

JOURNAL OF INTERNATIONAL BUSINESS RESEARCH

Special Issue Co-Editors

Maria Claret M. Ruane, Alfred University and University of Guam

James J. Taylor, University of Guam

Barbara A. Wiens-Tuers, Pennsylvania State University-Altoona

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JOURNAL OF INTERNATIONAL BUSINESS RESEARCH

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LETTER FROM THE EDITORS

It is with great pleasure that we welcome you to this Special Issue of the *Journal of International Business Research*, a journal published by the Allied Academies to support the exchange of ideas and insights in International Business.

This issue features the best papers from those presented at the *Hanoi 2008 International Conference on Business, Economics and Information Technology* on the theme of "*Doing Business in the Global Economy: Economic, Political, Social and Cultural Environments Facing Business.*" Founded on a very simple idea, that there is so much we can learn from each other, the conference provided an opportunity for academicians, researchers, students, and representatives from industry and government to get together and exchange ideas in the spirit of scholarship and professional growth.

We thank the University of Guam's School of Business and Public Administration, Penn State Altoona's Division of Business and Engineering, Alfred University's College of Business, and the Vietnam National University's Hanoi School of Business for their support of this Conference and the publication of this journal issue. We are also grateful to the Academy for providing us with the outlet by which we can share our scholarly efforts with those interested in the study of International Business.

Consistent with the editorial practice of the Academy on all of the journals it publishes, each paper in this issue has undergone a double-blind, peer-review process.

This issue includes papers by authors from nine different countries and thus reflects the international reach of Allied Academies.

Information about the Allied Academies, the *JIBR*, and the other journals published by the Academy, as well as calls for conferences, are published on its website. In addition, the website displays the latest activities of the organization. Please visit the site and know that the Academy welcomes hearing from you at any time, as do we.

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MANAGEMENT ATTRIBUTES OF IMPLEMENTING AN ERP SYSTEM IN THE PUBLIC SECTOR

Doreen T. Crisostomo, University of Guam

ABSTRACT

Implementing an Enterprise Resource Planning (ERP) system in the public sector is a difficult task. During the late 1990s when organizations were required to be Y2K compliant, the Department of Administration (DOA) attempted to implement an ERP system, and after years of unsuccessful attempt; DOA went back to its legacy system. Not much research was done in this area; therefore this study identified management attributes in implementing an ERP system in the public sector. It is important that management understand the issues that may arise when implementing an ERP system in the public sector. Given that most of the data are categorical, univariate linear regressions tests were conducted to establish a predictive relationship between the variables and further analyses were done to test the significance of the correlations using a 0.05 level of significance. The findings revealed that management attributes identified as being associated with the successful implementation of the enterprise resource planning system in the public sector are (a) top management's knowledge of the system, top management's preparedness to support the project team's efforts to manage change generated by the ERP system implementation and to support the implementation process; and (b) project manager's skills and knowledge of the ERP system and keeping employees informed regarding the status of the ERP project;

INTRODUCTION

Due to the changing technology occurring in the business environment, changes are needed in the organizational structure as well. Governments are constantly enacting legislation that influences how companies perform, and the trend is to liberalize trade across borders, thereby developing extreme competition among companies, people, and products. Thus, there is a pressure present that is forcing companies to change. In order for ERP implementation strategies to work, management must support the project (Beatty & Williams, 2006; Sankar, 2006). Other management issues are obtaining the right staff for the implementation, and how to address the reaction of users to the new system. It is important that management supports the ERP project. Top management commitment is critical to the success of a new or revised system (Bagranoff et al., 2005; Beatty & Williams, 2006; Sankar, 2006).

According to Tuteja (2005), the characteristics of a true ERP solution must be flexible to meet the changing needs of an enterprise, modules should be able to interface or detached from the

system without affecting other modules and have the capability to support multiple hardware platforms, the ability to support different functions within the organization, should not be restricted within the organization boundaries and the ability to assign accountabilities to the users controlling the system.

This study identified management attributes of implementing an Enterprise Resource Planning (ERP) system in the public sector. Al-Sehali (2000) conducted a study that investigated and determined the factors affecting the implementation of an ERP system in the International Arab Gulf States and United States companies. According to Al-Sehali's study, the major critical success factor for ERP implementation was top management support and involvement. The participants of this study were from 150 companies in the Arab Gulf States and in the United States.

Fisher (2002) conducted a study that focused on the factors that affected ERP implementation. Her study revealed that one of the barriers to the ERP implementation were the lack of top management involvement. Fisher (2002) identified one of the successes in implementing an ERP system as the change process. The participants from this study came from Fortune 500 companies and S&P 500 companies. Most of the studies revealed that top management support and involvement were the success factors when implementing an ERP system; however these studies were limited to mostly manufacturing companies.

METHODOLOGY

A quantitative survey was used to measure the perceptions and attitudes about the implementation of an ERP system. This survey was administered to members of the Association of Government Accountants (AGA), Guam Chapter. The AGA members consisted of individuals from the public sector. According to an AGA representative, there were 59 members that were currently associated or have been associated with the State Government: 55 members who are currently with the state government and 4 members who formerly worked with the state government out of a total of 110 AGA members. Only members with experience in the public sector were used.

RESEARCH QUESTIONS

1. *What top management characteristics are associated with successful implementation of the ERP system in the public sector?*
2. *What project manager characteristics are associated with successful implementation of the ERP system in the public sector?*

DATA COLLECTION

The researcher used Web-based software for data collection. This Web-based software is called the SurveyMonkey that designed, collected and analyzed the data of this study. In order for the participants to access the survey instrument, a password was required. The researcher provided the password to the AGA organization who then forwarded it to the AGA members.

