of how free agency affects an organization. On paper, the economic impact of free agency appears relatively straightforward. Unfortunately for team owners, the dynamics of free agency are more complicated than merely determining the dollars and cents owed to a player. The challenge lies in assessing how those dollars and cents translate into value for the organization. Value in this context refers to productivity and winning.

For team owners and general managers, the results of this study are potentially disheartening. Statistical evidence shows that player performance significantly declines following free agency. These findings indicate that organizations do not get a fair return on their money. Analyzing the results of free agent signings is similar to analyzing stocks on the market. Players, like stocks, are, essentially, investments. Teams choose and purchase their investments much in the same way that investors choose and purchase stocks. The criterion for investing in both is based on past performance and future potential. Oftentimes, the prices of the investments are determined by their performance history. As a result, when the investments do not perform in accordance with their historical averages, both teams and investors are left with unfair returns.

The findings from this study show that, in the case of Major League Baseball free agents as a whole, past performance is not indicative of future productivity. Thus, more often than not, teams are actually paying free agents for a higher level of performance than they are receiving. In the financial world, such repeated poor returns would necessitate the investors to cut their losses and sell their underperforming investments. In Major League Baseball, however, organizations are obligated to keep their underperforming investments through guaranteed multi-year contracts. Maybe it is time for Major League Baseball to reevaluate its current labor system. Maybe changes to free agency are warranted. Perhaps the business of baseball should be conducted more like the business on Wall Street. Imagine if investors speculated that the majority of all stocks actually underperformed and lost money after they were purchased. Obviously, stock prices would go down and investors would be much more cautious investing in the stocks they did purchase. This is where the parallel between professional baseball and the stock market ends. Baseball insiders have long suspected performance decrements in association with post-free agency contracts (T. Purpura, personal communication, August 23, 2005; S. Alderson, personal communication, September 1, 2005). Yet, during the last twenty five years, Major League Baseball salaries have increased dramatically, from Nolan Ryan's one million dollar a year salary in 1980 to Alex Rodriguez's unprecedented 25 million dollar a year salary in 2001 (Conn, 2004).

Somewhere amongst the anti-trust lawsuits and the player bidding wars, amid the emergence of "super agents" like Scott Boras, and sometime between the unveiling of expansion teams and proposals for contraction, the business of baseball changed. The catalyst for such change was free agency. The results of the change, according to this study, seem to create an

imbalance between motivation and performance, the impact of which can be seen as significant decline in offensive player productivity. In keeping with expectancy theory, the results could indicate that players are less motivated to be productive after signing multi-year contracts because there are no incentives in the form of financial rewards or job security. Without measuring player motivation directly, the theoretical implications are merely inferential assessments based on the outcomes of statistical analysis. However, these assessments are valuable in determining the possible impediments associated with free agency and performance.

Practical Recommendations

Based on the findings of this study and a thorough review of literature relating to the research, several practical recommendations for organizations and team owners can be presented.

1) Teams should sign all free agents to shorter-term contracts.

Perhaps it is worth revisiting Charles O. Finley's proposal, at least in principle, regarding free agency. As discussed in Chapter One, Finley suggested that organizations sign all players to renewable one year contracts. According to Mr. Finley, this action would reduce the liability and risk associated with multi-year contracts and create more competitive league. Unfortunately, proceeding with Mr. Finley's idea in this day and age would be an obvious violation of labor law. However, there are ways for ownership to minimize the length of free agent contracts without reverting to single year deals. Doing so would help ensure better control of the market demand for free agents and reduce the liability concerns associated with injury and performance.

2) Major League Baseball should follow the example of the National Football League and discontinue guaranteed contracts.

Essentially, this would create a situation where players would be competing for their jobs from year to year and even from game to game. It would certainly eliminate most problems of under-motivation while helping to restore competitive balance within the league. When asked about the NFL's stance on guaranteed contracts, long time and current Philadelphia Eagles President, Joe Banner said, "I don't believe guaranteed contracts are in the best interests of players, teams or fans. Right now, the system is set up so everyone works hard and is motivated to perform. If money went to players who were not playing or injured, that means much less money for the other players who are making a difference" (Jensen, 2005). In order for teams to attract players to sign with their organization, guaranteed money could be offered through signing bonuses or performance incentives.

3) Organizations should incorporate a "pay for play" compensation system.

In other words, players should be rewarded based on their past performance, not on their future potential. Under this system, players could be paid a universal minimum salary based on years of service. Naturally, the ten year veteran would have a higher base pay than the first year rookie. Performance incentives in the form of increased pay could then be offered to each player in accordance with pre-determined goals set forth by each team. Under this merit pay system, players who performed the best would make the most money. As in arbitration, an impartial mediator could be used to define the subtle nuances for specific situations where problems might arise. Again, this would help prevent motivational performance decrements associated with free agency and guaranteed multi-year contracts, while minimizing the risk for teams.

REFERENCES

- Adams, J. (1963a). Toward and understanding of inequity. *Journal of Abnormal and Social Psychology*, 67, 422-436.
- Adams, J. S. (1963b). Wage inequities, productivity, and work quality. *Industrial Relations*, 3, 9-16.
- Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology: Vol. 2* (pp. 267-299). New York: Academic Press.
- Adams, J. S., & Jacobsen, P. R. (1964). Effects of wage inequities on work quality. *Journal of Abnormal and Social Psychology*, 69, 19-25.
- Adams, J. S., & Rosenbaum, W. B. (1962). The relationship of worker productivity to cognitive dissonance about wage inequities. *Journal of Applied Psychology*, 46, 161-164.
- Alchain, A., & Demsetz, H. (1962). Production, information costs, and economic organization. *American Economic Review*, 6, 777-795.
- Ahlstrom, D., Si, S., & Kennelly, J. (1999). Free-agent performance in Major League Baseball: Do teams get what they expect? *Journal of Sport Management*, 13, 181-196.
- Andrews, I. R. (1967). Wage inequity and job performance: An experimental study. *Journal of Applied Psychology* 51, 39-45.
- Arrowood, A. J. (1961). Some effects on productivity of justified and unjustified levels of reward under public and private conditions. Unpublished doctoral dissertation, University of Minnesota.
- Bialik, C. (2003, July, 1). Sabermetrics goes mainstream. *Wall Street Journal Online* Retrieved September 18, 2004, from <http://www.wsj.com>
- Birnbaum, P. (1999). Good statistics. *By The Numbers*, 9, 2-4.
- Blau, C. (1999). Measuring the accuracy of runs formulas for players. *By The Numbers*, 9, 31-33.

- Conn, A. (2004). Baseball average salaries from 1998-2003. Retrieved October 8, 2004, from http://www.contractbud.com/?article=apc_baseavgsalary&sidepanel=y
- Cummings, T. G. (1980). *Systems theory for organization development*. Chichester, England: John Wiley & Sons.
- Duchon, D., & Jago, A. (1981). Equity and the performance of Major League Baseball players, An extension of Lord and Hohenfeld. *Journal of Applied Psychology*, 66, 728-732.
- Estes, B.C., & Shaheen, N. A. (2010). Determinants of value and productivity in a complex labor market: How sabermetrics and statistical innovation changed the business of professional baseball. *Business Studies Journal*, 2, 27-48.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7, 117-140.
- Gavin, J. F. (1970). Ability, effort, and role perception as antecedents of job performance. (Experimental publication system, manuscript number 190A) Washington, D.C.: APA.
- Georgopoulos, B. S., Mahoney, G. M., & Jones, N. W. (1957). A path-goal approach to productivity. *Journal of Applied Psychology*, 41, 345-353.
- Gillette, G. (1993). *The great American baseball stat book*. New York, NY: HarperPerennial.
- Goodman, P. S., & Friedman, A. (1968). An examination of the effect of wage inequity in the hourly condition. *Organizational Behavior and Human Performance*, 3, 340-352.
- Goodman, P. S., & Friedman, A. (1969). An examination of quantity and quality of performance under conditions of overpayment in piece rate. *Organizational Behavior and Human Performance*, 4, 365-374.
- Goodman, P. S., Rose, J. H., & Furcon, J. E. (1970). Comparison of motivational antecedents of the work performance of scientists and engineers. *Journal of Applied Psychology*, 54, 491-495.
- Grad, B. D. (1998). A test for additional effort expenditure in the "walk year" for Major League Baseball Players. *The University Avenue Undergraduate Journal of Economics*, 2, 1-18.
- Graen, G. (1969). Instrumentality theory of work motivation: Some experimental results and suggested modifications. *Journal of Applied Psychology Monograph*, 53, 1-25.
- Hackman, J. R., & Porter, E. E. (1968). Expectancy theory predictions of work effectiveness. *Organizational Behavior and Human Performance*, 3, 417-426.
- Harder, J. W. (1991). Equity theory versus expectancy theory: The case of Major League Baseball free agents. *Journal of Applied Psychology*, 76, 458-464.
- Herzberg, F., Mausner, B., & Snyderman, B. (1959). *The motivation to work*. New York: Wiley.

- Hill, J. R., & Spellman, W. (1983). Professional baseball: The reserve clause and salary structure. *Industrial Relations*, 22, 1-19.
- Holmstrom, B. (1979). Moral hazard and observability. *Bell Journal of Economics Management*, 2, 36-41.
- James, B. (1984). *The Bill James baseball abstract*. New York: Ballantine Books.
- James, B. (1987). *The Bill James baseball abstract*. New York: Ballantine Books.
- James, B., & Henzler, J. (2002) *Win shares*. Morton Grove, IL: STATS Publishing.
- Kahn, L. M. (1993). Free agency, long-term contracts and compensation in Major League Baseball: Estimates from panel data. *The Review of Economics and Statistics*, 75, 157-164.
- Kindred, D. (1996, 3/4). A maverick, a visionary-baseball owner Charles O. Finley. *The Sporting News*, 220, 21-23.
- Krautmann, A. C. (1990). Shirking or stochastic productivity in Major League Baseball? *Southern Economic Journal*, 14, 961-968.
- Lawler, E. E. (1966). Ability as a moderator of the relationship between job attitudes and job performance. *Personnel Psychology*, 19, 153-164.
- Lawler, E. E., & Porter, L. W. (1967). Antecedent attitudes of effective managerial performance. *Organizational Behavior and Human Performance*, 2, 122-142.
- Lehn, K. (1982). Property rights, risk sharing, and player disability in Major League Baseball. *Journal of Law and Economics*, 25, 343-366.
- Locke, E. A. (1975). Personnel attitudes and motivation. *Annual Review of Psychology*, 26, 457-480.
- Lord, R. G., & Hohenfeld, J. (1979). Longitudinal field assessment of equity effects on the performance of Major League Baseball players. *Journal of Applied Psychology*, 64, 19-26.
- Marburger, D. R. (2003). Does the assignment of property rights encourage or discourage shirking? *Journal of Sports Economics*, 4, 19-34.
- Maxcy, J. (1997). Do long-term contracts influence performance in Major League Baseball? In W. Hendricks (Ed.), *Advances in the economics of sport* (pp. 157-176). Greenwich, CT: JAI.
- Maxcy, J. G., Fort, R. D., & Krautmann, A. C. (2002). The effectiveness of incentive mechanisms in Major League Baseball. *Journal of Sports Economics*, 3, 246-255.
- Mitchell, T. R., & Biglan, A. (1971). Instrumentality theories: Current issues in psychology. *Psychological Bulletin*, 76, 432-454.
- Nadler, D. A., & Lawler, E. E. (1977). Motivation: A diagnostic approach. In J. R. Hackman, E. E. Lawler, & L. W. Porter (Eds.), *Perspectives on behavior in organizations* (pp.26-34). New York: McGraw-Hill.

- Peak, H. (1955). Attitude and motivation. In M. R. Jones (Ed.), *Nebraska symposium on motivation*. Lincoln, NE: University of Nebraska Press.
- Pedhazur, E. J. (1982). *Multiple Regression in behavioral research: Explanation and prediction* (2nd. Ed.). New York: Holt, Rinehart & Winston.
- Pinder, C. C. (1984). *Work motivation*. Glenview, IL: Scott Foresman.
- Porter, L. W., & Lawler, E. E. (1968). *Managerial attitudes and performance*. Homewood, IL: Irwin-Dorsey.
- Pritchard, R. D., Dunnette, M. D., & Jorgenson, D. O. (1972). Effects of perceptions of equity and inequity on worker performance and satisfaction. *Journal of Applied Psychology*, 56, 75-94.
- Scholl, R. W. (2000, June 24). Primer on equity. Retrieved January 27, 2004, from <http://www.cba.uri.edu/Scholl/Notes/Equity.html>
- Schulz, R., Musa, D., Staszewski, and Siegler, R. S. (1994). The relationship between age and Major League Baseball performance: Implications for development. *Psychology and Aging*, 9, 274-286.
- Scroggins, J. (1993). Shirking or stochastic productivity in Major League Baseball: Comment. *Southern Economic Journal*, 60, 239-240.
- Scully, G. W. (1989). *The business of major league baseball*. Chicago, IL: University of Chicago Press.
- Stevens, J. (2002) *Applied multivariate statistics for the social sciences*. 4th Ed.. Mahwah, NJ: Lawrence Erlbaum.
- Sturman, T. S., & Thibodeau, R. (2001). Performance-undermining effects of baseball free agent contracts. *Journal of Sport and Exercise Psychology*, 23, 23-36.
- Thomas, J. & Nelson, J. (1996). *Research methods in physical activity* (3rd ed.). Champaign, IL: Human Kinetics.
- Vroom, V. H. (1964). *Work and motivation*. New York: Wiley & Sons.
- Walster, E., Walster, G. W., & Berscheid, E. (1978). *Equity: Theory and research*. Boston: Allyn & Bacon.
- Werner, S., & Mero, N. P. (1999). Fair or foul?: The effects of external, internal, and employee equity on changes in performance of Major League Baseball players. *Human Relations*, 52, 1291-1311.
- Woolway, M. D. (1997). Using and empirically estimated production function for Major League Baseball to examine worker disincentives associated with multi-year contracts. *The American Economist*, 41, 77-83.
- Zimbalast, A. (1992b). *Baseball and billions: A probing look inside the big business of our national pastime*. New York, NY: BasicBooks.

REGULATION, CORPORATE GOVERNANCE ON FINANCIAL LEVERAGED COMPANIES MEXICO CASE.

Heriberto Garcia, Texas A&M International University

ABSTRACT

During the last two decades several countries around the world has been modified and improve the regulation around the corporate governance practices, these new regulation standards require in instance to improve practices such a better board of directors, transparency in information, limitations in the use of debt and shareholders minority rights. Indeed those new practices from long view perspective should improve the economic position of the public companies ergo investors. Mexico is not the exception to this world wide trend and during 2001 the Mexican Financial Markets adopts new regulations and better corporate governance practices in order to improve the investor risk return relationship, according with the present research the reality is different as previously expected. We analyze several companies after the regulation of 2001 and how they managed the financial leveraged according with the new standards, the results contradicts the regulation expectations and the theoretical Principal Agent relationship.

INTRODUCTION

Regulation around the corporate governance practices has been increasing in the last two decades. First, new regulations attempt to minimize the conflict between Agent and Principal. Second, new regulations are now more concentrated in improve corporate governance practices and tight the administrators decisions into more transparency system. Third, part of this new system is the use and control of the financial resources inside the organization, specially the capital structure and leverage levels.

The Agency theory concentrates in how the Principal and Agent can minimize the differences using diverse mechanisms, in (Jensen & Meckling, 1976) the separation and control of the firm generates potential opportunistic behavior of the management in order to minimize the potential damage the organization may increase the Agency cost due to monitoring and control of the firm, then potential solutions (Jensen, 1993; Denis , 2001) can be found such 1) Legal and regulatory instruments linked to the symmetrical financial information 2) Internal organizational processes to control the use of debt, governance practices, board of directors, executive compensations and minority rights and 3) External Financial Market and Product

Market. The potential solution can be different depending the country, regulation system and ownership structure.

Better corporate governance practices seems to be one the most used forms to minimize the conflict between Agent and Principal, in (Fama & Jensen, 1983) the organization can improve internal control mechanism or external systematic mechanism. Internal control mechanism can be a form of an entity that may evaluate and decide over long term economic decisions, board of directors. Another control form can be related to the level of debt or liabilities of the organization and the last form of control can be related to the compensation and evaluation of the executives or management of the firm.

One way to minimize the Agency problem as System can be due to new legislation or regulation. Changes in legislation and regulatory procedures began during last century. (Firend & Herman, 1964), point out the importance of regulation around public firms and financial agents. From a corporate governance perspective, later (Gregory, 1999) points out the importance of regulation in governance practices and guideline codes. Several institutions and organizations recommend the adoption of those practices by firms before some of those practices became a part of the legal requirements and regulatory procedures.

Later Lombardo and Pagano, (2000) found out that the total stock market returns are correlated with an overall measure of judicial efficiency procedures and the rule of law, but also dividend yields, and earning price ratios are positively correlated with the same variables, judicial efficiency and the rule of the law. Following the same line, (Lombardo & Pagano, 2002), found out that legal institutions, called rule of law and judicial efficiency procedures can affect the market equilibrium and improve legal institutions and also affect equity returns depending on the institutional change.

New regulation requirements are focused on the financial information and internal control matters. Evidence from (Leuz & Verrechia, 2004) shows that disclosure of proper information improves investor's perception of the company and how the financial resources are being used.

This evidence shows in the last decade, regulation of governance practices have been increased dramatically and the results seem to have improved the performance of the firm as well the transparency, and at the same time controlling the opportunism behavior of the management. It also shows regulation related with the investor protection rights is crucial to improve the financial markets and the way the firm is managed.