SURVEY INSTRUMENT

The survey instrument used for this study was partially based on the instrument used by Harrison (2004) in her dissertation study. Several of the questions were modified to fit the purpose of this study (i.e., public sector). The survey instrument consists of the following parts:

1. Successful implementation
2. Top management characteristics
3. Project manager characteristics

Successful Implementation

Eight questions were used to measure perceived success. All items will be measured using a 5-point Likert-like scale: 1 (*strongly agree*) through 5 (*strongly disagree*). The sum of the scores represents the implementation measure.

1. The ERP system allows me to submit financial reports on time.
2. The ERP system allows me to produce better financial reports.
3. The ERP system allows me easier access to information.
4. The ERP system has eliminated redundant tasks.
5. The ERP system has improved internal communication.
6. The ERP system provides us with the necessary software to adapt easily to changes in the external environment.
7. The ERP system has improved relationships with our constituents.
8. The ERP system has improved relationships with other organizations we work with.

Top Management Characteristics

Six questions were used to measure this variable. All items will be measured using a 5-point Likert-like scale: 1 (*strongly agree*) through 5 (*strongly disagree*). The scores were summed, and the sum represented this variable:

1. Top management supported the ERP implementation process.
2. Top management was prepared to support the project team's efforts to manage change generated by the ERP system implementation.
3. Top management was knowledgeable about the ERP system.
4. Top management was knowledgeable about the government processes.
5. Top management was aware of the employees' reactions to the ERP implementation project.
6. Top management was prepared to deal with the employees' reactions to the ERP implementation project.

Project Manager Characteristics

Six questions were used to measure the project manager's characteristics. All items were measured using a 5-point Likert-like scale 1 (*strongly agree*) through 5 (*strongly disagree*). Scores were summed to arrive at the project manager measure:

1. The project manager was knowledgeable about the ERP system.
2. The project manager was knowledgeable about the government processes.
3. The project manager was skillful in project management.
4. The project manager was influential with top management.
5. The project manager kept top management abreast of the status of the ERP project.
6. The project manager kept employees abreast of the status of the ERP project.

DATA ANALYSIS

In order to analyze the successful implementation, the frequencies of strongly agree to strongly disagree was used to analyze these questions. Descriptive statistics was used to analyze these questions regarding successful implementation. The sum of the scores represents the successful implementation measure and identified as the dependent variable.

In order to analyze the first research question, the frequencies of strongly agree to strongly disagree was used to analyze these questions. Descriptive statistics was used to analyze these

questions regarding top management characteristics. The sum of the scores represents the top management measure and identified as the independent variable.

In order to analyze the second research question, the frequencies of strongly agree to strongly disagree was used to analyze these questions. Descriptive statistics was used to analyze these questions regarding project manager characteristics. The sum of the scores represents the project manager characteristics and identified as an independent variable.

Hypothesis

The following hypotheses were tested in the study:

H₁₀: A top management group that is knowledgeable will not be associated with successful implementation of the ERP system.

H_{1a}: A top management group that is knowledgeable will be associated with successful implementation of the ERP system.

H₂₀: A top management group that is supportive will not be associated with successful implementation of the ERP system.

H_{2a}: A top management group that is supportive will be associated with successful implementation of the ERP system.

H₃₀: A top management group that is aware of and prepared to deal with employees' reactions to the ERP project will not be associated with successful implementation of the ERP system.

H_{3a}: A top management group that is aware of and prepared to deal with employees' reactions to the ERP project will be associated with successful implementation of the ERP system.

H₄₀: A project manager that is skillful and knowledgeable will not be associated with successful implementation of the ERP system.

H_{4a}: A project manager that is skillful and knowledgeable will be associated with successful implementation of the ERP system.

H₅₀: A project manager that knows how to deal with top management will not be associated with successful implementation of the ERP system.

H_{5a}: A project manager that knows how to deal with top management will be associated with successful implementation of the ERP system.

H₆₀: A project manager that knows how to deal with employees will not be associated with successful implementation of the ERP system.

H_{6a}: A project manager that knows how to deal with employees will be associated with successful implementation of the ERP system.

Research Question 1

What top management characteristics are associated with successful implementation of the ERP system in the public sector? To analyze this, the following hypotheses were tested regarding top managements knowledge; support and awareness of employee's reactions:

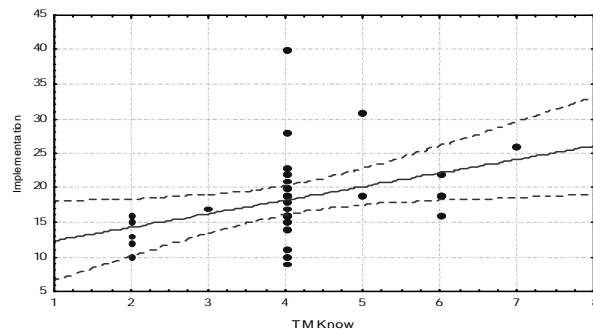
Hypothesis 1

H₁₀: A top management group that is knowledgeable will not be associated with successful implementation of the ERP system.

H_{1a}: A top management group that is knowledgeable will be associated with successful implementation of the ERP system.

The diagram shows that there is a positive correlation ($r = 0.3824$) between successful implementation and the knowledge of top management.

Figure 1: Successfulness of Implementation of ERP system given the knowledge of the Top Management.



General linear regression analysis reveals that knowledge of top management is a significant predictor for successful implementation ($F_{(1; 31)} = 5.307988$; $p = 0.0281$) at the 0.05 level of significance, thus the null hypothesis will be rejected in favor of the alternate hypothesis.

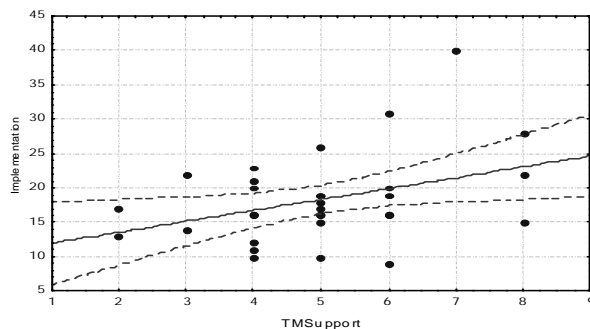
Hypothesis 2

H₂₀: A top management group that is supportive will not be associated with successful implementation of the ERP system.

H_{2a}: A top management group that is supportive will be associated with successful implementation of the ERP system.

The diagram shows that there is a positive correlation ($r = 0.3768$) between successful implementation and the support of top management.

Figure 2: Successfulness of Implementation of ERP system given the support of the Top Management



General linear regression analysis reveals that support of top management is a significant predictor for successful implementation ($F_{(1; 31)} = 5.129565$; $p = 0.0307$) at the 0.05 level of significance, thus the null hypothesis will be rejected in favor of the alternate hypothesis.

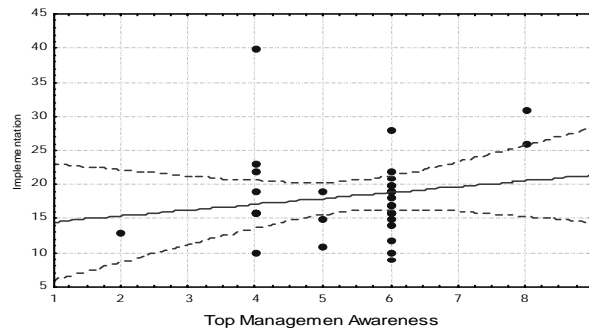
Hypothesis 3

H_{30} : A top management group that is aware of and prepared to deal with employees' reactions to the ERP project will not be associated with successful implementation of the ERP system.

H_{3a} : A top management group that is aware of and prepared to deal with employees' reactions to the ERP project will be associated with successful implementation of the ERP system.

The correlation between top management's awareness of employee's reaction associated with successful implementation of the ERP system was not significant ($r = 0.1672$) at the 0.05 level of significance.

Figure 3: Successfulness of Implementation of ERP systems given Top Management's awareness of Employee's reactions



General linear regression analysis reveals that top management's awareness of employee's reactions is not a significant predictor for successful implementation ($F_{(1; 31)} = 0.891723$; $p = 0.3523$), thus the null hypothesis will not be rejected at the 0.05 level of significance.

Findings Across the Subjects

The main characteristics identified as significant predictors for the success of implementation of the ERP system and government processes were top management's knowledge of the system and being prepared to support the project team's efforts to manage change generated by the ERP system implementation and the support of the implementation process. Top management's awareness of, and dealing with, employee's reactions to the ERP implementation project were not significant.

In general, regressions tests show that top management across all subjects plays a significant role in the successful implementation of the ERP System ($F_{(1;31)} = 6.148272$; $p = 0.0188$) at the 0.05 level of significance.

Research Question 2

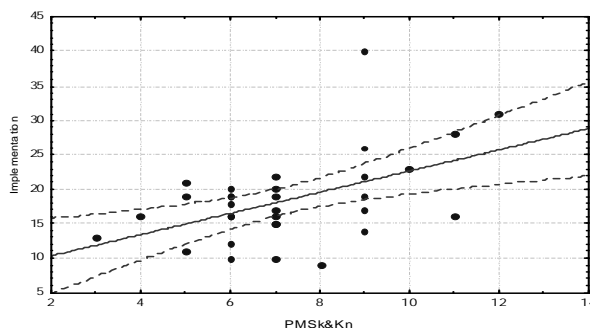
What project manager characteristics are associated with successful implementation of the ERP system in the public sector? To analyze this, the following hypotheses were tested regarding project manager's knowledge and skill; dealings with top management and employees reactions to the process:

Hypothesis 4

H_40 : *A project manager that is skillful and knowledgeable will not be associated with successful implementation of the ERP system.*

H_{4a}: A project manager that is skillful and knowledgeable will be associated with successful implementation of the ERP system.

Figure 4: Successfulness of Implementation of ERP system given the skills and knowledge of the Project Managers



The diagram shows that there is a positive correlation ($r = 0.5027$) between successful implementation and the project managers skills and knowledge.

General linear regression analysis reveals that project managers skills and knowledge is a significant predictor for successful implementation ($F_{(1;31)} = 10.48440$; $p = 0.0029$) at the 0.05 level of significance, thus the null hypothesis will be rejected in favor of the alternate hypothesis at the 0.05 level of significance.

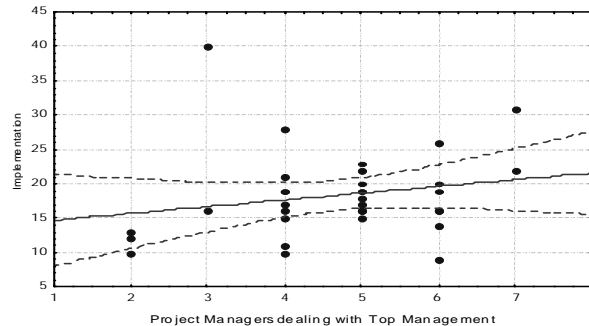
Hypothesis 5

H₅₀: A project manager that knows how to deal with top management will not be associated with successful implementation of the ERP system.

H_{5a}: A project manager that knows how to deal with top management will be associated with successful implementation of the ERP system.

The correlation between project manager that knows how to deal with top management associated with successful implementation of the ERP system was not significant ($r = 0.2061$) at the 0.05 level of significance.