Corporate Governance Practices (CGP) is ruled by law. Legal requirements differ around the world when they are related to shareholder interests and creditor protections. According to (La Porta, Silanes, Shleifer & Vishny, 1998, 2002), ownership structures, shareholders right protection, and financial markets are related with the legal system of the country. These variables are crucial to consider any investment, credit funds, and economic development of any country. The relation has to do with investors and creditors "power", cash flow control, and residual claims. According with (Hart, 1995) the investor's and creditor's rights are protected and should

be specified in the law. When they are ambiguous in the law, corruption system or inefficient legal system can result in options changes in how the investors finance the investments. During the last decade Mexican CGP suffered two major regulation and legal changes especially for public companies. The first major change in governance practices as a result of the new regulation and normative practice is based on the (CNBV, 2000), and the second major change is related to (CNBV, 2005). The first major overhaul to the system was the introduction of Code of the Best Governance Practices (CBGP) during 2000. The CBGP is sectioned in five major issues (CCE, 2000). According to the OECD, these issues meet general requirements for good corporate governance practices. These issues are concerned with the 1) board of directors; 2) evaluation and remuneration functions; 3) audit and control functions; 4) finance and planning functions; 5) disclose and information to the shareholders, see Table 1 to compare the new regulation with the OECD Principles.

Table 1 Comparison of Mexican Corporate Governance with the OECD Principles		
	OECD Principles	Mexican Law
The rights of the shareholders		
1) Secure methods of ownership registration	Yes	Partially
2) Relevant information in time and regular basis	Yes	Yes
3) Participate and vote in general shareholder meetings	Yes	Yes
4) Elect members of the board	Yes	Yes
The equitable treatment of the shareholders		
1) All shareholders have the same voting rights	Yes	Partially
2) Insider trading	Yes	Partially
3) Disclose strategic or relevant information	Yes	Partially
Disclose and transparency		
1) The financial and operative results of the company	Yes	Yes
2) Company objectives and financial plans	Yes	Yes
3) Members of the board and key executives remuneration	Yes	Yes
4) Material risk factors	Yes	Yes
5) Material issues regarding employees and stakeholders	Yes	Yes
6) Governance structures and policies	Yes	Yes
Responsibility of the board		
1) Ensure strategic guidance of the company	Yes	Yes
2) Ensure compliance with applicable law	Yes	Partially
3) Reviewing and guiding corporate strategy, financials plans.	Yes	Yes
4) Selecting, compensating and replacing key executives	Yes	Partially
Source: Principles of corporate governance OECD, www.oecd.org .		
LGMS(Ley general de sociedades mercantiles), LMV (Ley del mercado de valores)		

According with the new regulation and law it seems that Mexican Financial Markets (MFM) is on the track to be in the same line with (OECD, 1999) principles, also the major improvement is related to disclose and transparency and the rights of the shareholders. Using better CGP means for the investor better positions in terms of risk and return relationship, also it is important to mention that increasing regulation and normative practices around the CGP also means at the beginning of the process additional cost control and short term adjustment of the company financial and operative efficiency, but as long term perspective the company as whole should be in much better financial performance position.

The purpose of this research is asses and considers the effect of the first major improvement of the corporate governance practices from a Systematic perspective. The new law (CNBV, 2000) requires several requisites to the board of directors and how the financial resources are being used, the fundamental questions is how this new practices for the MFM are translated to improve financial performance and less associate financial risk for the investors using long time perspective approach. The new law requires several aspects, such structure and size of the board of directors, independent directors and CEO, transparency and specific procedures to change the capital structure of the company.

Table 2 Rule 11-33 and Governance Changes				
Governance Practices	LGSM	Comments	LMV	Comments
Equally treated (Shareholders)	Article 112,	Exist but no applied at all	Article 1, 14b1	Lacks homologate to ADRS and after 2001 Minority Rights
Insider trading prohibited		Not applied	Article 16b, 123, 124	Exist by law but not enforcement at all by CNBV
Information disclose that affect the firm economic performance	Article 158,166	Limited	Article 16b, 16b1	Applied but lacks of appropriate regulation for qualitative event status
Complete information about firm status to the shareholder	Article 166,172	Limited	Article 14b1, 14b2, 14b3	Applied but lacks of disclose material risk factors and relevant qualitative information
Audit financial information	Article 172,		Article 14b1, 14b2,	Applied
Corporate governance information	Article 172, 173,176	Only as law requirement. Limited in family owned firms.	Article 14b1, 14b2, 14b3	Applied after the rule 11-33 and code of best corporate governance practices
Financial information according with generally accepted accounting principles	Article 172, 173,176	Applied	Article 14b1, 14b2, 14b3	Applied
Corporate control and market regulation	Article 182,210	Only limited issues about control	Article 14b1, 14b2, 14b3,113	Not homologate to minority rights and creditors rights. But established after 2001.
Source: LGSM (Ley general de sociedades mercantiles), LMV (Ley del mercado de valores).				
Source: www.gob.mx/wb/egobierno/egob_leyes_del_congreso				

According with this new regulation, MFM companies should improve the long term decision process adopting and using the new law requirements and this will translate in better financial performance or less associate risk for the investors.

PREVIOUS RESEARCH AND EMPIRICAL EVIDENCE

We can describe the CGP as direct relationship with financial performance, the Agency Theory states that at some point the Agency cost should be less than the profit maximization process, (Jensen, 1993). Previous empirical research has been concentrated in how the domains affect the performance. We can describe according with (Drobetz, Schillhoffer & Zimmermann , 2003) 30 major variables which are divided in five major CGP domains 1) corporate governance commitment, 2) shareholders rights, 3) transparency , 4) management and 5) supervisory board matters and auditing. All this previous work shows significant evidence in establishing a relationship between governance practices and firm performance.

By the other hand, several empirical studies has been used different financial performance approach, financial domain has two implicit perspectives. The outside perspective is how the market perceives the value of the firm. If the company performs or creates value below the actual asset value, then the market will automatically set the new value. This perspective is linked to the movements on the stock price. The inside perspective refers to the financial statements or operative financial variables that accountants and the auditor's disclose to different authorities or interested entities. During this process human behavior and market pricing are not related, but they are intrinsic variables, (Stewart, 2002).

Classical study about how new regulation can affect the earnings and management practices, is described by Cohen, (2005) where there is significant change in earnings performance before and after major corporate governance regulation, also the authors support the hypothesis about the opportunistic behavior of the managers derived from the compensations structure and firm performance. Later on the same research line, (Machuga, S. & Teitel, K. 2007) found out the effect of the firm performance due to the new corporate governance code in Mexico, specifically using short term period analysis, the conclusion was the new regulation generally speaking in short term perspective increase the quality of earnings, compared with this research we use two wider windows of five years instead two years windows, we use same variables performance and financial ratios to compare before and after the new regulation.

Following the same line, (Chong, Guillen & Lopez de Silanes, 2009) conclude in the short term (one year period) that firm level corporate governance practices are positively related to better firm value and better financial performance, but the final conclusion is related to either serious problems for the MFM to access new capital, compared with the present research we use almost same financial performance variable but using long term analysis perspective.

There are several empirical evidence where and how the domains of the CGP can be related to financial performance, either internal or external perspective. According with previous

research, Board of Directors, Evaluation and Remuneration function, Audit and Control functions and Disclose of information and transparency seems to have direct relationship with financial performance, especially in the long term perspective, see Table 3.

According with OECD Principles of Corporate Governance several activities are related with the function of the board of directors. The first and most important activity is related to the strategic view and definition of the future of the firm. Another activity is related to information transparency to shareholders and financial markets, also the board of directors should establish internal controls and procedures which translate in legal and regulatory procedures inside the firm and the last one is related to evaluation and compensation of the CEO and directors of the firm.

Table 3 These table permits to understand the empirical evidence between governance practices. between governance changes, firm value performance and critical issues around new governance practices.		
Domain / Reference	Dependent variable / Governance Issues	Performance variables / Independent variable
Board of Directors		
Campbell and Wasley (1999)	Incentive contracts / Compensation Policy	Stock price value
Agrawal, Charles and Knober (1996)	Shareholders insiders, institutions and large blockholders, use of outside directors, debt policy, labor market and corporate control	Stocks returns, book value, ROA
Black, Jang, and Kim (2003)	Governance Index. Board od directors, outside directors, audit committee, internal auditor, disclosure to investors and ownership parity.	Tobin Q, Market Book Ratio
Shen, Hsu and Chen (2006)	Ownership structures	Firm values, and factors that formed firm values.
Li, Lam, Qian and Fang (2006)	Institutional Ownership, CEO Duality, Independent Board Leadership, Ownership structure.	ROA, EPS, Assets per Share.
Klapper and Love (2005)	The GOV index is divided in 7 domains, Discipline, Tranparency, Independence, Accountability, Responsibility, Fairness, Social Awareness.	Tobins Q Ratio as a measure of market valuation and ROA as a measure of operating performance.
Chiang (2005)	Structure of the board, proportion of independent directors, size of board of directors, president of the board of directors is currently the CEO, structure ownership, proportion of management shareholding. Proportion of institutional	ROA, ROE, EPS

CBGP is concerned with how the CEO and the high ranking officers are evaluated and remunerated. The guidelines according to the OECD governance principles establish the existence of independent committee members that evaluates nominate, and set remunerations to the highest executive ranks.

Table 3 Continue		
Evaluation and remuneration function	Dependent variable / Governance Issues	Performance variables / Independent variable
Kang, Kumar and Lee (2006)	CEO incentive compensation, corporate governance mechanism.	investment and firm returns
Nahar (2006)	Board of Directors, Ownership structure. Board independence, non executive directors.	Firms performance, ROA
Jiraporn, Kim and Davision III (2005)	CEO Compensation. Governance Index. Delay, Voting, State, Protection, other. Compensation, Cash, Bonus, Salary	Shareholders rights, Shareholder Wealth. Sales, assets, Ebit, debt, Stock return, Capx/sales, R&D/Sales, Ownership
Epstein and Roy (2005)	Strategic planning, management of customer relations, management style, operations, control and risk,	Financial performance
Jensen and Murphy (1990)	Incentives to CEO and top management	Shareholders Wealth (Firm value)
Bebchuk and Fried (2003)	Incentives and governance practices	Shareholders Wealth (Firm value)

The third section is related to the audit function, financial information, and control. Related to the audit function the requirement established in this part requires four observations, the proportion of the fee charged by the audit firm, the rotation of the audit partner who signs the audit report, independence from statutory audit, and the financial auditor.

Table 3 Continue		
Audit and control functions	Dependent variable / Governance Issues	Performance variables / Independent
Yeh, Lee and Ko (2002)	Ownership structure, directors and supervisors	CAMEL Variables and Growth variables
Myers and Ziegenfuss (2006)	Eight steps in internal audit procedures	Effectiveness and responsibility
Holstrom and Kaplan (2003)	Changes in compensation, Ownership structure, Board Directors,	US financial market returns
Payne (2006)	Governance practices in USA and Europe	Over a period of time becoming similar patterns in governance practices
Petra (2006)	Reforms to corporate governance practices and the rationale behind the reforms	Impact of governance reforms in corporate collapses

Also as part of the CBGP requires four major issues related with finance and planning. The first one is related to evaluation of new investment opportunities; second, use of debt or financial debt policy (Capital Structure), third evaluation and control of the financial plan and analysis risk factors. We have been analyzed these CBGP components and the relationship with financial performance in the following empirical research.

Table 3 Continue		
Disclose of information and transparency	Dependent variable / Governance Issues	Performance variables / Independent variable
Bushman and Smith (2003)	Discipline managers to direct resources and reduce information asymmetries	Productivity and value added of firms
Bushman and Smith (2004)	Transparency cross country analysis	Legal and Judicial regime
Mensah, Nguyen and Prattipati (2006)	Transparency as a multilevel concept	Comparison with financial accounting standard board

HYPOTHESIS AND METHODOLOGY

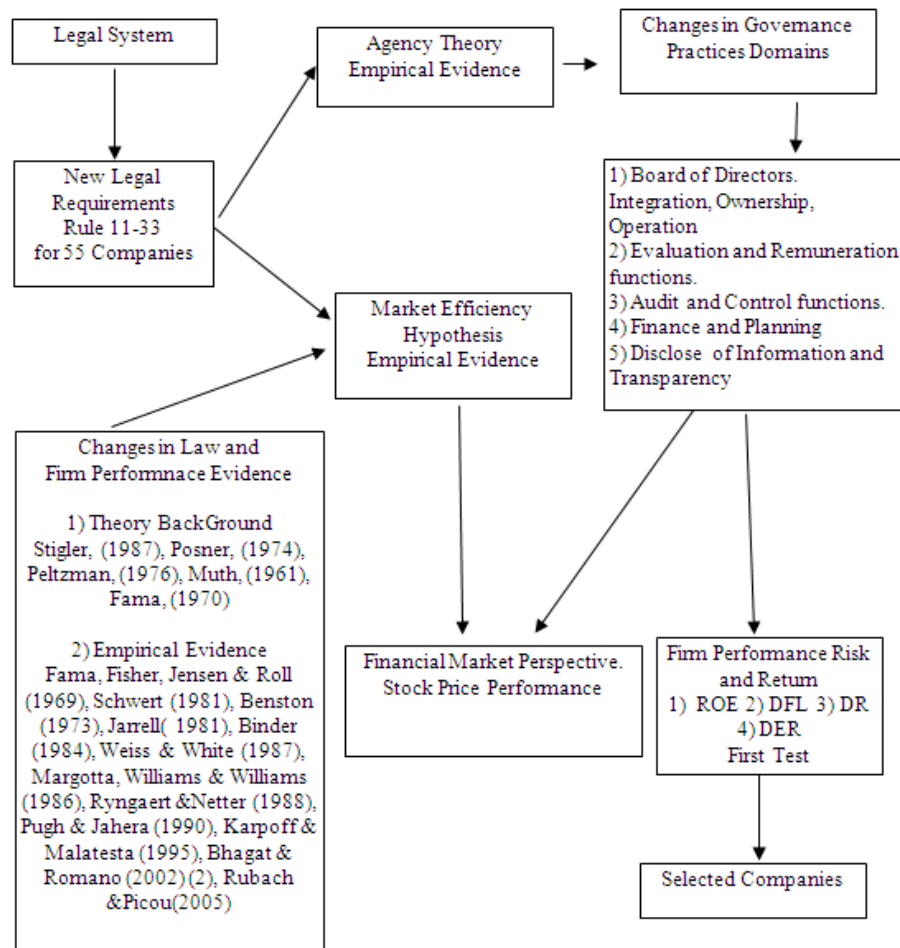
We designed the present research with one final goal, how financially stressed company or low return performance company has been affected (expost period) with the new regulation in terms of corporate governance domains? How financially stressed company or low return performance company improve corporate governance practices after the new regulation? What is the effect of the new regulation in terms of corporate governance and financial performance during the expost period? We support our research based on two theoretical primary perspectives, theoretical cause and effect relationship and the previous empirical evidence. See Figure 1.

The literature support the argument that information should affect the firm performance, also regulation can change the industry or firm performance depending the new specific requirements it can be either negative or positive in this framework the financial markets adopts the new information and according with the economic implications the changes should be reflected either from stock performance or firm financial performance. In our research according with previous literature changes in governance practices can affect the level of firm performance, capital structure and risk and return relationship.

We design the research in two steps, the first step should discriminate the effect of the new ruling in the Financial Markets, and then we select those companies with substantial lower return or higher financial risk or the combination of both. The first part of the research explore the following questions, Does the new Corporate Governance practices improve shareholder performance or reduce financial risk for any company?

The first step involves the data of 55 public companies during two periods, the first period is the previous risk and return performance before the regulation; we obtain quarterly data from 1995 to 2000 as Exante analysis.

Figure 1
First Step Selection of Companies



Then the period of transition and the adoption of the new regulation period include same companies' quarterly data from 2001 to 2005 we called Expost analysis. We obtain this data from Bloomberg, "BMV" "Infosel Financiero" and "El Financiero" which are the major financial sources of data in Mexico, the universe of companies holds up to the 95% of the Mexican Financial Market in terms of capitalization, also we exclude the financial sector due to not comparable data during that period and also due the comprehensive financial system regulation overhaul suffered during the Exante period, we used the following formulas as financial risk and return performance as parameters.

ROE (Return on Equity) = Net Profit / Equity

DFL (Degree of Financial Leverage) = EBIT / Earnings Before Tax.

DR (Debt Ratio) = Total Liabilities / Total Assets

DER (Debt Equity Ratio) = Total Liabilities / Stockholders Equity.

For the first step to discriminate the effect of regulation over the selected companies, we use the T Test method to determine if the means and variances are significantly different from each other, comparing the Exante with the Expost periods. The formula for the first test applied to the entire universe is as follows:

$$T_{test} \approx \frac{(\pi_1 - \pi_2)}{\sqrt{(\delta_1^2/n_1) + (\delta_2^2/n_2)}}$$

When π_1 = mean exante period, π_2 = mean expost period, δ_1 = sigma exante period, δ_2 = sigma expost period, n_1 = quarterly exante periods, n_2 = quarterly expost periods

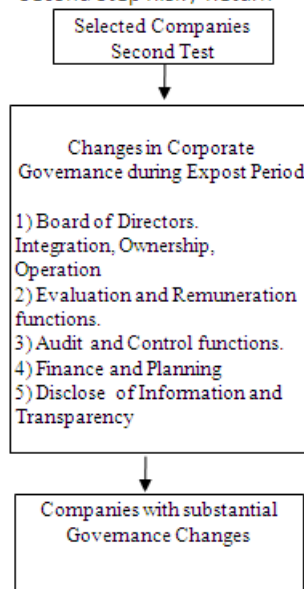
We separate the data by time period Exante and Expost, and by industrial sector, and then we include the overall descriptive statistics by industrial sector and then a comprehensive analysis, see the Descriptive Statistics Table 1.