Figure 5: Successfulness of Implementation of ERP systems given the Project Managers ability to deal with Top Management



General linear regression analysis reveals that a project manager that knows how to deal with top management is not a significant predictor for successful implementation ($F_{(1; 31)} = 1.37535$; $p = 0.2498$), thus the null hypothesis will not be rejected at the 0.05 level of significance.

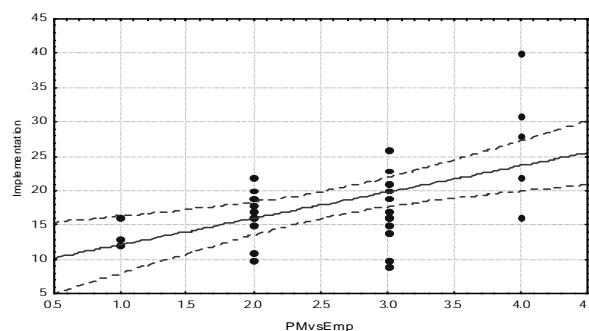
Hypothesis 6

H_0 : A project manager that knows how to deal with employees will not be associated with successful implementation of the ERP system.

H_a : A project manager that knows how to deal with employees will be associated with successful implementation of the ERP system.

The diagram shows that there is a positive correlation ($r = 0.5242$) between successful implementation and the project managers and their ability to deal with employees by keeping them abreast of the status of the ERP project.

Figure 6: Successfulness of Implementation of ERP system given the Project Managers ability to deal with Employees.



General linear regression analysis reveals that project manager and their ability to deal with employees by keeping them abreast of the status of the ERP project is a significant predictor for successful implementation ($F_{(1;31)} = 11.74572$; $p = 0.0017$) at the 0.05 level of significance, thus the null hypothesis will be rejected in favor of the alternate hypothesis at the 0.05 level of significance.

Findings Across the Subjects

The main characteristics identified as significant predictors for the success of implementation of the ERP system and government processes are project manager's skills and knowledge of the ERP system and project manager keeping employees informed regarding the status of the ERP project. The least important characteristic was the influence the project manager had with the top management and the project manager keeping them abreast of the status of the project.

In general, regression tests show that project managers across all subjects play a significant role in the successful implementation of the ERP system ($F_{(1;31)} = 9.727890$; $p = 0.0039$) at the 0.05 level of significance.

LIMITATION

This research study was limited to AGA members of the Guam chapter who worked with the Guam public sector. The total possible population of this study was 59 (100%) members at the time this study began, and of that population, 35 (59%) people chose to participate. Majority of the participants came from GPA, GWA, and OPA respectively. At the first opening of this study, a 45.8% (27) return rate was received. During the time of this study, the government of Guam was going through the modification of the current fiscal year budget as well as conducting its required annual independent audit. Most of the participants were from the accounting, finance, and budget department 83.3% (25) where they play an important role with the budget and independent audit process

FINDINGS

The findings of this study are reported by the research question.

Research Question 1

“What top management characteristics are associated with successful implementation of the ERP system in the public sector?”

The main characteristics identified as significant predictors for the success of implementation of the ERP system and government processes were top management's knowledge of the system and being prepared to support the project team's efforts to manage change generated by the ERP system implementation and to support the implementation process. Top management support and involvement were also found to be critical factors for a successful implementation from Al-Sehali (2000) and Fisher's (2002) study. However, top management's awareness of, and dealing with, employee's reactions to the ERP implementation project were not significant based on this study. In general, regressions tests show that top management across all subjects plays a significant role in the successful implementation of the ERP system.

Research Question 2

“What project manager characteristics are associated with successful implementation of the ERP system in the public sector?”

The main characteristics identified as significant predictors for the success of implementation of the ERP system and government processes are project manager's skills and knowledge of the ERP system, and project manager keeping employees informed regarding the status of the ERP project. The least important characteristic was the influence of the project manager had with the top management and keeping them abreast of the status of the project. In general, regression tests show that project managers across all subjects play a significant role in the successful implementation of the ERP system.

SUMMARY OF FINDINGS

The main characteristics identified as significant predictors for the success of implementation of the ERP system and government processes were top management's knowledge of the system; being prepared to support the project team's efforts to manage change generated by the ERP system implementation and to support the implementation process.

Project manager's skills and knowledge of the ERP system and keeping employees informed regarding the status of the ERP project.

Characteristics that were not significant contributors to the success of the implementation system were top management's awareness of employee's reactions; and project managers that knows how to deal with top management. The statistical results have been summarized in Table 1.

Table 1: Summary of Statistical Results				
Research Questions	Logistic Regression			
	Hypotheses	F-Statistic	$p < 0.05$	Result
1. What top management characteristics are associated with successful implementation of the ERP system in the public sector?	H ₁₀	$F_{(1; 31)} = 5.307988$	0.0281	Reject Null Hypothesis
	H ₂₀	$F_{(1; 31)} = 5.129565$	0.0307	Reject Null Hypothesis
	H ₃₀	$F_{(1; 31)} = 0.891723$	0.3523	Accept Null Hypothesis
2. What project manager characteristics are associated with successful implementation of the ERP system in the public sector?	H ₄₀	$F_{(1; 31)} = 10.48440$	0.0029	Reject Null Hypothesis
	H ₅₀	$F_{(1; 31)} = 1.37535$	0.2498	Accept Null Hypothesis
	H ₆₀	$F_{(1; 31)} = 11.74572$	0.0017	Reject Null Hypothesis

CONCLUSION

The main characteristics identified as significant predictors for the success of implementation of the ERP system and government processes were (a) top management's knowledge of the system; being prepared to support the project team's efforts to manage change generated by the ERP system implementation and to support the implementation process; and (b) project manager's skills and knowledge of the ERP system and keeping employees informed regarding the status of the ERP project.

Characteristics that were not significant contributors to the success of the implementation system were (a) top management's awareness of employee's reactions; and (b) project manager that knows how to deal with top management.

FUTURE RESEARCH RECOMMENDATIONS

The purpose of this study was to identify management attributes associated with the successful implementation of an ERP system in the Government of Guam. Based on the findings and conclusions, the researcher's suggestions for future research are as follows:

1. Conduct a study that identifies the risk factors in implementing an ERP system in the public sector.
2. Conduct a study that identifies the barriers of successful implementation in the public sector.

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APPENDIX A: HYPOTHESIS SUMMARY			
Hypothesis	Description	Null Hypothesis	Alternate Hypothesis
1	A top management group that is knowledgeable will be associated with successful implementation of the ERP system.	Rejected	Accepted
2	A top management group that is supportive will be associated with successful implementation of the ERP system.	Rejected	Accepted
3	A top management group that is aware of and prepared to deal with employees' reactions to the ERP project will be associated with successful implementation of the ERP system.	Accepted	Rejected
4	A project manager that is skillful and knowledgeable will be associated with successful implementation of the ERP system.	Rejected	Accepted
5	A project manager that knows how to deal with top management will be associated with successful implementation of the ERP system.	Accepted	Rejected
6	A project manager that knows how to deal with employees will be associated with successful implementation of the ERP system.	Rejected	Accepted

CULTURAL DIVERSITY AS AN ORGANIZATIONAL RESOURCE: SURVEY OF GUAM LEADERS

Ansito Walter, University of Guam
Marilyn C. Salas, University of Guam

ABSTRACT

The authors and University of Guam students enrolled in PA 405: Leadership Ethics in the Profession and PA 215: Supervision in Government Organizations reviewed the literature on cultural diversity in Guam and investigated the opinions of Guam leaders regarding what they believe to be the most important ways to promote peace and stability, social and economic prosperity, and a more culturally diverse future for Guam.

Leaders' responses to three survey questions provided data for focus group discussions, analyses, and validation. Overall findings indicated that the indigenous culture of Guam, Chamorro, needed to be preserved, promoted and showcased and at the same time, accept that cultural diversity is Guam's uniqueness and can be Guam's strength for social, cultural and economic development.

Guam is at an opportune place in its development for a comprehensive, consistent economic and social plan. With changing times due to population shifts, pending military build up, infrastructure needs, and small revenue generating sources, a comprehensive, thoughtful plan initiated by our leaders and the people of Guam will be a major step for the future development of our island.

INTRODUCTION

Why do we believe that a study about cultural diversity in Guam is important? What and how can this study contribute toward public and private organizations, better understanding of cultural sensitivity and competency for places with diverse social and cultural environments? How will this particular study enlighten and strengthen our understanding of cultural diversity as supervisors, managers, administrators, and leaders in a 21st century Guam and as a role model in the global economy?

Edward Taylor first defined the concept of culture in 1871 as a complex whole which includes knowledge, belief, art, law, morals, customs, and any other capabilities and habits acquired by man as a member of society. Culture is a traditional series of behavioral instructions transmitted from person to person or from generation to generation through time (Case, 1977). Culture plays a major role in shaping and determining our meanings and perceptions of reality (Covey, 1989). R.

Roosevelt Thomas Jr. depicted diversity as differences, similarities, and tensions that can and do exist between the elements of different mixtures [multiple races, gender, multicultural, multilingual, multi-religious society] of people (Hesselbein and Goldsmith, 2006).

People are the cornerstone of society or any known successful human organizations. The most successful organizations in the 20th and 21st centuries are those organizations that are people-centered; that place the greatest value in their stakeholders (customers, employees and associates). Employee diversity can and will increase imagination, creativity, innovation, group problem solving, and productivity (Kinicki and Kreitner, 2008; Schermerhorn/Hunt/Osborn, 2005).

Peter and Waterman Jr, (1982) depicted how understanding and harnessing cultural attributes had contributed toward the success and competitive advantage of the most excellent and innovative companies in the United States. Understanding people and cultures is not only vital but is a necessity. Understanding cultural diversity in the global economy is ethical; it is socially responsible to do things right and do the right things (Sims, 2003).

It is critical and indeed essential that today's organizational managers and leaders develop a mindset that values diversity and sees diversity as an organizational resource, while also seeing the integration of diversity into the organization's culture as the right and socially responsible thing to do. Organizations that view valuing and managing diversity as the ethical and socially responsible thing to do can reap the rewards of increased quality of service and productivity and improved organizational health.

GUAM'S HISTORY

Guam's history is a natural progression of cultural diversity. The migration of people to Guam changed Guam's composition and has contributed to Guam's cultural makeup.

Guam by comparison is the largest island in Micronesia, covering an area of approximately 225 square miles; 30 miles long and 4 to 9 miles wide. It is located at the southernmost end of a chain of fifteen islands called the Marianas in honor of Queen Maria of Spain. These islands are situated between the 13th and 20th parallels of north latitude, and along the 145th meridian east of Greenwich (Carano and Sanchez, 1964).

Although the history of the peoples of Guam and the rest of Micronesia remains a scientific conjecture, radio-carbon dating of cultural artifacts indicates that the Island of Guam and the rest of the Mariana Islands were settled around 2500 B.C. by Austronesian-Malayo-Polynesian seafaring speaking people descended from Malaysia, Indonesia and the Philippines. The early inhabitants of Guam and the rest of the Mariana Islands referred to themselves as "Chamorros". It seemed that they were the only ethnic group of the Mariana Islands and their Chamorro language which descended from an Austronesian-Malayo-Polynesian mother language appeared to be the only spoken language of the islands during ancient times (Alkire, 1972). The people and the islands were isolated from the outside world for more than three thousands years. There were reports that the

Mariana Islands were the most populated of the islands in Micronesia reaching to as many as 3,000 people. They were healthy and lived to be more than 100 years of age. The islands were free of major diseases like smallpox, venereal disease, and tuberculosis.