As previous research papers, the use of general data and financial firm data address several problems, first the system as whole can be affected by the economic data from both periods, we include the data from the GDP for both periods, our results confirm there is no significant difference between GDP means for both periods, the DGP growth an average 2.8% annually, the Exante Mean is 3.5% and the Expost Mean is 1.9%, in general terms, the stock market capitalization to GDP is 21.9%, see (Chong, Guillen & Lopez de Silanes, 2009).

The second problem we address is the financial economic disaster (abnormal loss) during 1995 (Exante Period) with decreased of 6.1% for GDP resulting in Mexican Financial System overhaul, we exclude the Financial Institutions from the entire analysis, but the economic event arise a serious debt and economic problems for the entire universe of companies, most of them recurring in restructuring the debt payments and gain additional time and wait to better economic conditions, in some cases this process last years.

Previous research studies used, paired samples, regression or correlation statistical test, (Perry & Shivdasani, 2005; Petra, 2005; Kang & Kumar, 2006; Nahar, 2006; Shen, Hsu, Chen, 2006) are the recent studies using the same variables and similar statistical tests.

Figure 2
Second Step Risk / Return



HYPOTHESES

The first step requires discriminating the performance and financial distress companies from the entire universe, we use the following hypothesis to identify those companies:

The alternate H: For the 55 companies the mean and variance for H1 ROE, H2 DFL, H3DR, H4 DER are different between Exante and Expost periods.

After we ran the alternate Hypothesis, then we select from the universe of companies those companies with any of the following characteristics or conditions see Figure 2: 1) Substantial lower return using H1, 2) Substantial higher financial risk using H2, H3 and H4 or 3) Combination of both. The universe of initial companies is described in Table 4:

Table 4 Initial Universe	
Sector / Industry	Companies
Retail	14
Communications	4
Construction	9
Manufacture	15
Others	7
Mining	3
Services	3
Total Companies	55

The statistical results for the first step of the research are in Statistical Results 1. We resume the statistical results into the following table, also we include how each variable improve or worse during the period of analysis.

Table 5				
Statistical Significance Accepted H Alternative				
	H1 ROE	H2 DFL	H3 DR	H4 DER
Accepted H Alternative	3	22	13	32
Rejected H Alternative	52	33	42	23
Total	55	55	55	55

Table 6 Cumulative Results Means*				
	ROE	DFL	DR	DER
Worse	34	34	47	47
Better	21	21	8	8
Total Results	55	55	55	55

* Not statistical significance, but performed differently compared after the rule 11-33

From the Table 5, we select 32 companies which either decrease performance or increase financial risk, the second step consist in analyze the following question If the company explore lower return or higher financial risk then how new Corporate Governance practices affect changes in how the firm is manage? How the company addresses to improve performance or reduce financial risk in terms of Corporate Practices?

We divide the Corporate Governance practices into five most important issues, we use the same variables according with the Figure 2 and previous related research, 1) Board of Directors, 2) Evaluation and Remuneration function, 3) Audit and Control Functions 4) Finance and Planning and finally 5) Information Transparency then we identify the most important

changes in corporate governance practices during the Expost period, the results are in the following Table 7.

Table 7.											
Corporate Governance Domains and Changes after new regulation Expost Period											
Domains*	(1)	(2)	(3)	(4)	(5)	Domains*	(1)	(2)	(3)	(4)	(5)
Commercial						Mining					
Benavides	3	0	0	4	9	Autlan	0	0	0	0	0
Collado	0	0	0	0	0	GMexico	1	0	0	2	0
Comerci	0	0	0	1	3	Peñoles	0	0	0	0	0
Coppel	0	0	0	0	4	Manufacture					
Elektra	7	0	3	17	44	Bimbo	5	0	0	5	8
Fragua	2	0	0	2	3	GCorvi	0	0	0	1	2
Gigante	0	0	0	2	13	Geupec	1	0	0	1	4
Liverpool	0	0	0	2	4	Hilasal	2	1	0	1	5
GPH	0	0	0	0	0	Kimberly	1	0	0	1	4
Walmart	5	0	1	8	25	Vitro	5	0	0	9	8
Communications						Others					
Cintra	10	2	1	4	15	Alfa	2	3	0	6	6
Telmex	9	1	0	9	7	CIE	0	0	0	1	3
Televisa	8	0	0	7	6	Desc	3	0	0	4	3
Services						Gissa	2	1	0	2	3
Posadas	3	0	0	4	3	Total	75	6	2	96	183
Construction											
Ceramic	0	0	0	0	0	* Reference	Domains / Activities				
GCC	2	0	0	2	1	(1)	Board of Directors				
GEO	1	0	0	1	4	(2)	Evaluation and remuneration function				
GMD	1	0	0	1	0	(3)	Audit and control functions				
Hogar	0	0	0	0	0	(4)	Finance and Planning				
Lamosa	3	0	0	3	1	(5)	Disclose of information and transparency				

CONCLUSIONS AND RESULTS

According with the evidence there are several important aspects we find out for financial distress or Low financial performance companies in Mexico, first companies with this financial conditions opt for restructuring the calendar of the debt payments or opt for renegotiate the debt structure with the bond holders or financial institutions, or simply gain additional time to get better business periods, see domain 4. The second most important aspect is they enter to the process to concentrate into the core business processes these include the decisions to reduce the not core business assets or divestiture process domain 1 and 4. Third, we find out more informative and communication process to the Financial Market as a whole see domain 5, these

include the actions and the processes the companies had been decided to improve the financial situation. Four, some few companies did not disclose any important information about the business plan, financial situation or any potential improvement of the actual business situation, except for the official annual report, they complain with the law but they did not disclose how they will improve the financial situation. Five, there are serious problems to the Mexican companies to access new capital due to excessive financial distress.

Several firms lost the management control or the ownership of the firm during the expost analysis, Benavides, Cintra and Gigante,

We did not find any radical or emergency plan to improve the financial situation in any of the companies with financial distress, this means, ownership control, change of the CEO, change of the administration or changes in any of the Members of the Board of Directors or any important changes of the main executives of the firm, see domains 2 and 3.

We find out more questions than answers after this analysis, besides the empirical evidence from the financial distress companies in Mexico and corporate governance practices, How the Board of Directors realize the imminent danger of increasing financial distress and low financial performance? How the Board of Directors approves and accept additional financial risk and lower performance in five years window time (Expost analysis)? What is the relationship between the Board of Directors and the Shareholders? Why the Mexican Financial Market opt to accept companies with lower performance and more debt? There is any relationship between the ownership concentration and financial distress? There is any relationship between this trend and the Globalization process? There is any additional information that is not included besides the official annual reports and the official information disclosure?

Descriptive Statistics Table 1																
Variables / Time Period	Commercial				Communications				Services				Construction			
	ROE	DFL	DR	DER	ROE	DFL	DR	DER	ROE	DFL	DR	DER	ROE	DFL	DR	DER
Ex ante Mean	20%	56%	43%	50%	11%	89%	52%	160%	2%	61%	37%	84%	13%	181%	50%	83%
Expost Mean	11%	135%	48%	109%	12%	119%	63%	222%	3%	118%	40%	77%	8%	123%	52%	126%
Std Dev EXANTE	0.33	3.71	0.09	1.10	0.19	2.26	0.06	0.42	0.28	1.42	0.15	0.49	0.25	6.32	0.11	0.43
Std Dev EXPOST	0.05	1.13	0.04	0.27	0.35	3.98	0.05	0.77	0.07	0.53	0.02	0.06	0.08	1.26	0.05	0.26
N Ex ante	306	306	306	306	130	130	130	130	63	63	63	63	215	215	215	215
N Expost	280	280	280	280	120	120	120	120	60	60	60	60	200	200	200	200
All Observations	586	586	586	586	250	250	250	250	123	123	123	123	415	415	415	415
Mean	16%	0.92	45%	78%	10%	1.00	57%	192%	2%	0.86	39%	81%	11%	1.44	51%	104%
Median	12%	1.04	47%	93%	9%	0.97	58%	171%	4%	1.02	39%	74%	10%	1.02	50%	109%
Std Dev	26%	3.31	10%	92%	33%	3.80	9%	80%	22%	1.18	12%	40%	21%	4.58	12%	50%
Min	-23%	-15.0	29%	-295%	-51%	-12.0	43%	104%	-117%	-4.8	18%	30%	-33%	-9.1	32%	3%
Max	142%	8.7	64%	272%	125%	14.7	72%	391%	34%	2.6	58%	178%	72%	24.1	73%	188%

Variables / Time Period	Mining				Manufacture				Others				All Sectors				Gross Domestic Product	
	ROE	DFL	DR	DER	ROE	DFL	DR	DER	ROE	DFL	DR	DER	ROE	DFL	DR	DER	GDP	
Ex ante Mean	10%	96%	34%	56%	13%	93%	37%	72%	15%	84%	49%	105%	12%	94%	43%	87%	3.5%	
Expost Mean	5%	289%	53%	120%	8%	99%	45%	102%	3%	260%	53%	122%	7%	164%	50%	125%	1.9%	
Std Dev EXANTE	0.06	0.38	0.10	0.29	0.08	1.92	0.07	0.27	0.10	1.65	0.07	0.28	0.18	2.52	0.09	0.47	0.05	
Std Dev EXPOST	0.15	9.14	0.07	0.34	0.08	1.25	0.05	0.21	0.09	6.14	0.05	0.28	0.12	3.35	0.05	0.31	0.02	
N Ex ante	72	72	72	72	394	394	394	394	200	200	200	200	1380	1380	1380	1380	23	
N Expost	60	60	60	60	340	340	340	340	180	180	180	180	1240	1240	1240	1240	20	
All Observations	132	132	132	132	734	734	734	734	380	380	380	380	2620	2620	2620	2620	43	
Mean	8%	1.84	42%	85%	11%	0.96	41%	86%	9%	1.64	51%	113%	10%	1.24	47%	106%	2.8%	
Median	8%	0.96	44%	81%	10%	1.06	42%	84%	10%	1.07	51%	109%	9%	1.02	47%	103%	3.2%	
Std Dev	12%	6.24	13%	46%	9%	1.85	8%	31%	12%	4.81	7%	31%	19%	3.68	10%	53%	4.1%	
Min	-26%	-1.9	23%	30%	-16%	-7.6	26%	41%	-23%	-5.8	37%	61%	-41%	-8.0	29%	-4%	-9.2%	
Max	30%	39.0	62%	172%	35%	5.6	55%	155%	35%	28.3	64%	188%	68%	17.6	64%	220%	8.4%	

Statistical Results 1											
Statistical Test for Mean Paired Samples (T Test 5% Alfa Results for H1, H2, H3, H4)											
Commercial	LC / FSC	ROE	DFL	DR	DER	Mining	LC / FSC	ROE	DFL	DR	DER
Alsea	LC	0.65	0.21	0.45	0.68	Autlan	LC	0.76	0.67	2.43	3.99
Benavides	LC	1.18	2.40	0.98	2.61	GMexico	LC	0.29	5.88	2.44	4.54
Collado	LC	0.05	0.20	1.21	2.76	Peñoles	LC	0.60	2.40	1.55	2.61
Comerci	LC	0.41	1.40	2.57	4.84	Manufacture	LC / FSC				
Coppel	LC	0.41	1.40	2.57	4.84	Bachoco	LC / FSC	0.50	0.24	0.09	0.03
Elektra	LC	2.18	1.78	1.67	5.89	Bafar	LC	0.76	0.35	1.04	0.89
Fragua	LC	0.88	0.46	1.67	2.66	Bimbo	LC	0.42	1.99	2.09	3.68
Gigante	LC	1.31	3.17	1.04	1.53	Femsa	LC / FSC	0.00	0.02	0.50	1.08
Liverpool	LC	0.59	2.10	2.73	4.23	GCorvi	LC	1.01	0.62	1.83	3.59
						Geupac	LC	0.36	1.70	2.02	2.73
Marti	LC	0.13	1.51	1.67	2.80	Gmodelo	LC	0.59	0.34	1.51	1.70
GPH	LC	1.06	5.83	1.73	2.80	Gmodern	LC	0.22	2.23	0.22	0.25
Saba	LC	0.85	4.08	0.05	0.20	Gruma	LC	0.92	1.54	0.07	0.23
Soriana	LC	1.28	1.71	2.04	2.83	Herdez	LC	0.31	0.62	0.96	1.78
Walmart	LC	0.27	3.24	1.99	2.70	Hilasal	LC	2.10	2.25	1.45	2.63
Communicatio	LC / FSC					Kimberly	LC	0.32	1.82	2.04	3.83
Cintra	LC	2.90	3.39	1.94	7.15	KOF	LC / FSC	0.75	0.06	0.14	0.60
Telmex	LC / FSC	1.30	3.02	3.33	4.49	Maseca	LC	1.14	1.04	0.42	0.59
Televisa	LC / FSC	1.48	2.23	3.27	5.47	Vitro	LC / FSC	0.49	3.88	1.57	4.85
TV Azteca	LC / FSC	0.37	0.41	0.49	0.93	Others	LC / FSC				
Services	LC / FSC					Alfa	LC / FSC	0.51	4.01	0.72	1.79
CMR	LC	0.64	0.94	1.08	1.35	CIE	LC	1.64	2.05	0.41	0.80
Posadas	LC	0.23	3.61	0.95	1.83	Desc	LC / FSC	1.50	6.42	1.09	2.31
Realtur	LC	0.50	1.87	0.45	2.80	Gearso	LC	0.71	0.39	0.53	0.92
Construction	LC / FSC					Gissa	LC	1.88	3.40	2.19	3.66
Ara	LC	0.29	1.89	1.25	1.54	Gsanborn	LC	0.68	1.02	0.37	0.87
Cemex	LC / FSC	0.70	1.58	0.58	1.35	Imsa	LC / FSC	1.58	0.97	0.23	0.50
Ceramic	LC / FSC	0.36	3.25	1.35	3.92	T Test with Alfa 5% = 2.02.					
Cmoctez	LC	0.43	0.68	0.67	0.73	Statistical Significance Accepted H Alternative					
GCC	LC	0.62	0.74	1.92	3.11			ROE	DFL	DR	DER
GEO	LC	1.23	1.77	1.59	3.31	Accepted H Alternative	3	22	13	32	
GMD	LC / FSC	2.00	4.11	3.76	3.87	Rejected H Alternative	52	33	42	23	
Hogar	LC	0.64	4.53	2.48	5.69						
Lamosa	LC	0.04	1.36	1.17	2.46	Total	55	55	55	55	

REFERENCES

- Agrawal, A., Ch., Knoeber (1996). Firm performance and mechanism to control agency problems between managers and shareholders. *Journal of financial and quantitative analysis*. 31, 377-397.
- Bebchuk, M. , Fried, J.M. (2003). Executive compensation as an Agency Problem. *Journal of Economic Perspective*. 17, 71-92.
- Benston, G. (1973). Required disclosure and the stock market: An evaluation of the Security Exchange Act of 1934. *American Economic Review*. 63, 132-155

- Bhagat, S., Romano, R. (2002). Event studies and the law: Part I Technique and corporate litigation. *American Law and Economics Review*. 4 (1),141-168.
- Binder, J. (1985). Measuring the effects of regulation with stock price data. *The RAND Journal of Economics*. 16(2), 167-183.
- Black, B.S., Jang, H., Kim, W. (2002). Does corporate governance affect firm value? Evidence from Korea. Working Paper. *Stanford Law School*.
- Bushman, R.M., Smith, A. J. (2003). Transparency, financial accounting information and corporate governance. *FRBNY Economic Policy Review*. 9(1), 65-87.
- Bushman, R.M., Smith, A. J. (2004). What determines corporate transparency?. *Journal of Accounting Research*. 42 (2), 207-252.
- Campbell, C. Wasley, Ch. (1999). Stock based incentive contracts and managerial performance: the case of Ralston Purina company. *Journal of financial economics*. 51(2), 195-217.
- CCE. Consejo Coordinador Empresarial (1999). Código de Mejores Prácticas Corporativas. *Comisión Nacional Bancaria y de Valores*. México.
- Chiang, H., Chia, F. (2005). An empirical study of corporate governance and corporate performance. *Journal of American academy of business*. 6(1), 95-101.
- Chong, A., Guillen, J., Lopez de Silanes F. (2009). Corporate governance reform and firm value in Mexico: an empirical assessment. *Journal of Economic Policy Reform*. 12 (3), 163-188.
- CNBV (2000). Comision nacional bancaria y de valores. *Boletin Prensa 28 de Septiembre 1999*.
- CNBV (2005). Comision nacional bancaria y de valores. *Boletin Prensa 7 de diciembre*.
- Cohen, D., A. Dey, and T. Lys. (2005). Trends in earnings management and informativeness of earnings announcements in the Pre and Post-Sarbanes Oxley periods. *NYU Working paper*.
- Denis, D. (2001). Twenty five years of corporate governance research and counting. *Review of Financial Economics*. 10 (3), 191-212.
- Drobetz, W., Schillhofer, A. & Zimmermann, H. (2003). Corporate governance and expected stock returns: Evidence from Germany. *European Financial Management*. 10(2), 267-293.
- Epstein, M. Roy, M. (2005). Evaluating and monitoring CEO performance: evidence from US compensation committee reports. *Corporate Governance*. 5(4), 75-87.
- Fama, E. (1970). Efficient capital markets A review of theory and empirical work. *Journal of Finance*. 25(2), 383-417.