The discovery of Guam by Magellan on March 6, 1521 marks the beginning of a new era, a devastating wind of change that would alter the island, its people, their traditions and cultures. The Spaniards recognized the economic importance of Guam toward the galleon trades between Mexico and the Philippines and began colonial administration of the island in 1564 until 1898 for 334 years. Spain also introduced forceful change into the indigenous cultures so as to be in conformity with the norms and values of Christianity, which they so ethnocentrically believed and proclaimed as the right thing to do. As Guam and the rest of the Marianas continued to gain further economic exposure to the outside world by the Spaniards, more European explorers and traders became frequent visitors.

Through such encounters there emerged new cultures; a new mix of Chamorro-Spaniards, Chamorro-Mexicans, Chamorro-Filipinos, Chamorro-Italians, Chamorro-French, Chamorro-Scottish, and Chamorro-Carolinians (Salas, 2006; Underwood, undated). The Spanish colonial administration ended in 1898 when Spain lost the Spanish-American War fought in the Caribbean Islands.

As a result of the Spanish-American War, the United States annexed Guam in 1898. Guam is considered America's farthestmost "strategic prime real estate property" in the Pacific Ocean. A glance at a map of the Pacific area shows how strategically vital Guam's location is in reference to Japan, the Philippines, Australia, and mainland Asia. Its strategic location and its value as a base for future U.S. naval operations were principal reasons for keeping Guam. While he was the Assistant Secretary of the Navy, Franklin Delano Roosevelt stated that the "real value of the Island of Guam to the nation lies in its use as a naval base in the case of operations in the Pacific, and in this respect its [strategic vitality] toward the security of the United States, and world peace and stability cannot be overestimated (Carano & Sanchez, 1964:2)." With equal certainty, it might also be stated that in an age of jet planes and guided missiles, Guam's value cannot be overestimated (Carano and Sanchez, 1964). Hanson Baldwin, a military analyst, described the islands in Micronesia as being absolutely vital to the long range security of the United States (Nevin, 1977:72). They extend the potential range of the United States sea and air power by thousands of miles, yet are not close enough to the continent of Asia to be militarily vulnerable or politically provocative. Guam is the only Micronesian Island that flies the U.S. flag and the only forward-based site in the Pacific that can substitute as a military base for Okinawa, the Philippines and Japan. In a potential enemy's hands, Micronesia (Guam) would be a strategic nightmare to United States defense planners" (Nevin, 1977).

Because the United States considers Guam as strategically vital to its national security and world peace, the U.S. Department of Defense occupies one-third of the island, the Government of Guam owns one-third, and the remaining land is owned by local landowners. The United States has

administered Guam as an Unincorporated Territory since the signing of the Treaty of Peace in Paris on December 10, 1898 between the United States and Spain. On April 11, 1899 the island was proclaimed the island of Guam in the Mariana Islands, and shall continue to be known as Guam under the Organic Act of Guam (Carano & Sanchez, 1964); (Willens & Ballendorf, 2004).

With the exception of Guam, the Mariana Islands of Saipan, Rota, Tinian and the Northern Islands would be administered by Germany. Cultural, economic and social interactions between the Chamorros of Guam and the Northern Mariana Islands would inevitably be influenced by German ways. There emerged another face of cultural diversity, the Chamorro-Germans.

The Japanese held a brief administration of Guam from 1941-1944 as Japan attempted to wrestle the control of Guam from the United States during World War II. Although the Japanese colonial administration was brief, they were still able to introduce Japan's cultural ways and practices to Guam. There emerged the new Chamorro-Japanese.

When the United States retook possession of Guam during World War II and commenced to open the Island for trade and commerce in the 1950s, an influx of Micronesians and other foreigners began arriving in Guam. They included: Palauans, Filipinos, Japanese, Chinese, Indians, and Americans.

The accessibility of the islands by the new era of jet planes, the termination of the United Nations Trusteeship, and the signing of the Treaty of Compact of Free Association between the Freely Associated States (Federated States of Micronesia (FSM), Republic of the Marshall Islands, and the Republic of Palau) gave citizens of the Freely Associated States easy immigration entry to the United States and its insular areas. Guam is the first U.S. entry port.

Diversification expanded to the east in the mid 1970s when *Operation New Life* arrived in Guam with over 100,000 Vietnam refugees. In the mid 1990s, Guam became a stepping-stone for the Kurds of Afghanistan and Iraqis leaving their war torn homeland for entry into the United States. Subsequent movements of people have occurred but not in an organized manner. Guam has been a "hotspot" for Chinese dissidents who arrive in boats illegally.

In 1986, the Marshall Islands and the Federated States of Micronesia (Chuuk, Kosrae, Pohnpei and Yap) entered into a Compact of Free Association with the United States. In 1994, the Compact of Free Association for the Republic of Palau was approved. Under the Compact of Free Association, citizens of the Freely Associated States (Federated States of Micronesia (FSM), the Republic of the Marshall Islands (RMI), and the Republic of Palau (ROP) can freely enter the United States and its Insular Areas for education, employment, and training purposes. Since 1986, the Island of Guam has been inundated with immigrants from the FSM, RMI, and ROP. But the great majority are from the FSM, particularly Chuuk State which is closest to Guam. There are now Chamorro-Chuukese, Chamorro-Kosrean, Chamorro-Pohnpeians, Chamorro-Yapese, Chamorro-Marshallese, and more Chamorro-Palauans. Guam's cultural face changed again.

Guam witnessed and experienced a new era of economic boom during the 1990s, once the US Military eased military restrictions to Guam. Construction, tourism and hotel service industry

became the focal point of the economic boom. The economic boom brought additional Americans, Europeans, Southeast Asians (Chinese, Japanese, Filipinos, Koreans, Thai, Vietnamese, Indians, Laotians, Cambodians, Bangladeshi, Burmese), people from the Americas, South Pacific Islanders, and even more immigrants from the Freely Associated States of Micronesia.

Today, as Guam prepares for the transfer of 9,000 US marines, not including their dependents, from Okinawa to Guam in 2009 and 2010, Guam will again witness and experience another era of new arrivals of people. Another anticipated era of economic boom projected will be five times larger than what we saw and experienced during the economic boom of the 1990s.

Guam in the 21st century is a multilingual, multicultural, multi-religious society. It is dynamic and blessed with different “tastes and colors”. During the last 10-15 years, Guam has witnessed increased awareness of cultural diversity. As more people migrated to Guam for better work, educational opportunities, and quality of life, there has been a major shift in demographics. Of 171,019 people, in Guam, Chamorros are the largest population at 37 percent. The next largest population is Filipino, representing 26.3 percent of the population. Other populations in Guam make up less than 10 percent individually, and include: Asian (7 percent), Caucasian (6.8 percent), Chamorro mix (5.1 percent), Chuukese (4 percent), and Korean (2.5 percent). Other ethnic groups in Guam make up less than 2 percent each of the total Guam population (2006 Census and 2000 Census in the Comprehensive Historic Plan for Guam 2007-2011).

Ethnic cultural diversity has placed Guam at a higher level of competitive advantage as compared to the rest of Micronesia. There are more diverse restaurants here in Guam offering unique, delicious foods than anywhere else in Micronesia. The distinctive nature of its demographic composition makes Guam even more colorful. Salas (2006) uses the analogy of jelly bellies to describe Guam’s ethnic cultural diversity. Like jelly bellies, we are an island of colors- colorful people. Some colors are radiating now; others are dull. In Guam, there is a richness of languages and cultures and when people have the opportunity to live their languages and cultures, respect and appreciation of others will also develop. We will have a competitive advantage (Salas, 2006).

THE STUDY

In December 2007, a study was conducted to investigate the opinions of Guam leaders regarding what they believe to be the direction that is most important in promoting peace and stability, social and economic prosperity, and a better future for Guam and its cultural diversity. Leaders were defined as heads of their respective private, public or non-profit organizations.

A survey composed of three questions was developed for the study. The three questions were: 1. What is your vision for Guam? 2. Diversity of cultures on Guam will remain a reality. How can we harness/use the strength of cultural diversity for positive impacts on the people, government and economy of Guam? 3. Do you have any other comments regarding Guam and its cultural diversity?

Students in PA 405: Leadership Ethics in the Profession and PA 215: Supervision in Government Organizations participated in the selection of names and professions of leaders in private and public sectors who they considered influential in decision-making for Guam and its future development. The list of leaders ranged from mayors, bank presidents, senators, military officers, car dealers, consul generals, governor, bishop, chief of police, shopping center managers, educators, construction owners, government directors, justices among others.

Four Focus Groups (FG) composed of students in PA 405 and PA 215 were formed to distribute and collect written responses and/or interview selected leaders. Of 100 surveys distributed to leaders, 56 surveys were returned with responses. The distribution of leaders is presented in Table 1.

Representation	# of Leaders
Private Business	16
Mayors	15
Senators	8
Consul Generals	6
Government Directors	3
Military Leaders	2
Educators	3
Leaders of Island and Church	3
Total	56

After surveys were gathered, FGs participated in discussions and prepared a report of their findings. Their findings would validate the authors' analyses of the surveys.

FINDINGS

Overall, leaders in Guam communicated similar responses to the questions. These findings informed us of the leaders' unified thoughts based on their responses.

1. *What is your vision for Guam? The same themes were present in the responses to this question.*

These themes included:

Sound economy, economic growth, economically independent, improved infrastructure, environmentally-friendly people, Chamorro right to self-determination, home of the Chamorros- strive to promote and preserve our unique qualities (encourage language fluency, traditions, customs) while welcoming those who love our island, use collective abilities of diverse people, and community of peace.

2. *How can we harness/use the strength of cultural diversity for positive impacts on the people, government and economy of Guam?*

Themes included:

“Inafa’maolek”, showcase Chamorro-Chamorro cultural center, showcase all cultures, utilize cultural diversity to strengthen the community socially and economically, create recreational centers for changing interests and growing communities, employ people from diverse cultures, understand and respect diverse cultures, and sponsor education programs that highlight multiculturalism

3. *Do you have any comments regarding Guam and its cultural diversity?*

Themes included:

Make Guam a model for the rest of the world, Guam’s uniqueness is its diversity, strength is diversity, diversify in industry, accept cultural diversity, be proud of our culture, protect the island’s culture, heritage, traditions and language, a place of respect, charity, faith, hospitality, warmest and friendliest island, and we must promote and protect military relocation, infrastructure, and an intricately woven tapestry- provides warmth and security; something truly beautiful to behold.

When responses were combined by leadership groups, some significant points were shared. Guam’s Governor and Bishop’s vision were for building a community of peace and strengthening the foundation of our community.

Responses from the Mayors of Guam who work closely with the community indicated that they had the strongest voices about having pride in our Chamorro culture. They were also very positive about embracing cultural diversity through summer programs for kids, sports and recreation activities in the community.

Senators as well as leaders in government operations referred to the Chamorro term “inafa’maolek” or working together to keep peace and harmony. “Inafa’maolek” is the umbrella or

all encompassing value that depicts respect, care, sharing, giving, understanding and helping. In the Chamorro culture, these elements encourage healthy social interactions.

Leaders in private businesses focused their responses on the economic growth of Guam. They found it important to be on the cutting edge of development, to employ people from different cultures, and to diversify within the economy.