- Fama, E. , Fisher, L., Jensen, M., Roll, R. (1969). The adjustment of the stock prices to new information. *International Economic Review*. 10(1), 1-21.
- Fama, Eugene, y Michael Jensen, (1983). Separation of ownership and control. *Journal of Law and Economics*. 26. 301-325.
- Firend, I., Herman, E. (1964). The SEC through a glass darkly. *The Journal of Business*. 37(4), 382-405.
- Gregory, H.J. (1999). *Comparison of board guidelines and practices*. Weil, Gotshal & Manges New York..
- Hart, O. (1995). *Firms, Contracts, and Financial Structure*. Oxford University Press: London.
- Holmstrom, B., Kaplan, S. (2003). The State of U.S. Corporate Governance: What's Right and What's Wrong? *European Corporate Governance Institute ECGI. Finance Working Paper*.
- Jarrell, G. (1981). The economic effects of federal regulation of the market for new security issues. *Journal of Law and Economics*. 24, 613-.645
- Jensen, M. Murphy, K (1990) Performance pay and top management incentives. *Journal of political economy*. 98(2). 225-264.
- Jensen, M., Meckling, W. (1976). Theory of the Firm: Managerial behavior, agency costs, and ownership structure, *Journal of Financial Economics*. 3(4), 305-360.
- Jensen, M. (1993). The modern industrial revolution, exit, and the failure of the internal control system. *Journal of Applied Corporate Finance*. 6(4), 831-880.
- Jiraporn, P., Sang Kim, Y. , Davidson III, W. (2005). CEO Compensation, Shareholder rights and corporate governance: An empirical investigation. *Journal of economics and finance*. 29(2). 242-258.
- Kang, S. , Kumar, P., Lee, H.(2006). Agency and corporate investment: the role of executive compensation and corporate governance. *The Journal of Business*. 79(3), 1127-1148.
- Karpoff, J., Malatesta, P. (1995). State takeover legislation and share values: The Wealth effects of Pennsylvania's Act 36. *Journal of Corporate Finance*. 1(3), 367-382.
- Klapper, L., Love, I. (2004). Corporate governance, investor protection and performance in emerging markets. *Journal of Corporate Finance*. 10(5), 703-728.
- La Porta, R. Lopez de Silanes, F. Shleifer, A. Vishny, R. (1998). Law and Finance. *Journal of Political Economy*, 106(6), 1113-1155.
- La Porta, Rafael., Lopez de Silanes, F., Shleifer, A. , Vishny, R. (2002). Investor protection and corporate valuation. *Journal of Finance*. 57(3), 1147-1170.

-
- Leuz, C., Verrecchia, R. (2004). *Firms capital allocation choices, information quality and cost of capital*. University of Pennsylvania, USA.
- Li, J., Lam, K., Qian, G., Fang, Y. (2006). The effect of institutional ownership on corporate governance and performance: An empirical assessment in Hong Kong. *Management International Review*. 46(3), 259-276.
- Lombardo, D., Pagano, M. (2002). Law and Equity: A simple model. In McCahery, J., Moerland, P., Raaijmakers, T., Renneboog, L., *Corporate Governance Regimes Convergence and Diversity* (Eds.). Oxford University Press (343-362).
- Lombardo, D., Pagano, M. (2000). Legal determinants of the return on equity. Centre for studies in economics and finance. *CSEF University of Salerno. Working Paper*.
- Machuga, S., Teitel, K. (2007). The effects of the Mexican Corporate Governance Code on Quality of Earnings and its Components. *Journal of International Accounting Research*. 6(1), 37-55.
- Margotta, D., Williams, T., Williams, V. (1986). An analysis of the stock price effect of the 1986 Ohio takeover legislation. *Journal of Law, Economics and Organization*. 6(1), 235-251.
- Mensah, M., Nguyen, H., Prattipati, S. (2006), Transparency in financial statements: a conceptual framework from user perspective. *Journal of the American Academy of Business*. 9(1).47-51.
- Muth, J. (1961). Rational expectations and the theory of price movements. *Econometrica*. 29(3), 315-335.
- Myers, P., Ziegenfuss, D (2006). Audit committee pre-Enron efforts to increase the effectiveness of corporate governance. *Corporate Governance*. 6(1), 49-63.
- Nahar Abdullah, S. (2006) Directors remuneration, firm's performance and corporate in malaysia among distressed companies. *Corporate Governance*. 6(2), 162-174.
- OECD. (1999). OECD Principles of corporate governance. Paris *OECD*.
- Payne, Andros. (2006). Corporate governance in the USA and Europe They are closer than you might think. *Corporate Governance*. 6(1), 69-71.
- Peltzman, S. (1976). Toward a more general theory of regulation. *Law and Economics*. 19(2), 211-240.
- Perry, T., Shivdasani, A. (2005). Do boards affect performance? Evidence from corporate restructuring. *The Journal of Business*. 78(4), 1403-1432.
- Petra, S. (2005). Do outside independent directors strengthen corporate boards. *Corporate Governance*. 5(1), 55-64.
- Posner, R. (1974). Theories of Economics Regulation. *The Bell Journal of Economics and Management Science*. 5(2), 335-358.
-

- Pugh, W., Jahera, J. (1990) State antitakeover legislation and shareholder wealth. *The Journal of Financial Research*. 13(3), 221-231.
- Rubach, M., Picou, A. (2005). The enactment of corporate governance guidelines an empirical examination. *Corporate Governance*. 5(5), 30-38.
- Ryngaert, M., Netter, J. (1988). Shareholder wealth effects of the Ohio antitakeover law. *Journal of law, Economics and Organization*. 4(2), 373-383.
- Schwert, G. W. (1981). Using Financial Data to Measure Effects of Regulation. *Journal of Law & Economics*, University of Chicago Press. 24(1), 21-58.
- Shen, M., Hsu, Ch., Chen, M. (2006). A study of ownership structures and firm values under corporate governance. The case of listed and OTC companies in Taiwan's Finance Industry. *Journal of American Academy of Business*. Cambridge. 8(1), 184-191.
- Stewart, B. (2002). Market Myths, *The new corporate finance where theory meets practice*. Donald Chew. Mc Graw Hill.
- Stigler, G.J.(1987). The theory of economic regulation. *The Bell Journal of Economics and Management Science*. 2(1), 3-21.
- Weiss, E., White, L. (1987). Of Econometrics and Indeterminacy: A study of investors reactions to changes in corporate law. *California Law Review*. 75(2), 551-607.
- Yeh, Y., Lee, T., Ko, C. (2002). *Corporate Governance and Rating System*. Taipei: Sunbright Culture Eds.

DIVERSITY EDUCATION AND IMPROVED TEAM INTERACTIONS

**Karen C. Kaser, University of Houston-Downtown
Madeline Johnson, University of Houston-Downtown**

ABSTRACT

Educators seek to improve student understanding of how diversity characteristics can influence interactions with others. The core research question addressed in this paper is whether diversity awareness education early in the business curriculum can improve student awareness of diversity issues and thereby lead to better team dynamics in subsequent courses. A total of 481 students who had studied diversity issues in a Business Cornerstone course were surveyed during their senior year. The results indicated that diversity consciousness had been raised and that the respondents had used their knowledge of diversity in working with people from diverse backgrounds on team projects. A survey of faculty members supported student perceptions that they were aware of diversity issues. Further analysis into differences in perceptions of improvement in diversity awareness based on demographic characteristics revealed interesting results. Positive perceptions in awareness of diversity consciousness varied by ethnicity and race but not by age and gender. These findings raise questions for further research into the reasons for these differences by ethnicity and race.

INTRODUCTION

Diversity awareness is an integral component of any diversity training or education program. Generally, people consider three dimensions (characteristics) of diversity—race, gender, and ethnicity—when discussing diversity. However, the dimensions of diversity include all the ways in which people are different. Bucher (2000, p. 15) describes diversity as including whatever we think distinguishes us. Awareness of one's own diversity is the first step in the process of becoming aware of the diversity of others. Increasing one's diversity awareness can impact one's ability to interact with others. According to the US Bureau of Labor Statistics (2001) report "Working in the 21st Century," the labor force is getting older, more women are working today than in the past, and minorities are the fastest growing part of the labor force. As our countries, communities, schools, and workplaces become increasingly diverse, a person's ability to be aware of one's own diversity as well as the diversity of others is exceedingly important.

Improving Diversity Awareness through Teaching/Training

The dimensions of diversity include all the ways in which people are different. A few of those dimensions include race, gender, physical makeup (appearance), ethnicity, physical and mental limitations, age, sexual preference, income level, geographical location or region, occupation, religion, and education (Ingram, 2001), p. 5). While this list is by no means exhaustive, it represents some of the more commonly recognized dimensions of diversity. Much of the existing research focuses on four of the above listed dimensions: race, ethnicity, gender, and age. The population for ethnic and racial minorities in the United States is estimated at approximately 35 percent (CIA World Factbook, 2010). According to the US Bureau of Labor Statistics (2010), African Americans made up 11.5 percent of the total labor force in 2008 and were projected to increase to 12.1 percent by 2018; Hispanics made up 14.3 percent and were projected to increase to 17.6 percent; and Asians made up 4.7 percent and were projected to increase to 5.6 percent. As the ethnic and racial minority workforce increases, American universities, colleges, and workforce training programs are tasked with preparing graduates to live and work effectively in a diverse society.

Educators search for meaningful ways of demonstrating to students how ethnicity, culture, gender, age, socioeconomic status, and other diversity characteristics can impact their interactions with fellow students, coworkers, and others in their day-to-day activities. Social perception biases, such as stereotyping, often inhibit the effectiveness of those interactions. Peoples' values can have an impact on how they view others, particularly others who are different from them. Age, gender, race, and religiosity were studied to see how an individual's values influence attitudes toward others. Sawyer, Strauss, and Yan (2005, p. 510) found that age, gender, and race have a significant impact on the relationship between individual value structure and attitudes toward diversity, while religiosity had no significant impact. Spelman (2010) discusses the impact that emotion has when students discuss diversity in classroom situations. His commentary suggests that teachers should help students develop the capacity to interact in emotional situations about challenging intercultural issues with people from other identity groups by getting students to look at themselves, particularly their cultural identities, and how those identities can be threatened during diversity discussions (882). Awareness of one's own diversity is also important to overall diversity awareness. Diversity-awareness training aims at raising the awareness of social perception biases, thus increasing the sensitivity toward the beliefs and feelings of others who have differing diversity characteristics. Knowledge of the biases influencing social perception is an intermediate goal, which is expected to "induce a positive change in trainees' behavior related to the treatment of culturally different individuals" (Sanchez and Medkik, 2004, p. 518). Teaching students to be flexible and to consider how other people's backgrounds affect their behaviors, as well as how their own backgrounds affect their behaviors, is an important part of any diversity awareness curriculum. Diversity education includes raising diversity awareness by focusing on diversity skills such as flexible thinking,

communication, teamwork, and leadership as well as developing the ability to overcome personal and social barriers (Bucher, 2000, p. 21). But can diversity awareness really be improved through teaching?

A study by Easter (2002) examined the “effectiveness of diversity training in eliminating racial stereotypes in the workplace and modifying employees’ negative attitudes toward diversity” (p. 1). The quasi-experimental study found no significant difference in the attitudes and behaviors of the students who received diversity training from those who did not receive the training. While the outcome appears to indicate that diversity awareness was not improved through training, several factors could have skewed the results. First, the students scored high on the diversity pre-test, so there was little room for improvement. Second, the instrument used to measure diversity awareness may have been more appropriate for a longitudinal study with intervention that required counseling rather than a brief academic intervention. Finally, the assessment instrument was a self-report survey, and students may have answered the questions the way they thought they were “supposed” to answer them (p. 8). In contrast, a study by Royster (1993, p. 59) showed significant improvement in participants’ pre-test and post-test scores related to their attitudes, perceptions, assumptions, prejudices, stereotypes, and myths about diversity after participating in a cultural diversity program administered by an Arkansas diversity organization.

Additional studies indicate more positive results from diversity education and training. Evaluation of the Diversity Sensitivity Training Program developed by Tranakos-Howe (2001) which attempted to increase sensitivity to issues of diversity self awareness, cultural education, and skill building demonstrated a positive impact in the level of cultural sensitivity—including awareness, knowledge, and behavioral skills—between pre- and post-test administration. Kulik and Roberson (2008) reviewed diversity education research from 1970-2008 and came to several conclusions about diversity education. The review suggests that diversity knowledge can be improved with “semester-long interventions delivered in academic settings, full- or half-day workshops delivered in organizational settings, or even laboratory interventions lasting only an hour or two” (p. 312). The impact on diversity attitudes has mixed results, with overall attitudes toward diversity being improved but with far less consistency in the impact on attitudes toward specific demographic groups (p. 313). Diversity skill learning received less attention, but the research suggests that “adult learners usually perceive themselves as having higher skills after diversity education” (p. 314). Learning can be achieved via knowledge and/or skills training. Questions persist as to which method is better equipped to achieve the goal of a more effective workforce in diverse settings. Roberson, Kulik, and Pepper (2009) suggest that while “skill . . . training is more likely to lead to behavioral change . . . awareness training will be profitable to the extent it increases the perceived applicability of skills to the job” (pp. 84-85).

Hypothesis 1: Diversity awareness can be improved through teaching.

Many studies conducted in the past show conflicting results on the relationship between dimensions of diversity and diversity awareness education/training. Attitudes and reactions toward diversity education/training are important factors to consider when evaluating the effectiveness of the training. The Roberson, Kulik, and Pepper (2009) study suggested that trainee race/ethnicity was a significant predictor of the ability to transfer the learning to the workplace: “Non-White trainees were significantly more likely to attempt to use their training back on the job than were White trainees” (p. 81). Sanchez and Medkik (2004) compared average reaction to diversity awareness training between Non-White participants and White participants. Non-White participants reacted slightly more positively to the training than White participants (p. 527). Other studies found no significant relationship between specific dimensions of diversity and training. Schmidt (2009, p. 308) found that age, gender, and race/ethnicity had no relationship with job training satisfaction. A great number of studies regarding diversity education/training have separated gender from race/ethnicity as variables. Additionally, studies specific to diversity training for Hispanics are rare. Hood, Muller, and Seitz (2004) examined changes in attitudes of Hispanic and Anglo men and women before and after a diversity competency intervention. Results revealed that Anglo women’s attitudes moved in a positive direction more so than other groups’. Hispanic women seemed to be the most tolerant of others, while Anglo men appeared to be the least tolerant of others.

Hypothesis 2: Response to diversity training will vary by gender and race or ethnicity.

Improving Team Interactions through Diversity Awareness

Businesses and organizations today demand that their employees are proficient in teamwork skills. “One of the most common situations in which different cultures may collide in today’s global workplace is in work groups or teams (Humes and Reilly, 2008, p. 119). Thus, team building is the focus of many training and educational programs. Much of the curricula devoted to enhancing team effectiveness are focused on criteria such as team diversity, team size, team processes, team longevity, and team skills. Increasingly, however, trainers and educators believe that diversity awareness is an essential part of the team building curriculum. Bucher (2000, p. 168) states “As our awareness and understanding of diversity grows, we become better able to deal with team members, who in all likelihood will have a wide variety of values, personalities, behaviors, and talents.” The body of data on how a team’s diversity can impact—either positively or negatively—its productivity and effectiveness is well documented (Kearney, Gebert, and Voelpel, 2009; Shaw, 2004; Stahl, Makela, Zander, and Maznevski, 2010; Staples & Zhao, 2006). Less documented is whether team members’ diversity awareness has any impact on the effectiveness of team interactions.

The ability to work effectively in diverse teams often depends on the team members’ diversity skills. Bucher (2000, p. 32) states, “Diversity skills are those competencies that allow

people to interact with others in a way that respects and values differences.” Skills such as communication, teamwork, self-evaluation and behaviors/attitudes such as self-esteem, self-awareness, empathy, flexible thinking, and adaptability are components of diversity awareness. These skills can have an impact on how team members interact with each other and how team members perceive their teams’ effectiveness. Shaw’s study (2004) involving diversity and team-based class projects found that diversity skill level impacted several outcome and experience variables. In particular, “low- and medium-diversity skill students reported their groups had higher levels of anxiety and apprehension, cognitive effort, group conflict, role ambiguity, and role conflict than did high-skill students” (162). Other differences included lesser abilities to set performance goals and use group resources effectively and higher levels of stereotyping.

Dimensions of diversity such as gender, race, ethnicity, culture, age, etc., of the team members can impact members’ perceptions of team interactions and team effectiveness. Morales and Rahe (2009) suggest that the role of cultural differences is paramount in the way people perceive their work performance (59). The effectiveness of those interactions is influenced by the team members’ diversity skills. For example, the way different cultures perceive effectiveness and conflict management can impact perceptions of work performance. Much has been written about the impact of gender diversity on team performance. Shaw (2004) suggests that when students find themselves in a group where they are overwhelmed by the presence of a majority of the opposite gender, their diversity skills fail to work or may achieve unpredictable results (163). In contrast, Morales and Rahe (2009) studied the impact that gender has on the perception of performance and found that “gender as an independent variable does not have any influence on the perceived performance” (61).

Communication is an important diversity skill because it is integral to conducting daily activities in the workplace, classrooms, neighborhoods, or anywhere else that people of diverse backgrounds interact. According to Milliken & Martins (1996), diversity in the workplace focuses on observable attributes such as race/ethnicity, nationality, age, and gender, as well as underlying attributes such as values, skills, knowledge, and cohort membership. “These attributes form our identity and influence our relationships in the workplace [and] our identity and our relationships form and are formed by our communication with one another” (Thomas, 1996, p. 371). Successful communication is achieved when the receiver of a message interprets the message the way the sender intends. Lehman and DuFrene (2008) stated “Differences between the sender and the receiver in areas such as culture, age, gender, and education require a sensitivity on the part of both parties so that the intended message is the one that is received” (22).

Barriers to successful communication span the dimensions of diversity and include differences in culture, race, ethnicity, gender, age, education, experience, and socio-economic status, among others. Communication includes both verbal and nonverbal messages. Verbal messages include written and spoken words, whereas nonverbal messages include metacommunication (inferences that accompany spoken words) and kinesics (body language).

According to Lehman and DuFrene (2008), barriers to intercultural communication include ethnocentrism, stereotyping, interpretation of time, personal space requirements, body language, translation limitations, and lack of language training. Problems associated with communicating verbally in a diverse environment include a lack of language training and translation limitations. Issues with nonverbal communication in a diverse society include interpretation of time, personal space requirements, metacommunication, and body language.

Successful teamwork experiences rely upon effective communication. The same barriers that impact every day communication activities also impact team communication. Multicultural teams are particularly vulnerable to interaction problems, and members have different perceptions of the environment, motives and intentions of behaviors, communication norms, stereotyping, ethnocentrism, and prejudices (Matveev & Nelson, 2004, p. 255). These problems can impact team performance negatively. Numerous studies have focused on the positive and negative aspects of diverse teams, but as Bucher (2000) states, “Diversity is only an asset when team members develop skills to manage the assets and challenges of diversity . . . and becoming more conscious of diversity . . . will improve those skills that are essential for true teamwork; these include communication, conflict management, empathy, self-evaluation, and leadership” (169). While cultural diversity in teams “enables an increase in creativity due to a wider range of perspectives, more and better ideas, and less group thinking . . . [and] it has the potential to increase performance . . . heterogeneous teams experience higher process losses compared with homogenous teams because they face additional communication barriers” (Erdem & Polat, 2010, p. 406).

Improving one’s awareness of diversity impacts the effectiveness of the communication among team members. Rentz, Flatley & Lentz (2011) state “Learning about the ways cultures differ is an important foundation for communicating globally” (pp. 497-498). Diversity awareness can improve diversity skills, such as communication. A study by Matveev & Nelson (2004) provided “empirical support for the communication competence-team performance hypothesis” (266). “Managers experienced in working on multicultural teams reported a relationship between the level of cross cultural communication competence and multicultural team performance” (266). The relationship among diversity awareness, diversity skills, and team performance invites the question: Can increased diversity awareness improve team interactions?

Hypothesis 3: Increased diversity awareness improves team interactions.

RESEARCH METHODS

The survey method was chosen as the best way to measure student perceptions of the use and benefit of instruction they had received in diversity consciousness and awareness. The questionnaire contained three statements concerning the impact of the diversity education delivered in Business Cornerstone. Students were asked to indicate the strength of their

agreement/disagreement on each statement. In addition, six background/demographic questions were asked. These included gender, age, race, major, year that Business Cornerstone was completed, and semester credit hours completed since completing the Business Cornerstone. In addition to the survey completed by students, another survey was completed by faculty teaching in the College of Business. The faculty survey included two questions regarding awareness of diversity consciousness among students in their upper level classes.

The student sample included all students enrolled in Business Strategy, the capstone class for the College of Business. This course was chosen since only seniors nearing graduation are permitted to enroll. Administering the survey to this group ensured that students would have had the maximum opportunity to use and/or benefit from the instruction given in the Business Cornerstone class on critical thinking, team building, and business research. According to Holter and Kopka (2001), a period of time must elapse and additional courses must be completed before students recognize the value of the course. The questionnaire was administered during the Spring, Summer, and Fall semesters of 2007. Of the 863 students enrolled in the Business Strategy course, 481 students completed the questionnaire for a return rate of 55.7%. Of those participating in the survey, 54% were women, 68% were 23-30 years old and 33% were Hispanic. Other age and racial groups completing the questionnaire were represented in proportions consistent with the age/racial mix of the university. All possible majors within the college were represented with percentages comparable to the size of the program. For example, accounting and finance are the college's largest programs and represented the largest percentage in the sample. As expected, most (71%) of the students had taken the Business Cornerstone course in 2004 or 2005. This would be consistent with continuous full- or part-time enrollment from the beginning of their junior year when the Business Cornerstone course is taken to the end of their senior year when the Business Strategy course is taken. Finally, 91% of the respondents had completed 20 or more semester credit hours since taking the Business Cornerstone course.

The faculty sample included all full time and part time instructors in the College of Business. A total of 40% of the faculty completed the survey. All of the faculty respondents were tenured or on tenure-track. No adjunct or part-time instructors completed the survey. All the academic disciplines within the College were represented.

The data from both surveys was summarized using frequencies and means. The mean scores were tested against the neutral position of neither agreeing nor disagreeing using a t-test. ANOVAs were run to test differences in means by gender, race, major, and hours completed. In addition a correlation matrix was created to evaluate the relationship between team experiences and diversity consciousness.

FINDINGS

The first hypothesis that diversity consciousness can be improved through teaching was tested using data from both students and faculty. The mean score on the student responses on

each question was statistically different from the neutral position that reflected neither agreement nor disagreement with the statement. In addition, the mean score on all three statements was lower than the neutral position of 3 indicating a positive perception that the diversity education in the Business Cornerstone class improved their diversity consciousness. The mean response and standard deviation on each statement is shown Table 1.

Table 1: Diversity Consciousness can be Improved through Teaching			
Statement	Mean	Std Dev	2-tailed T test (Significance)
My diversity consciousness was raised as a result of what I learned in the Business Cornerstone class.	2.34	1.025	Y
In my upper level classes, I have used some of the principles relating to workplace diversity covered in the Business Cornerstone class.	2.32	.972	Y
Examining the perspective of diversity as an advantage in workplace, school, and social situations has improved my interaction with people from diverse backgrounds.	2.29	.970	Y

Hypothesis #2 proposed that the response to diversity training will differ by gender and race and/or ethnicity. To test this hypothesis, ANOVAs were run for gender and ethnic/racial groups. The frequencies by ethnic/racial groups are shown in Table 2.

Table 2: Response to Diversity Training will vary by Gender and Race/Ethnicity				
	My diversity consciousness was raised as a result of what I learned in the Business Cornerstone class. ($\alpha = .03$)			
	Agree or Strongly Agree	Neither Agree nor Disagree	Disagree or Strongly Disagree	All Responses
White	56% (72)	26% (33)	18% (23)	100% (128)
Hispanic/Latino	67% (104)	24% (38)	9% (14)	100% (156)
African American/Black	64% (53)	21% (17)	15% (12)	100% (82)
Other	63% (65)	20% (21)	17% (17)	100% (103)
	In my upper level classes, I have used some of the principles relating to workplace diversity covered in the Business Cornerstone class. ($\alpha = .01$)			
	Agree or Strongly Agree	Neither Agree nor Disagree	Disagree or Strongly Disagree	All Responses
White	58% (75)	26% (34))	16% (20)	100% (129)

Table 2: Response to Diversity Training will vary by Gender and Race/Ethnicity

Hispanic/Latino	70% (110)	22% (34)	8% (13)	100% (157)
African American/Black	69% (57)	20% (16)	11% (9)	100% (82)
Other	62% (64)	25% (26)	13% (13)	100% (103)
Examining the perspective of diversity as an advantage in workplace, school, and social situations has improved my interaction with people from diverse backgrounds. ($\alpha = .07$)				
	Agree or Strongly Agree	Neither Agree nor Disagree	Disagree or Strongly Disagree	All Responses
White	63% (80)	23% (30)	14% (18)	100% (128)
Hispanic/Latino	69% (108)	23% (36)	8% (13)	100% (157)
African American/Black	68% (56)	21% (17)	11% (9)	100% (82)
Other	60% (63)	31% (32)	9% (9)	100% (104)

There were no statistically significant differences by gender; however, on all three statements, there were statistically significant differences among the ethnic/racial groups. The Hispanic/Latino group had the highest percentage of agreement or strong agreement on all three questions. The African-American/Black group had the second highest percentage with White having the lowest percentage of agreement.

Finally, we examined the response of faculty respondents to the question: How many students in your upper level classes demonstrated an awareness of diversity issues? A total of 70% stated that the majority of students demonstrated awareness of diversity issues with 8% indicating that all had demonstrated an awareness of diversity issues. Therefore, there is support for the first hypotheses from both the student and faculty surveys.

The third hypothesis was increased diversity awareness improves team interactions. Using the student respondent data set we calculated the correlations among student perceptions of their effectiveness in working in teams with their perceptions of their own improvement in diversity consciousness. Table 3 is the correlation matrix for all student respondents. The highest correlations were between the three statements pertaining to diversity. These ranged from .66 to .76. However, the correlations between the statements pertaining to working in teams and the statements pertaining to diversity consciousness ranged from .52 to .57. As expected the correlations between working in teams and diversity consciousness were not as strong as within the measures of diversity consciousness. Nevertheless, the moderate correlations lend support to the hypothesis.

Table 3: Increased Diversity Awareness Improves Team Interactions

	More Effective Team Member	Knowledge of Pitfalls Improved Team Decision-making	Consciousness Raised	Used Diversity Principles
Knowledge of Pitfalls	.67			
Consciousness Raised	.55	.52		
Used Diversity Principles	.57	.55	.76	
Improved Interaction with diverse backgrounds	.52	.57	.66	.70

Since there were statistically significant differences among ethnic/racial groups in the perceptions of learning diversity consciousness, we investigated the correlations between perceptions of team effectiveness and diversity consciousness by ethnic/racial groups. The correlation matrix by ethnic/racial group is shown in Table 4. When broken down in this way, the correlations between the perceptions of improvement in diversity consciousness with the perceptions of working in teams effectively range from .60 to .66 among two groups: Hispanic/Latino and African American/Black. This re-enforces that improvement in diversity consciousness as a result of diversity education was strongest among these two ethnic/racial groups.

Table 4: Team Effectiveness and Diversity Consciousness by Ethnic/Racial Groups

	More Effective Team Member	Knowledge of Pitfalls	Consciousness Raised	Used Diversity Principles
Knowledge of Pitfalls				
White	.66			
Hispanic/Latino	.67			
African American/Black	.67			
Other	.68			
Consciousness Raised				
White	.48	.47		
Hispanic/Latino	.61	.55		
African American/Black	.61	.58		
Other	.53	.49		

Table 4: Team Effectiveness and Diversity Consciousness by Ethnic/Racial Groups

	More Effective Team Member	Knowledge of Pitfalls	Consciousness Raised	Used Diversity Principles
Used Diversity Principles				
White	.51	.47	.77	
Hispanic/Latino	.61	.60	.77	
African American/Black	.61	.59	.74	
Other	.58	.54	.74	
Improved Interaction with diverse backgrounds				
White	.34	.48	.64	.57
Hispanic/Latino	.66	.61	.67	.71
African American/Black	.60	.61	.66	.71
Other	.50	.56	.68	.85

The data from the faculty survey also indicates that team interactions may have benefitted from the diversity education. When asked how many students experience communication problems related to cultural or diversity issues while working in teams, 50% of the faculty respondents selected less than half or none. There is support for the third hypothesis with respect to the student data set, particularly when the data is analyzed by ethnic/racial groups. The support from the faculty data set is inconclusive since only half of the respondents observed fewer than half of the students with communication problems related to cultural or other diversity issues.

DISCUSSION

Approximately one-sixth of the semester was dedicated to diversity awareness education in the Business Cornerstone course. Nevertheless student self-perception of his/her own diversity consciousness was raised. This elevation in diversity consciousness could be valuable in self-monitoring of one's own diversity or in the ability to relate to others. It is common practice in the College of Business for students to work in teams on assignments. Therefore, students have the opportunity to adjust individual behaviors and observe whether the diversity consciousness has personal value for them. The survey results confirm that the students did use the diversity training they received and considered it valuable in their interactions with people from diverse backgrounds. Specifically, they recognized diversity training as an advantage in a

variety of settings from school to workplace to social situations. Although there were no attitudinal measures of stereotypes in this study, the results are encouraging. Increasing diversity awareness of self or others is the first step toward changing attitudes. Our results support previous research that diversity education can improve diversity consciousness and lead to behavioral change.

Our findings with respect to hypothesis #2 raise questions that warrant further investigation. Our results are consistent with previous research that found that non-whites react more positively to diversity education than do whites. Both African Americans and Hispanics/Latinos were more likely to agree or strongly agree that the diversity education in the Business Cornerstone course had raised their consciousness of diversity and improved their interactions with people from diverse backgrounds. An important question to be answered in future research is why race and ethnicity matters. There are several possible explanations. White students may be more aware of diversity issues since greater emphasis has been placed in our society on breaking down stereotypes of non-whites. Another explanation is that non-whites come into the classroom with less awareness of diversity issues. A pre-post test of diversity awareness could provide insight into whether there are differences among race/ethnicity in their beginning levels of diversity consciousness. It is also possible that non-whites are more willing to accept that diversity matters. How people communicate, perceive, behave, listen or respond is influenced by their gender, age, race or ethnicity. If non-whites begin with a greater expectation that diversity matters, then they may be less resistant to diversity education and therefore, more willing to learn. Further research on student attitudes about diversity could help in identifying why non-whites are more likely to use and benefit from diversity education.

Hypothesis #3 sought to explore the relationship between student perceptions of diversity consciousness and the use of diversity principles with working in teams in subsequent courses. The survey contained two statements regarding teamwork:

- (1) "I was a more effective team member in my upper level classes as a result of what I learned in the Business Cornerstone class."
- (2) "Instruction regarding the pitfalls of team decision making helped teams in my upper level business classes make better decisions."

Students in the Business Cornerstone class also receive instruction on how to work in teams. Students are exposed to the process of team building and different methods for decision-making in teams. Is there any synergy between diversity education and training on how to work in teams? It should be noted that these two areas are not explicitly connected in the Business Cornerstone class. Each topic is covered separately; therefore, if there is a correlation, the students would have to make it independently. Not surprisingly, the correlations between pairs of the diversity statements are higher than the correlation of the diversity statements to the teamwork statements. The correlations among the pairs of diversity statements ranged from .66

to .76. Similarly the correlation between the two teamwork statements had a correlation of .67. Nevertheless, the pairwise correlations between each teamwork statement and each diversity statement were all greater than .5. Therefore, it did appear that students drew some connection between effective teamwork and diversity consciousness. It should be noted that when the data is analyzed by race/ethnicity, that the pairwise correlations were .6 or higher. Our results are consistent with previous research on the relationship between improved diversity skills (as a subset of diversity awareness) and team performance. An interesting instructional question is whether the connection between diversity education and better teamwork can be improved by more explicit instruction on how to use diversity consciousness to improve team interactions with students of diverse backgrounds.

CONCLUSION

The results from this study support continuing formal diversity education in the college curriculum. Students perceive value from the education both in subsequent courses and in the workplace. Teaching diversity education in the context of team building and team decision-making may further enhance the benefit of diversity education to the student. The results reported in this study suggest that students can make the connection from diversity education to teamwork but that it could be improved if class activities required students to reflect on how diversity influenced team interactions.

REFERENCES

- Bucher, R. D. (2000). *Diversity consciousness: Opening our minds to people, cultures, and opportunities*. Upper Saddle River, NJ: Prentice-Hall, Inc.
- Bureau of Labor Statistics, U.S. Department of Labor (2010). *Occupational Outlook Handbook, 2010-11 Edition*. Retrieved from <http://www.bls.gov/oco/oco2003.htm#population>.
- Easter, M. (2002, April 1-5). *The rise and fall of diversity training*. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA. Retrieved from ERIC. (ERIC No. ED465874).
- Erdem, O. & Polat, S. (2010). Team analysis. *E-Journal of new World Sciences Academy*, 5(1), 398-415. Retrieved from <http://www.newwsa.com>.
- Hood, J. N., Muller, H. J. & Seitz, P. (2001). Attitudes of Hispanics and Anglos surrounding a workforce diversity intervention. *Hispanic Journal of Behavioral Sciences* 23(4), 444-458. doi: 10.1177/0739986301234006.
- Humes, M. & Reilly, A. H. (2008, February). Managing intercultural teams: the Eorganization exercise. *Journal of Management Education*, 32(1), 118-137. doi: 10.1177/1052562906294988.

- Ingram, P. D. (2001). An overview of diversity awareness. *PennState College of Agricultural Sciences Publications*. Retrieved from <http://pubs.cas.psu.edu/freepubs/pdfs/ui362.pdf>.
- Kearney, E., Gebert, D. & Voelpel, S. C. (2009). When and how diversity benefits teams: the importance of team members' need for cognition. *Academy of Management Journal*, 52(3), 581-598.
- Kulik, C. T. & Roberson, L. (2008). Common goals and golden opportunities: evaluations of diversity education in academic and organizational settings. *Academy of Management Learning & Education*, 7(3), 309-331. Retrieved from Business Source Complete. (Accession No. 34251670).
- Lehman, C. M. & DuFrene, D. D. (2008). *Business Communication*, 15th Ed. Mason, OH: Thomson South-Western.
- Matveev A. V. & Nelson, P. E. (2004). Cross cultural communication competence and multicultural team performance: perceptions of American and Russian managers. *International Journal of Cross Cultural Management*, 4(2), 253-270. doi: 10.1177/1470595804044752.
- Milliken, F. J. & Martins, L. L. (1996). Searching for common threads: Understanding the multiple effects of diversity in organizational groups. *The Academy of Management Review*, 21(2), 402-433. Retrieved from Business Source Complete. (Accession No. 9605060217).
- Morales, C. E. & Rahe, M. (2009). Further evidence on the role of gender diversity in team performance. *Research and Practice in Human Resource Management*, 17(2), 55-67.
- Rentz, K., Flately, M. & Lentz, P. (2011). *Lesikar's Business Communication: Connecting in a Digital World*, 12th Ed. NY: McGraw-Hill/Irwin.
- Roberson, L., Kulik, C. T. & Pepper, M. B. (2009). Individual and environmental factors influencing the use of transfer strategies after diversity training. *Group & Organization Management*, 34(1), 67-89. doi: 10.1177/1059601108329732.
- Royster, N. H. (1993). An assessment of the impact of cultural diversity training on the attitudes of Arkansas business, industry, and community leaders. (Doctoral Dissertation). Retrieved from ProQuest Dissertation and Theses Database. (Order No. 93334098).
- Sanchez, J. I. & Medkik, N. (2004, August). The effects of diversity awareness training on differential treatment. *Group & Organization Management*, 29(4), 517-536. doi: 10.1177/1059601103257426.
- Sawyer, O. O., Strauss, J. & Yan, J. (2005). Individual value structure and diversity attitudes. *Journal of Managerial Psychology*, 20(6), 498-521. doi: 10.1108/02683940510615442.
- Schmidt, S. W. (2009, July). Employee demographics and job training satisfaction: the relationship between dimensions of diversity and satisfaction with job training. *Human Resource Development International*, 12(3), 297-312. doi: 10.1080/13678860902982082.

- Shaw, J. B. (2004, April). A fair go for all? The impact of intragroup diversity and diversity-management skills on student experiences and outcomes in team-based class projects. *Journal of Management Education*, 28(2), 139-169. doi: 10.1177/1052562903252514.
- Spelman, D. (2010, October). Recognizing the centrality of emotion in diversity courses: commentary on "gender in the management education classroom." *Journal of Management Education*, 34(6), 882-890. doi: 10.1177/1052562910378984.
- Staples, S. D. & Zhao, L. (2006). The effects of cultural diversity in virtual teams versus face-to-face teams. *Group Decision and Negotiation*, 15, 389-406. doi: 10.1007/s10726-006-9042-x.
- Thomas, G. F. (1996). Business communication and diversity in the workplace: a guest editorial. *Journal of Business Communication*, 33(4), 371-374. doi: 10.1177/002194369603300401.
- Tranakos-Howe, S. K. (2001). An investigation of the diversity sensitivity training program: What is the impact of participation? (Doctoral Dissertation). Retrieved from ProQuest Dissertation and Theses Database. (UMI No. 9994102).
- U.S. Central Intelligence Agency. (2010). *The world factbook, 2010*. Retrieved from <https://www.cia.gov/library/publications/the-world-factbook/geos/us.html>.

WORKING MOTHERS: WORK-LIFE BALANCE AND RELATIVE COGNITIVE EFFECTS ON CHILDREN

Erika Youngberg, Wartburg College

ABSTRACT

The decision of whether it is best to be a working or a non-working (stay-at-home) mother has been studied in order to determine the motivation for such choices and the possible effects on children. The objective of this research paper is to help differentiate between these different options and determine which approach is most suitable. To achieve this, a foundation will be laid to support both non-working and working mothers followed by an analysis which both compares and more fully outlines the two components. After reviewing the facts, an argument will be presented that working mothers are able to achieve work-life balance and that neither option (working nor non-working) will negatively impact children. Ultimately, the maternal working or non-working decision is left up to the discretion of families on an individualized basis.

INTRODUCTION

“Women are the primary caregivers in most families” (Augustine, Cavanagh, & Crosnoe, 2009, p. 3). In fact, Guryan, Hurst, and Kearney (2008) found that mothers spend about twice as much time caring for a child than fathers do. These sources suggest that mothers are the primary care givers for their children. As a result, it is becoming increasingly important to understand the relationship between a mother’s employment, work-life balance, and possible effects on children. In the 1960’s less than 20% of mothers with preschool-aged children were working and by the 1990’s this number grew to 60% (Baum, 2003). By the end of the twentieth century, the United States and other developed nations have had one of the most dramatic shifts in the increase in paid work by mothers (Waldfogel, 2006). “More mothers with young children engage in marketplace work today than ever before” leaving many children in the United States with no stay-at-home mother which is significantly different from a generation ago (Baum, 2003, p. 409; Boushey, 2008). Because of the rise in women’s employment, questions concerning mothers’ work-life balance and maternal employment in relation to its effect on children’s cognitive development are of social and personal concern to both current and aspiring mothers (Gregg, Washbrook, Propper, & Burgess, 2005).

With this increasing number of women in the workplace, many mothers experience “contradictory role expectations” (Gani & Ara, 2010, p. 61). This term recognizes different expectations that are placed on women at work and at home. Gani and Ara (2010, p. 61)

describe that women are “expected to be committed, dynamic, competitive, straight forward, and non-sentimental on a professional level”; while at home mothers are expected to be “sweet, soft, sensitive, adaptable, gentle, and domesticated”. Because of these role differences, women often feel “pressure to reconcile the dual burden of the two roles at her home and workplace because each is a full time job” (Gani & Ara, 2010, p. 62). As can be inferred, these pressures can affect the performance of mothers both at work and at home (Gani & Ara, 2010). When confronted with the issue of searching for work-life balance, women must determine how to utilize their time. Can women remain active in the work force and still manage to have time for their children and family, or would it be more beneficial to stay at home and care for the child full time?

Before answering these questions, it is important to recognize that many factors can influence a mother’s decision and that motherhood presents many challenges. One significant, reoccurring issue specifically related to a mother’s decision of whether to be active in the workforce or be a stay-at-home mother involves the cognitive effects such a decision might have on children. Therefore, “the effects of maternal employment on child development have been widely studied in the psychology, sociology, and economics literature” (Baum, 2003, p. 411). This issue will be further broken down and discussed in the next several sections.

The decision of whether it is best to be a working or a non-working (stay-at-home) mother has been studied in order to determine the motivation for such choices and the possible effects on children. The objective of this research paper is to help differentiate between these different options and determine which approach is most suitable. In order to achieve this, a foundation will be laid to support both non-working and working mothers followed by an analysis which both compares and more fully outlines the two components. After reviewing the facts, an argument will be presented that working mothers are able to achieve work-life balance and that neither option (working nor non-working) will negatively impact children. Ultimately, the maternal working or non-working decision is left up to the discretion of families on an individualized basis.

NON-WORKING (STAY-AT-HOME) MOTHERS

“Since the mid-1990s there has been a steady decrease in the labor force participation of married women with children under the age of six” (Goodpaster, 2010, p. 1). Many studies have been conducted in an attempt to generate conclusions as to what factors are encouraging these women to remain at home with their children. This section will discuss three primary, supporting characteristics possessed by mothers who have decided to remain at home with their children as opposed to remaining in or entering the workforce. Three primary benefits from this point of view include: perceived value, positive effects on a child’s cognitive abilities, and financial efficiency.

The potential values of maternal childcare vary from person to person; however, many mothers perceive sentimental benefits. For example, time with children is often valued by parents and can be a fun experience (Guryan et al., 2008). It is enjoyable for many parents to be able to spend time with their children, to watch them grow and mature, and to spend quality time teaching them various activities and lessons. A *Wall Street Journal* article implies that being able to instill personal, family values in the children is also a rewarding feeling (Shellenbarger, 2003). Some parents view “market-purchased childcare options as poor substitutes for parental time” (Guryan et al., 2008, p. 36). After experiencing these sentimental interactions during maternity leave some mothers may choose to remain in the home to care for the child (Goodpaster, 2010).

A second important factor that directly impacts the decision of many mothers to become or remain a stay-at-home maternal care provider is the effect on a child’s cognitive abilities. There have been numerous, recent studies showing that maternal employment correlates to substantial negative impacts on children’s cognitive abilities (Bernal, 2008; Baum, 2003; Guryan et al., 2008; Stewart, 2010). “Extensive research has shown that children’s early achievements are strong predictors of a variety of outcomes later in life” (Bernal, 2008, p. 1173). In fact, most children have already developed most of their cognitive ability or skill endowment by ages sixteen to eighteen (Bernal, 2008, p. 1174). Though children have the cognitive potential at this age, other schooling is still often necessary for developing those skill endowments. The extent to which a child’s cognitive development has been studied has shown that the first several months of a child’s life are vital to development (Baum, 2003, p. 410).

If mothers return to their careers too quickly, they will have less time to spend with the newborn and may also be decreasing the quality of the time they are able to spend with the child (Baum, 2003). Full-time working women have many time commitments to fulfill within their careers. Because of these obligations, working mothers are forced to sacrifice valuable time with their baby. Secondly, if the mother has a demanding job, she may return home exhausted and distressed (Baum, 2003). Also, these feelings may hinder the mother’s ability to spend enriching, quality time with the child. Thus, the mother may not be able to spend the quality time demanded by her children that is necessary for cognitive development (Stewart, 2010). “If parents are absent or not involved with their children, then social capital is lacking, and as a consequence the level of human capital that parents possess is an irrelevant resource for the child because the mechanism of transferring human capital does not function” (Guryan et al., 2008, p. 38).

Full- and part-time working mothers often try to avoid time controversies between work and home; however, working mothers constantly have time constraints due to their careers (Stewart, 2010). However, this controversy is avoided by non-working, stay-at-home mothers. Stewart (2010) recently completed a study concerning the amount of enriching childcare time mothers are able to spend with their children. His study discovered that younger children prefer enriching care with parents in the morning, while children thirteen years and older prefer afternoon and evening times (Stewart, 2010). As a result, Stewart (2010) noticed that many

working mothers attempted to adjust their schedules in order to spend quality time with their children. At the conclusion of this study, it was recognized that this attempt to shift child care times to parts of the day when mothers are not working was not as beneficial to the child as distributing enriching childcare time evenly throughout the day (Stewart, 2010). Therefore, being a stay-at-home mom can both prevent these time commitment strains and allow for full-time, quality maternal child care which can be beneficial for mother and child.

“The average effect of maternal employment and child care on children’s cognitive ability is negative and rather sizable” (Bernal, 2008, p. 1175). In addition to the negative impacts of a career on a mother’s available time with children, statistical evidence suggests that mothers working full-time who use child care “during the first five years of a child’s life is associated with a 1.8% reduction in the child’s test scores” (Bernal, 2008, p. 1175). This 1.8% is comprised of two components: mother’s work and alternative child care. Each additional year of full-time work by the mother constitutes for a 1% reduction in children’s test scores; whereas the other 0.8% drop is due to an additional year of child care. Bernal’s (2008) study also found that the reduction percentage of test scores was even more profound for children with increased abilities. The decrease in test scores should not be taken lightly. Other studies have reached similar conclusions. For example, Baum’s (2003, p. 439) results suggest maternal “work in the first year of a child’s life has detrimental effects” based on the evidence that Peabody Picture Vocabulary Tests (PPVT), Peabody Individual Assessment Tests in Math (PAT-M), and Peabody Individual Assessment Tests in Reading (PIAT-R) scores were reduced on average by 2.5 points (or 17% of standard deviation).

Bernal (2008, p. 1196) describes that “mothers are able to provide a more stimulating environment than the average alternative daycare provider.” Well-educated mothers may also be better suited to helping a child achieve cognitive benefits. “As women gain education, they are more likely to use complex language with their children, read with and provide home learning activities for their children, accompany their children on intellectual activities (e.g., museum), and enroll their children in lessons” (Augustine et al., 2009, p. 3). Secondly, as children grow, mothers may also have more time to promote a child’s participation in school activities and “partner with school personnel to promote child’s learning” (Augustine et al., 2009). For example, non-working mothers may have time to accompany the child on school field trips as a chaperone or be involved with other school-related volunteer activities whereas working mothers do not always have this luxury. Because some new mothers do not want to risk decreasing their children’s cognitive abilities as is shown through these studies, they may decide to supply full-time maternal care in which they can provide their own quality care that is able to enhance the child’s cognitive abilities.

Finally, many women also choose to become or remain a stay-at-home mother because of the perceived financial efficiency. Some of the financial benefits related to stay-at-home mothers are described in a *Wall Street Journal Article* stating:

The child-rearing benefits of having a parent at home can be huge. Families can save on things such as child care, convenience foods, and commuting and clothing costs for a working woman. (Shellenbarger, 2003).

Neither daycare centers' nor babysitters' fees are cheap; however, a mother with a full-time job has no other option than to use some type of non-maternal care in her absence (Bernal, 2008). Thus, non-working mothers are potentially able to save costs related to daycare. Over the course of a year, the price of daycare can be quite significant (Bernal, 2008). Logically, this amount would quadruple in the child's first four years of life. In addition to daycare fees, the quality of a daycare is also of concern to many working parents. Many parents view market-purchased childcare options as poor substitutes for parental time (Guryan et al., 2008). As a result, some parents feel as though a daycare facility does not help stimulate their child's cognitive abilities. It is not possible for parents to fully monitor childcare providers to ensure that children in their care are receiving enriching, quality cognitive stimulation (Guryan et al, 2008, p. 36). For example, some parents prefer their children to be making an art project, coloring, or reading books rather than simply watching cartoons on television. Because parents are not allowed to monitor these activities, they may feel insecure about leaving their child/children in daycare.

Shellenbarger's (2003) article regarding non-working women discusses other cost-saving aspects such as lesser commuting and clothing costs for the mother. Because the mother is remaining home with the child, she is not commuting to work on a daily basis; thus saving on gas costs and wear and tear on the vehicle. With mothers at home, the purchase of business attire is significantly reduced. Though they may choose to purchase a few outfits for special occasions, they are not expected to be formally dressed for work on a daily basis. This significantly reduces the cost of acquiring new, professional clothing. These various techniques help save families money that may replace the income a mother might have been able to earn in the workplace.

There are significant benefits that stay-at-home, full-time mothers can achieve including: perceived value, positive effect on child's cognitive abilities, and financial efficiency. Mothers are able to spend significant, quality time with a child that is able to help them grow and develop as individuals. Several studies have shown that maternal care is able to substantially improve the cognitive ability of children as demonstrated by a 1.8% increase in their PPVT test scores. Non-working mothers are also able to save money by not having to purchase daycare services or a mother's work related expenses (commuting and clothing). Although there are valid reasons as to why it may be beneficial for mothers to exit the work force and remain at home with child, there is ample evidence that working mothers can also help benefit the mother and child.

WORKING MOTHERS

“More mothers with young children engage in marketplace work today than ever before” (Baum, 2003, p. 409). As more mothers join or return to the workforce, the emphasis placed on work-life (family) balance has become much more evident. “Workplaces have been slow to adapt to the needs of working mothers for paid time off and flexibility, the rapid decline in the effect of children on women’s employment is quite stunning and implies a considerable private burden borne by mothers and potentially their spouses” (Boushey, 2008, p. 27). This section will primarily look at how work-life balance can be achieved by working women and the effects on children.

As the previous section discussed, several studies have determined that stay-at-home mothers can be beneficial to children; however, several studies have reached opposite conclusions (Ruhm, 2004; Mott, 1991; Verropoulou & Joshi, 2009; Parcel & Menaghan, 1994). As a society with an increasing amount of working mothers, several studies have determined possible related benefits including: parental career aspirations, an increase in financial well-being, positive effects of non-maternal caregivers on a child’s social and cognitive development, and studies demonstrating neutral and/or positive associations with a mother’s working status on a child’s cognitive development.

“Most children in the US now live in families where they have no stay-at-home parent, which is dramatically different from just a generation ago” (Boushey, 2008, p. 3). This is at least partly due to the fact that women with high school or college degrees are choosing to invest in their careers and are not necessarily wanting to be a stay-at-home mother (Boushey, 2008). For example, a young woman that has always dreamed of being an optometrist and has completed the required schooling and training may not wish to give up her career entirely to stay home and care for her new born child. In this instance, the new mother may choose to continue working and attempt to balance her work and family commitments. This might allow her to retain and strengthen her life long career aspirations. Although balancing work and family is not always an easy task, it can be accomplished (Gani & Roshan, 2010). In fact, the higher the level of education completed by a mother the lesser role conflict is experienced (Gani & Roshan, 2010). However, because role conflict often consists of various factors, other issues such as spouse support, employer support, child care arrangements, and distance between workplace and residence are also able to significantly aid mothers in balancing their work and family commitments (Gani & Roshan, 2010). Regardless of the various obstacles, “a woman can be a home maker and a professional at the same time and she should be proud of being both” (Gani & Roshan, 2010, p.72).

A second benefit of working mothers involves the earnings increase of a family’s total income. For instance, if both parties of a married couple are employed they will have two incomes; whereas a married couple where only the father is employed will result in merely one income. Previously, it was discussed that maternal work within the first year of a child’s life

may have detrimental effects; however, these effects are offset by the positive effect of an increased family income (Baum, 2003). This addition of a mother's earnings can be beneficial to the child's growth and cognitive ability by allowing the family access to more money that can be spent on inputs that contribute to the child's well-being (Baum, 2003). For example, parents may be able to afford to enroll and support the child in extracurricular lessons, classes, or other activities that require travel. Each of these activities is able to help the child cognitively and socially thus adding to their overall development. Every \$20,000 increase in a parent's income enhances child development test scores by an average of about 0.9% (Baum, 2003). Therefore, Baum (2003) found that unless parents fail to utilize their incomes to provide for their children, parents need not worry about remaining in the work force even after birthing a child. Mothers are, in fact, able to raise a family and still enjoy working.

A third advantage of being a working mother is that children are able to experience non-maternal care while the parents are at work. This can be a positive experience for both mothers and children. Mothers are able to remain in the workforce in their desired position(s), are still able to spend time with their children, and working mothers become a strong role model (Verropoulou & Joshi, 2009). As mentioned above, mothers are able to remain active in their place of work, doing something they enjoy that stimulates them cognitively while still being able to spend time with their children while they are not at work. Therefore, it can be argued that because working mothers have met their own cognitive needs, they may also be better equipped to look after their children's cognitive needs. Secondly, the working mother may offer a good role model to their children (Kiernan, 1996). The working conditions and experiences parents deal with at work "help influence their child-rearing values and provide a model of the kinds of behaviors they encourage in their children" (Parcel & Menaghan, 1994, p. 976).

Children with working mothers are also positively affected. Children may look up to their mother, viewing her as a strong woman who works hard to provide for the family both at work and at home (Kiernan, 1996). In addition to having a role model, children are able to attend quality daycare centers and other forms of non-maternal care that help "promote a child's social and educational development" (Verropoulou & Joshi, 2009, p. 666). Daycare teaches children how to share and communicate with other children while still providing them with opportunities to develop cognitively and physically (Parcel & Menaghan, 1994). There is some skepticism about the quality of daycare centers; however, when mothers seek non-maternal childcare they attempt to select caregivers who are most like themselves (Mott, 1991). Therefore, not only are children allowed to socialize with other children and be stimulated cognitively with various projects, but they will also be cared for by people who exhibit the same values as their parents. Thus, the child will still be raised to the parents' desired standards.

Parcel and Menaghan (1994) examined the effects of maternal employment related to cognitive and social outcomes and found that maternal employment has no detrimental effect on a child's cognitive development or behavior. In addition, Verropoulou and Joshi (2009, p.669) found that "maternal employment makes very little difference to the child outcomes, with, if any,

positive effects, resulting from cash resources and a positive role model.” In fact, several other studies support that non-maternal care for children with working mothers either does not have a significant effect on a child’s cognitive ability or that it has a positive effect (Baum, 2003; Ruhm, 2004; Leibowitz, 1977; Mott, 1991). Baum (2003) states that “the effects of early maternal employment during the child’s first quarter may be temporary and ‘fade out.’” This is due to the fact that PPVT tests are measured at younger ages (three and four) where the PIAT scores are based on the results of children who are five years of age or older (Baum, 2003). Likewise, Ruhm (2004, p. 180) discusses his findings:

Child care during the first year is associated with slightly lower predicted verbal ability at ages three or four but marginally higher mathematics achievement two years later (with no difference in reading). Conversely, care in Years two and three is linked with higher (lower) PPVT and PIAT-M (PIAT-R) scores, and none of these correlations are close to being statistically significant...Generally, these results conform to prior research findings of small and inconsistent effects of non-parental care. Most importantly, the coefficients on maternal employment do not change much with the inclusion of controls for daycare.

This excerpt also supports the theory that daycare and other forms of non-parental care have either no impact or a positive effect on the cognitive and social abilities of children. Furthermore, it supports the possibility that *if* any detrimental effects were to occur while the mother works during the first year of a child’s life, that those effects would be reversed as the child ages. Similarly, Leibowitz (1977) found that maternal employment does not have detrimental effects and that neither full-time nor part-time maternal employment has major effects on PPVT test scores.

Finally, the studies of Verropoulou and Joshi (2009) and Mott (1991) both found that non-maternal childcare actually has positive effects on a child’s cognitive ability. Verropoulou and Joshi (2009) describe children as having positive cognitive progress in vocabulary for children who have attended high-quality daycare or other non-maternal settings. By age seven, it was determined that children of employed mothers “fared better than those whose mothers had stayed at home” (Verropoulou & Joshi, 2009, p. 668). The only negative association found was that children under age five tended to have lower reading scores by a factor of about three months; however, this was reversed after age five (Verropoulou & Joshi, 2009).

Similarly, Mott’s study determined that “healthy infant girls received some cognitive advantage by being cared for extensively by caretakers other than their mother during infancy, where infant boys *with health problems* gained socioemotional [benefits] by spending more time with their mothers” as specifically measured using the Memory for Location, Motor and Social Development (MSD), and Peabody Picture Vocabulary Tests (PPVT) (Mott, 1991, p. 139). The Memory for Location test results concluded that use of “infant non-maternal care did not either

substantially enhance or negatively influence” children’s scores (Mott, 1991, p. 147). When looking at the PPVT test results, Mott (1991) found that children in non-maternal care or non-relative care scored higher than children who had been primarily cared for by their mothers. In addition, Mott (1991) suggests that formal child care arrangements during infancy may carry some advantage in subsequent years. For example, daycare centers and other non-relative caregivers may be able to “reduce a child’s fear of strangers and enhance the child’s ability to interact with [an] interviewer” in future years (Mott, 1991, p. 151). The care and love demonstrated by non-home, non-relative caregivers may provide “significant intellectual input that can, to a moderate, statistically significant extent, enhance a child’s subsequent intellectual capability on this well-validated, well-normed vocabulary measure” (Mott, 1991, p. 151). Finally, Mott’s (1991) study again supports the previous statements indicating neutral or positive effects of non-maternal child care.

Contrary to Goodpaster’s (2010) assertions, Boushey (2008, p. 20) argues that “over the past decade and a half, children have exerted a smaller pull on women staying home rather than working.” There are many reasons and benefits as to why mothers may be deciding to remain in the work place. These issues may be related to possible benefits including: parental career aspirations, an increase in financial well-being, positive effects of non-maternal caregivers on a child’s social and cognitive development, and studies demonstrating neutral and/or positive associations with a mother’s working status on a child’s cognitive development. “The characteristics of the childcare used by mothers who return to work early are relatively beneficial for children’s development and help to compensate for any drawbacks associated with the mother’s absence whilst at work” (Gregg et al., 2005, p. F56). Because working women are able to achieve a sense of work-life balance and know there will be no detrimental effects on the cognitive ability of children, many may decide to remain in or return to the workforce.

ANALYSIS

A current issue related to mothers’ decisions to remain in the workforce involves the Family Medical Leave Act (FMLA). Presently in the United States, the FMLA allows expecting mothers twelve weeks (roughly three months) of maternity leave, without pay by the company of which she is employed. The FMLA includes laws and policies regarding sick leave, vacation leave, and, most importantly for this topic, maternity leave (Kartha, 2010). The Maternity Leave Act is enforced similarly in almost all U.S. states; however, the policy will fluctuate a bit between states. For example, “in Tennessee, the maternity leave policy allows a woman to go on leave for sixteen weeks for childbirth” (Kartha, 2010). Regardless of minor differences, the overall goal of the FMLA is to preserve job tenure and stability. Thus, the high costs previously associated with taking time off from work to care for a newborn child have been lowered by the FMLA (Goodpaster, 2010). In this case, mothers do not have to worry about losing their jobs or

receiving cumulative salary reductions. These policies attempt to assist mothers in achieving work-life balance.

Though the FMLA is beneficial to working mothers, it also allows them to experience what it would be like to become or remain a stay-at-home mother (Goodpaster, 2010). “A working and expecting mother has uncertainty regarding the value she will receive if she leaves her job to stay home with her child” (Goodpaster, 2010, p. 2). Mothers on maternity leave are not being paid, are spending time with their child/children and are able recognize the potential value of remaining uninvolved in the workforce. Goodpaster (2010) has discovered that if, during maternity leave, a mother discovers the value of staying home with a child exceeds the value she places on her career she will probably opt to leave the labor force upon conclusion of her maternity leave. However, many mothers continue to remain active in their chosen career path at the expiration of the leave time. It can be argued that the maternal care given to children during the three to five months of maternity leave is enough to offset any possible negative effects found in studies such as Bernal’s (2008) article discussed above. “The extent to which a child’s cognitive development has been studied has shown that the first several months of a child’s life are vital to development (Baum, 2003, p. 410). Baum (2003) states that the first several *months* of a child’s life are when it is most important for parents to spend quality time with their children. Because the FMLA allows mothers to be at home the first several months of a child’s life, a mother who remains at home for maternity leave may be able to offset any negative cognitive effects of their child, possibly making them nonexistent.

Regardless of the mother’s choice, the preceding sections have discussed many reasons why a mother may choose a particular working or non-working path. Non-working mothers can achieve perceived or sentimental values, positive effects on a child’s cognitive abilities, and financial efficiency. Some mothers have always dreamed of being able to remain at home with their children; thus allowing them to provide quality care for and teach important family values to children full-time. A child with exclusive maternal care also has a lower risk of illness and infection in the first few years of life (Waldfogel, 2006). As described in the non-working mothers section above, several studies have shown that full-time maternal child care can actually have positive effects on a child’s cognitive abilities on several standardized tests including the PPVT, PAT-M, and the PIAT-R. Finally, studies such as Guryan et al. (2008), Shellenbarger (2003), and Bernal (2008) have discovered that non-working mothers are able to save on several child-raising costs such as daycare fees and travel.

On the other hand, working mothers are able to continue on with their own career aspirations, increase their family’s financial well-being, and also perceive positive effects of non-maternal caregivers on a child’s social and cognitive development. If a new mother has spent the time, energy, and funds on receiving a high school, college, and/or graduate education, they may be passionate about their career as well as their family. Therefore, they may be less willing to give up their career and choose to be a working mother. As touched on previously, mothers are able to remain active in their place of work, doing something they enjoy that stimulates them

cognitively while still being able to spend time with their children while they are not at work and be an educational role model. It can be argued that because educated, working mothers have met their own cognitive needs they may also be better equipped to look after their children's cognitive needs. Secondly, a mother's employment is able to help raise the family's overall income. It was discussed in a previous section that for every \$20,000 increase in a parent's income, child development test scores are able to be enhanced by an average of about 0.9% (Baum, 2003). This added family income can also be used to assist a child's cognitive and social abilities by allowing parents to afford extra classes and activities for their child such as traveling athletic teams, instrumental lessons, country/world travel, and others that may help a child to grow. The non-maternal care given by other individuals while parents are at work are also able to help the child both cognitively and socially. The care received by children from their caregivers "lays the foundation not just for their physical growth and health but also for their cognitive and emotional growth and development" (Waldfogel, 2006, p. 26). If children are placed in a non-maternal care setting which provides sensitivity and responsiveness to the needs of children, the child's needs will be appropriately met (Waldfogel, 2006). Daycare centers are able to help children develop larger vocabularies and give them a basic sense of trust which helps them "form the foundation from which to explore the world and relate to others" (Waldfogel, 2006, p. 29). One common daycare concern for parents involves the issue of their child having a higher risk of illness and/or infection in the first few years of life; however, these "negative health effects tend to be minor," short lived, and beneficial (Waldfogel, 2006, p. 30). Exposure to these minor health qualms can help children build and create a sturdier immune system. In summary, quality non-maternal care can be very beneficial for children and still allow parents to be active in their chosen career.

After reviewing the evidence, it is clear that both sides provide similarly strong arguments. One common theme amongst the two, however, is the importance of spending time with children. "Time investment in children is important to the development of human capital" (Guryan et al., 2008, p. 23). Therefore, regardless of the mother's choice to work or not work, parents can instead focus on the concept of quality time spent with their children in relation to positive effects on children that may be generated (Guryan et al., 2008). Guryan et al. (2008) discusses four childcare categories that, when combined, amount to total childcare time. The four categories include: basic, educational, recreational, and travel time. Although it can be argued the *amount* of time spent with children is most important, Guryan et al. (2008) suggests productive parents can produce the same amount of capital with their children in less time. As a result, it is the quality of time spent with children that is important rather than the amount of time. Therefore, working mothers (parents) are able to achieve work-family balance if they are willing to spend quality time with children, allowing social and cognitive capital to be generated (Guryan et al., 2008).

An additional argument involving the amount of parental time spent with children was recently raised and discussed by Jong (2010) concerning attachment parenting and the unrealistic

societal views of motherhood. Attachment parenting is essentially defined as “you wear your baby, sleep with her and attune yourself totally to her needs” (Jong, 2010, p. C1). However, Jong continues, “How you do this and also earn the money to keep her is rarely discussed; you are just assumed to be rich enough” (2010, p. C1). Raising children is not an easy task and these additional societal views suggesting that mothers should constantly have their children attached at the hip is a bit unrealistic. The article goes on to say that many people in the United States “assume that mother and father are exclusive terms, though in other cultures, these terms are applied to a variety of aunts, uncles and other adults” (Jong, 2010, p. C1). These non-maternal caregivers such as babysitters and other family members are able to demonstrate genuine love and care for a child while the mother is away. As a result, these caregivers are, theoretically, able to make up for the mother’s temporary absence. Although relatives can be an inexpensive, helpful option for some families, others do not have relatives that live close by. Therefore, if a family does not have this childcare option available, they are forced to choose between non-maternal, non-relative caregivers and having a stay at home parent.

Finally, it is important to understand that all children and mothers have differing personalities and needs. There is evidence that “young boys lag behind young girls in development of verbal facility” (Parcel & Menaghan, 1994, p. 978). Low birth weight, lower parental education, and children dealing with health problems can also show negative effects of a child’s cognitive and social development (Parcel & Menaghan, 1994; Guryan et al., 2008). If components such as these are not taken into account when looking at cognitive effects of a mother’s career decision, results may be negatively skewed.

Additionally, Mott (1991) discusses four variances between families and children and how the relative childcare choice may be affected due to these differences. These variances include: “Boys and girls respond differently to various kinds of home and non-home environments, later developmental outcomes can be conditioned by the infant’s well-being, the positive or negative value of a particular infant care arrangement may not be generalizable across all developmental outcome domains, and no type of infant care arrangement can be generalized as being uniformly preferable or detrimental” (Mott, 1991, p. 154). For example, if a mother has an unhealthy or special needs son, she may decide that the best course of action is to remain at home with the child in order to nurture him and give him the attention and assistance he needs. Conversely, if a mother has a young daughter who is able to learn quickly and is developing at a much faster rate when compared to other children her age the family may choose to enroll her in a daycare facility in which non-maternal, non-relative caregivers can help develop her abilities through various teachers and programs they have available. Although there is “no evidence of a trend towards women opting out of employment simply because they are mothers,” some mothers may still choose to remain at home due to individualized needs of themselves and/or their children (Boushey, 2008, p. 20).

CONCLUSION

After reviewing the facts, evidence shows that working mothers are able to achieve work-life balance. Though work-life balance can be achieved, it will take much work especially concerning strengthening communication with “superiors, peers, and subordinates in the work situation and with family members” (Gani & Ara, 2010, p. 71). Furthermore, the facts presented throughout this research paper strengthens the argument that a mother’s employment or lack thereof will not have a negative impact on children as long as parents actively spend quality time with their children. In addition, parents must recognize that children need a varying level of parental time and support throughout their lifetime. There are “multiple periods throughout a child’s life when parental input, or social capital, is important in facilitating appropriate development” (Parcel & Menaghan, 1994, p. 1004). If parents are able to facilitate and assist this development, children will benefit. Although both working and non-working mothers are able to achieve work-family balance, neither is necessarily suitable for every family’s situation. Inevitably, families deal with a number of differing problems and conditions which may be the reason studies often reach conflicting conclusions (Baum, 2003, p. 411). There is ample evidence supporting both choices and therefore, depending upon the family’s needs, the mother’s decision of whether or not to work is ultimately decided by families on an individualized basis (Baum, 2003, p. 411). In conclusion, “The decisions that working parents make about who cares for their children are personal and varied...to thrive children need not just food and material goods but care and affection that promotes health, cognitive development and social and emotional wellbeing” (Waldfogel, 2006, p. 26).

REFERENCES

- Augustine, J., Cavanagh, S., & Crosnoe, R. (2009). Maternal Education, Early Child Care and the Reproduction of Advantage. *Social Forces*, 88(1), 1-29.
- Baum II, C. (2003). Does Early Maternal Employment Harm Child Development? An Analysis of the Potential Benefits of Leave Taking. *Journal of Labor Economics*, 21(2), 409-440.
- Bernal, R. (2008). The Effect of Maternal Employment and Child Care on Children’s Cognitive Development. *International Economic Review*, 49(4), 1173-1209. doi: 10.1111/j.1468-2354.2008.00510.x
- Boushey, H. (2008). “Opting out”? The Effect of Children on Women’s Employment in the United States. *Feminist Economics*, 14(1), 1-36. doi: 10.1080/13545700701716672
- Gani, A. & Ara, R. (2010). Conflicting Worlds of Working Women: Findings of an Exploratory Study. *Indian Journal of Industrial Relations*, 45(5), 61-73.

- Gregg, P., Washbrook, E., Propper, C., & Burgess, S. (2005). The Effects of a Mother's Return to Work Decision on Child Development in the UK. *Economic Journal*, 115(501), F48-F80. doi: 10.1111/j.0013-0133.2005.00972.x
- Goodpaster, N. (2010). Leaves and Leaving: The Family and Medical Leave Act and the Decline in Maternal Labor Force Participation. *B.E. Journals of Economic Analysis & Policy: Contributions to Economic Analysis & Policy*, 10(1), 1-36.
- Guryan, J., Hurst, E., & Kearney, M. (2008). Parental Education and Parental Time with Children. *Journal of Economic Perspectives*, 22(3), 23-46. doi: 10.1257/jep.22.3.23
- Jong, E. (2010, November 6-7). Mother Madness. *The Wall Street Journal*, C1-C2.
- Kartha, D. (2010). Maternity Leave Laws and Policies. *Buzzle.com: Intelligent Life on the Web*.
- Kiernan, KE. (1996). Lone Motherhood, Employment and outcome for children. *Int J Law Policy Fam*, 10(3), 233-256. As cited in Verropoulou, G. & Joshi, H. (2009). Does Mother's Employment Conflict with Child Development? Multilevel analysis of British Mothers born in 1958. *Journal of Population Economics*, 22(3), 665-692. doi: 10.1007/s00148-007-0157-4
- Leibowitz, A. (1977). Parental Inputs and Children's Achievement. *Journal of Human Resources*, 12(2), 242-251. As cited in Baum II, C. (2003). Does Early Maternal Employment Harm Child Development? An Analysis of the Potential Benefits of Leave Taking. *Journal of Labor Economics*, 21(2), 409-440.
- Mott, F. (1991). Developmental Effects of Infant Care: The Mediating Role of Gender and Health. *Journal of Social Issues*, 47(2), 139-158.
- Parcel, T. & Menaghan, E. (1994). Early Parental Work, Family Social Capital, and Early Childhood Outcomes. *American Journal of Sociology*, 99(4), 972-1003.
- Ruhm, C. (2004). Parental Employment and Child Cognitive Development. *Journal of Human Resources*, 39(1), 155-192.
- Shellenbarger, S. (2003). The Sole Breadwinner's Lament: Having Mom at Home Isn't as Great as it Sounds. *The Wall Street Journal*. D1. As cited in Goodpaster, N. (2010). Leaves and Leaving: The Family and Medical Leave Act and the Decline in Maternal Labor Force Participation. *B.E. Journals of Economic Analysis & Policy: Contributions to Economic Analysis & Policy*, 10(1), 1-36.
- Stewart, J. (2010). The Timing of Maternal Work and Time with Children. *Industrial & Labor Relations Review*, 64(1), 181-200.
- Verropoulou, G. & Joshi, H. (2009). Does Mother's Employment Conflict with Child Development? Multilevel analysis of British Mothers born in 1958. *Journal of Population Economics*, 22(3), 665-692. doi: 10.1007/s00148-007-0157-4
- Waldfoegel, J. (2006) What do Children Need? *Public Policy Research*, 13(1), 26-34. doi: 10.1111/j.1070-3535.2006.00417.x

STRATEGIES IN A MULTI-POLAR WORLD: OPPORTUNITY FOR APPLICATION OF PROJECT MANAGEMENT APPROACHES

Neha Purushottam, University of South Africa
P.M. D. Rwelamila, University of South Africa

ABSTRACT

This paper is based purely on the review of literature and indications emerging from the review. The aim of this paper is to examine literature in the area of (a) multi-polar world and its impact on strategic management (b) applicability of project management approaches in strategic management in order to find how they can help strategists to function better in the multi-polar world environment.

INTRODUCTION

This paper explores what is multi-polar world and what its implications to the businesses. The next section discusses how this dynamics of multi-polarity is affecting strategists and what challenges it is posing to the field of strategic management. This section is followed by a section where linkages between Project management and Strategic management are explored. This section remains focused only on what can be learned from project management to function better in the multi-polar world. This paper is based purely on review of literature and concludes with discussing a way forward in this area for further exploration.

MULTI-POLAR WORLD: MEANING AND IMPLICATIONS

In literature across various disciplines, a number of studies like Howorth (2010), McMillan (2009) and Dimirovski *et al.*, (2006) indicated that multi-polarity in the world is growing. Mostly polarity in the world was discussed with reference to the power dynamics in the international politics (Etzioni, 1965; Best & Bracken, 1995; Hanqin, 2011). The transition in the world geopolitics witnessed shifts from bi-polar world to uni-polar world and then from the uni-polar world to the multi-polar world (Howorth, 2010). Researchers like Wasdell (2011, p11) gave credit of multi-polarity to the changing geopolitics but indicated presence of other power groups like “*multi-national corporations, global industries and financial institutions*”. He argued that besides nation states these power groups also add to the multi-polarity. Similarly, Zoellick (2010) highlighted that the end of “*third world*” and the growing participation of developing

countries in the world economy has contributed to the emergence of multi-polarity. He indicated that shifting of economic powers from the industrialized nations to the developing nations as the main contributors to this phenomenon. Accenture (2010) conducted a series of studies starting from 2007 on this issue. Accenture (2010, p6) defined the term “multi-polar world” as follows:

“.....the diffusion of global economic power across a widening range of regions and countries, with that diffusion accelerated by information technology, greater economic openness, and the growing size and reach of multinational companies.”

This study further indicated five dimensions of multi-polar world as (a) talent, (b) capital, (c) resources, (d) consumers and trade and (e) innovations.

Researchers (Zoellick, 2010; McMillan 2009) indicated that multi-polar world demands taking responsibility, wider use of open multilateralism, managing local and global dynamics, acceptance of the contributions of new growth engines (developing countries) of world economy and understanding the importance of emerging power centres like Asia, Africa, EU, Latin America etc in the world economy. Dimirovski *et al.* (2006) opined that such business environment requires interdependent approach and innovation in mindset and technology. Zoellick (2010) indicated that the adaptation of collaborative approach in the multi-polar world will have challenges and risks like maintaining intention, consistency, speed, flexibility, innovativeness and accountability.

The literature suggests that multi-polar world is a certainty and with the growing globalization and technological progression, most institutions including businesses, are required to either adapt their approaches or innovate new approaches to remain efficient and effective.

MULTI-POLAR WORLD AND ITS IMPLICATIONS FOR STRATEGIC MANAGEMENT

Emergence of various power centres, political or economic, globalization (McMillan, 2009) and advancement in technologies (Dimirovski et al., 2006) contributed to the emergence of a complex and dynamic business environment. While discussing changing world arena and its impacts, Ohmae (2005, p5) stated:

“The interconnected, interactive, global economy is a reality. It is often confusing and disorientating: It challenges both the way we see business and the way we do business.”

Further highlighting the challenges faced by new generation strategists, Ohmae (2005) mentioned that in this environment, it is difficult to clearly define competitors, company, customers and their relationships as they are continuously changing i.e. dynamic. Similar

thoughts were expressed by D'Aveni, Dagnino and Smith (2010) who pointed that due to fast pace of change and blurring of boundaries of industries, it is hard to characterize competition and buyer-supplier power. Pearce and Tavares (2000) indicated that this changing landscape of trade and economics impacted functioning of various companies operating in different countries.

D'Aveni, Dagnino and Smith (2010) highlighted that when the environment is turbulent, complex and is changing at high pace, sustaining any competitive advantage is difficult. They observed that the growing multi-polarity, fast pace technological advancements, globalization and privatization all are adding to the new era of “*temporary advantage*”. They (p1375) indicated the need of freshness in the approaches of doing and managing businesses and while discussing its consequences they mentioned:

“Consequently, there is a need for a new dynamic theory focusing on the action/reaction level of analysis that is more revealing to these dynamics.”

Zoellick (2010) indicated that such inter-connected multi-polar world requires organizations that are practical, accountable, flexible, quick in responding and which have collaborative and open attitude.

If we summarize the work of these researchers, it clearly indicates the need of strategic tools which can handle dynamism and complexity, manage temporary competitive advantages and risks, produce time bound results, can be used to network with various stakeholders and deliver to their diverse objectives.

PROJECT MANAGEMENT AND ITS ASSOCIATION WITH STRATEGIC MANAGEMENT

It is interesting to observe that reviewed literature on project management and on its relations with strategic management indicates possibilities of its applications in answering concerns of multi-polarity and temporary management discussed in earlier paragraphs.

Project are known for their clear-cut boundaries in terms of initiation and completion, their ability to achieve specific objectives (deliverables can be product or process or results) for which they are designed and their progressive nature (Project Management Institute, 2004). In an interesting definition projects were defined as transitory and dynamic organization (Shenhar, 2001). Explaining distinctive identities of projects, Association of Project Management (2006, p1) highlighted:

“.....a project has a clear objective and deliverables, with a defined start and end, that must be completed on time, within budget (cost) and to the agreed quality and, of course, it must deliver the agreed benefits.”

Milosevic and Srivannaboon (2006) used strategic project leadership framework for exploring alignment between these two areas of management. They identified that besides supporting business plans; project management has much bigger role to play as they have influence on business strategy. While reviewing the discipline of project management, Yiu (2008) observed that it was developed alongside with the systems theory and therefore indicates linkages with strategic management. In further analysis, Yiu (2008) stressed on the ability of project management in handling dynamism, temporary activities, and networks of multiple organisations.

Srivannaboon (2006) explained that research in the area of project management and strategic management covers three main streams where researchers cover: (a) issues related to how strategic management can affect project management (b) issues related to how project management influence strategic management and (c) the perspective of mutual influence. Grundy (1998) explored these areas through many tools and techniques from both disciplines and stressed about bright prospects of cross-fertilization of these two disciplines.

This paper intends to remain focused only on what can be learned from project management in order to have strategies which can best suited to the nature of multi-polar world.

While canvassing the wider applicability of project management in formulating strategies, Cicmil (1997) stressed that project management ensures optimal utilization of scarce resources, competitive advantage of the organization and integration of interests of various stakeholders which are critical for any strategist. Yiu (2008) in his review of applicability of project management clearly highlighted that the popularity of project management in engineering or technology based sectors is because it is able to manage challenges of a dynamic and complex environment where general management constructs fall short.

Van Der Merwe (2002), argued that more emphasis on 'project' aspect than on 'management or behavioural' aspect by the practitioners of project management was one of the reason why association of project management with strategic management remained a less explored area. He also indicated possibilities of applicability of project management principals during strategy implementation. Similar were findings of Longman and Mullins (2004) and Dietrich and Lehtonen (2005). These researchers attempted to convince that discipline of strategic management can benefit a lot from project management approaches especially during execution of strategy. McElroy (1996) determines that projects are a good mean to implement strategic change in an organization.

While reviewing literature it was observed that in the maximum number of research studies, application of project management was explored at functional and operational level of strategies. However, very few numbers of studies were witnessed when it came to application of project management (PM) at business and corporate level strategies. It is worth mentioning that business level strategy deals with issues related to positioning in market and competitive advantage while corporate level strategies looks at coherence in overall strategies of a multi-business firm (Gamble and Thompson, 2011). In order to address issues related to multi-polarity

and ‘temporary advantage’ there is a need for further exploration of application of project management approaches at all levels of strategic management. Without pre-empting what is covered in the next section it is important to acknowledge the existence of a number of PM tools which deals with the issues of planning, implementation and control phases of any project and literature suggests that these phases are also fundamental in corporate strategic management. These phases and their respective stages when embodied in the project-life cycle have a potential to improve significantly the traditional approaches of dealing in a multi-polar world.

A WAY FORWARD: POSSIBLE AREAS OF STRATEGIC MANAGEMENT FOR APPLICATION OF PROJECT MANAGEMENT APPROACHES

Gummesson (1974) looked at project management as a mean to handle change in order to remain effective and efficient in changing business environment. Years after, Mullaly and Thomas (2009), explored correlation between dynamic “fit” and construct of “value direction”. They identified that intersection of these two constructs from two different disciplines gives organization an understanding of today (through fit) and route of tomorrow (through constructs of value direction). Gummesson (1974) and Mullaly and Thomas’s (2009) work could be qualified by advancing an argument within the broader theme of this proposal that contemporary thinking in strategic management in a multi-polar world could be strongly influenced or enhanced by project management fundamentals. There are strong indications to suggest that strategy could be effectively implemented through projects.

According to Gray and Larson (2006) two major dimensions of strategic management are: (i) responding to the changes in external environment and allocating scarce resources of the organisation to improve its competitive position and (ii) internal responses to new action programmes aimed at enhancing the competitive position of the organisation. They argued that constant scanning of the external environment for changes is a major requirement for survival in a dynamic competitive environment. They also emphasised that the nature of responses depends on the type of business, environment volatility, competition, and the organisational culture. Furthermore, Gray and Larson (2006) argued that strategic management provides the theme and focus of the future direction of the organisation. Their work supported consistency of action at every level of the organisation. It also encouraged integration because effort and resources are committed to common goals and strategies.

Studies (Accenture, 2010; Zoellick, 2010) indicate that businesses in multi-polar world are invariably part of local, regional and global system and thus get influenced by dynamics in these systems. In the light of the report by Accenture (2010) and the work of Gray and Larson (2006), following are the main questions in-front of strategists in the multi-polar world:

- a) How to remain aware with the changes in local, regional and global business environment and their impact on business?

- b) How to keep strategies aligned with continuously changing local, regional and global business environment?
- c) How to network with various stakeholders in local, regional and global system?
- d) How to manage local, regional and global resources for the competitive advantage?
- e) How to manage risks which arises because being a part of local, regional and global dynamics at the same time?
- f) How to ensure that internal organization understands the dynamics of being part of multi-polar world?
- g) How to align internal organization culture with the dynamics of multi-polar world?

On prima facie, it seems that project management can help in solving these questions by contributing to address (a) the complexity of functioning in multi-polar world (b) challenges of temporary advantage and (c) the issues of dynamism. If management of an multi-national organization at local, regional and global levels can be taken as a separate project, principles of project portfolio can be handy in managing businesses at all these levels. As per the earlier discussions, the components of strategic management in a multi-polar world should be closely interlinked, and should direct toward the future success of the organisation. Since project management philosophy frequently deals with the issues of alignment of various needs of different stakeholders it may be able to address this demand also. Strategic management in this complex world requires strong linkages among *mission, goals, objectives, strategy and implementation* (Gray and Larson 2006, Rwelamila 2007). As literature suggests, the *mission* gives the general purpose of the organisation, *Goals* give global targets within the mission and *Objectives* give specific targets to goals. It also indicates that objectives give rise to the formulation of *strategies* to reach objectives. Finally, it suggests that strategies require *actions* and *tasks* to be implemented. In most cases, the actions to be taken represent projects, which could be grouped in programmes or portfolios. The issues of temporary advantages like how to remain competitive can probably be addressed through project management approaches where one project based on one set of advantages can followed by another project based on another set of advantages. In other words, applicability of project management approaches may give space to the possibility of continuous newness (may be innovation in some cases) while transition from one project to another. Moreover, each project has a limited life span (Association of Project Management, 2006). This characteristic gives projects the opportunity to handle the issues of dynamism. The changes in the business environment to some extent can be addressed within the duration of a project's lifespan through flexibility and risk management approaches. From these discussions, it can be concluded that there are strong indications that the understanding of project management philosophies and approaches may be helpful in addressing the issues faced by the strategists in the multi-polar business environment.

This is important to mention that this paper is based purely on review of literature, observations made in practice and indications emerging from them. There is a need for several field research studies to explore answers of all the above mentioned questions in the light of project management approaches as a tool in managing strategy.

REFERENCES

- Accenture (2010). *From global connection to global orchestration: Future business models for high performance where technology and the multi-polar world meet*. Retrieved February 24, 2011, from https://microsite.accenture.com/NonSecureSiteCollectionDocuments/By_Subject/Management_Consulting/PDF/Accenture_Multipolar_World_Research_Report_2010.pdf.
- Association of Project Management (2006). *APM Body of Knowledge (Fifth Edition)*, Association of Project Management, UK.
- Cicmil, Svetlana F.K. (1997). Critical factors of effective project management. *The TQM Magazine*, 9(6), 390-396.
- Cooper, T., Purdy, M., & Foster, M. (2010). A portfolio strategy for locating operations in the new “multi-polar world”. *Strategy and Leadership*, 38 (4), pp 42-49.
- D’aveni, R. A., Dagnino, G.B. & Smith, K.G. (2010). The age of temporary advantage. *Strategic Management Journal*, 31(13), 1371-1385.
- Dietrich, P. & Lehtonen, P. (2005). Successful management of strategic intentions through multiple projects- reflections from empirical study. *International Journal of Project Management*, 23(5), 386-391.
- Dimirovski, Georgi M., Dinibutun, A. Talha, Kile, F., Neck, R., Stahre, J., Vlacic & Ljubisa B. (2006). Control system approaches for sustainable development and instability management in the globalization age, *Annual Reviews in Control*, 30(1), 103–115.
- Etzioni, E. (1965). Strategic Models for a De-Polarizing World Source. *Journal of Peace Research*, 2(2), 136-146.
- Gamble, J.E. & Thompson, A.A. (2011). *Essentials of strategic management: The quest for competitive advantage (Second Edition)*, New York: McGraw-Hill/Irwin.
- Gray, C. F. & Larson, E. W. (2006). *Project management: The managerial process, (Third Edition)*, Singapore: McGraw-Hill International Edition.
- Grundy, T. (1998). Strategy implementation and project management. *International Journal of Project Management*, 16(1), 43-50.
- Gummesson, E. (1974). Organizing for strategic management: A conceptual model. *Long Range Planning*, 7(2), 13-19.

- Hanqin, Xue (2011). Meaningful dialogue through a common discourse: law and values in a multi-polar World. *Asian Journal of International Law*, 1(1), 13–19.
- Howorth, J (2010). The EU as a Global Actor: Grand, Strategy for a Global Grand Bargain? *Journal of Common Market studies*, 48(3), 455–474.
- Longman, A. & Mullins, J. (2004). Project management: key tool for implementing strategy. *Journal of Business Strategy*, 25(5), 54-60.
- McElroy, W. (1996). Implementing strategic change through projects. *International Journal of Project Management*, 14(6), 325-329.
- McMillan, C. (2009). The great game: How globalization changes the managerial mindset. *Ivey Business Journal Online*, 1. Retrieved February 15, 2011, from ABI/INFORM Global. (Document ID: 1825234881).
- Milosevic, D. Z. & Srivannaboon, S. (2006). A theoretical framework for aligning project management with business strategy. *Project Management Journal*, 37(3), 98-110.
- Mullaly, M. & Thomas, J.L. (2009). Exploring the dynamic value and fit: Insights from project management. *Project Management Journal*, 40(1), 124-135.
- Ohmae, K. (2005). *The next global stage: Challenges and opportunities in our borderless world (First Edition)*. Singapore: Pearson Education, Inc., publishing as Wharton school publishing.
- Pearce, R., & Tavares A. T. (2000). Emerging trading blocs and their impact on the strategic evolution of multinationals, *Managerial Finance*. 26(1), 26-31.
- Project Management Institute (2004). *A Guide to The Project Management Body of Knowledge: PMBOK Guide* (3rd ed.). USA: Project Management Institute.
- Rwelamila, P. M. D. (2007). Project Management Competence in Public Sector Infrastructure Organisations, *Construction Management and Economics Journal*, 25(1), 55 – 66.
- Shenhar, A.J. (2001). Contingent management in temporary, dynamic organizations: The comparative analysis of projects. *Journal of High Technology Management Research*, 12(2), 239–271.
- Srivannaboon, S. (2006). Linking project management with business strategy. *Project Management Journal*, 37(5), 88-96.
- Van Der Merwe, A.P. (2002). Project Management and business development: integrating strategy, structure, processes and projects. *International Journal of Project Management*, 20(5), 401-411.
- Wasdell, D. (2011). The dynamics of climate change: A case study in organizational learning. *The Learning Organization*, 18(1), 10-20.
- Yiu, Chung Yim (2008). A theoretical framework for aligning project management with business strategy. *Facilities*, 26(13/14), 501-511.

Zoellick, Robert B. (2010). The end of the third world: the case for modernizing multilateralism. *The International Economy*, 24(2), 40-43.

Zoellick, Robert B. (2010). The end of the third world? Modernizing multilateralism for a multipolar world. *Law and Business Review of the Americas*, 16(3), 371-382.