DISCUSSION

There was never a dull moment in the history of Guam. The Chamorros witnessed new arrivals of people to Guam, with different “tastes and colors”, who would find their places in an evolving island. People came for various reasons: a new life, carrying out military missions, exploration, Catholicism, sharing new religions, touring, seeking new business ventures, and more. The reasons are extensive. In their eternal value of inafa’maolek, the Chamorros showed their hospitality.

Based on FG’s discussions and reports and the authors’ analyses, the overarching finding was that leaders agreed that the indigenous culture of the island, *Chamorro*, needs to be preserved, promoted and showcased through various programs throughout the island. The frequency of responses to enhance the Chamorro culture is significant. If you are knowledgeable of the history of Guam, the hospitality of the Chamorro people, and are doubly aware of the future direction of Guam, then preserving and promoting the indigenous culture of the island should be taken seriously and planned respectfully by all leaders. It would be advantageous to utilize the Chamorro culture as a foundation for Guam’s social and economic development.

At the same time that leaders encourage the promotion of the Chamorro culture, there is an acceptance that cultural diversity is here to stay. History has recorded the journey of people to Guam. Faced with newcomers to Guam, the indigenous people continued with their practices and traditions and added practices that had meaning to their daily lives whether consciously or unconsciously. Cultural diversity is Guam’s uniqueness and it can also be Guam’s strength. As Honorable Justice Steven Unpingco of Guam stated in his address to University of Guam’s Student Government, “we shall always respect an environment with diversity because diversity is our strength not our weakness”. In every speech you make, every opportunity to talk to people, remember to share the richness of ethnic diversity in our island of Guam whether it be through using another language, singing songs, sharing proverbs, stories, and/or jokes. Your actions will celebrate the colors of people represented in Guam. An island of this size has done a remarkable job of “inafa’maolek”.

Understanding and appreciating the diversity of our cultures is important to social and economic development and promotes peace and stability. Walter (Sept. 2007) emphasized the importance of education training for building appreciation through situational examples of Micronesian experiences.

Our economy is based on tourism and the U.S. military. Responses from leaders indicated a desire to seek additional industries and explore diversification within industries. Throughout history, the Chamorros welcomed people to Guam with their finest Chamorro hospitality. How it was received and used or abused is another research study.

Leaders must continue to invite the participation of our island community who hold unique traditions, cultures, languages and lifestyles of our island population as they plan programs for successful social and economic development. For too long, island leaders have focused on tourism and the military for building Guam's economy with less attention to the source for successful economic development – the people of the island who can help shape the quality and health of Guam.

Leadership concerns regarding Guam's infrastructure, U.S. military relocation, right to self-determination, respect for the Chamorro culture and an appreciation for cultural diversity should be addressed in the spirit of "Inafa'maolek".

Finally, leaders' positive recommendations for harnessing and utilizing cultural diversity for Guam's future social, cultural and economic development are refreshing and offer recommendations for private and public organizations in Guam.

RECOMMENDATIONS

These findings indicate that Guam is at an opportune place in its development for a comprehensive, consistent economic and social plan. With changing times due to population shifts, pending military build up, infrastructure needs, and small revenue generating sources, a comprehensive, thoughtful plan for Guam initiated by our leaders and the people of Guam will be a major step for the future development of our island.

Throughout history, the people of Guam have lived with heterogeneity. Using Gardner's thoughts (1990), it is time to seriously design Guam to handle cultural diversity and to survive changes and, when necessary, seek changes.

CONCLUSION

Do not take cultural diversity for granted. It should be respected, recognized and utilized if our desire is for social and economic prosperity. Respect the culture of the land (Chamorro) and at the same time celebrate the diverse cultures that have found their home in Guam.

Frederick Haribison once said, "The progress of a nation depends first and foremost on the progress of its own people. Unless it develops their human spirit and human potentialities, it cannot develop much else economically, politically, and socially" (Schramm, 1964: 27).

Maciariello (2006) states that an organization (Guam) that is high in spirits builds and develops the strength of each person. Furthermore an executive who encourages the spirit of

performance in daily practice is a leader. A leader lifts a person's vision to higher sights, raises a person's performance to a higher standard, and builds a person's personality beyond normal limitations. We must work extremely hard with pride and humility. God will do the rest (Carson & Murphy, 1992).

In our history of cultural diversity, in our experiences with new groups of people, we must accept that we are ONE FAMILY on this beautiful Island of Guam. Let us move forward together in harmony.

Who will make this happen? Who will lead?

Si Yu'os Ma'åse'! (Thank you!)

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ATTITUDES OF SOUTH KOREAN COLLEGE STUDENTS TOWARDS GLOBALIZATION

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ABSTRACT

This study measures the attitudes towards globalization of 95 South Korean college students at a private university in Seoul, South Korea. The 53 male and 42 female respondents were Business Administration majors. Using the Program on International Policy Attitudes (PIPA) questionnaire, attitudes towards globalization were classified into two major groups 1. attitudes towards economic globalization and 2. attitudes towards cultural globalization (PIPA, 2000). Overall, the results show that these students feel positive about economic and cultural globalization.

Of the 13 items measuring economic globalization, there was a statistically significant difference in the replies of male and female respondents when asked if globalization was good for the environment. The female respondents tend to be less enthusiastic when asked if globalization was good for the environment compared to their male counterparts. Although the question on the environment was only one of the 13 items in the PIPA questionnaire under economic globalization, the results strengthen previous studies that showed that females tend to be cautious towards globalization compared to their male counterparts (Czepiec, Roxas, Jao and Suplico, 2007).

The replies of male and female respondents to the 10 items measuring cultural globalization showed no significant difference. This implies that male and female respondents find cultural globalization easier to embrace rather than economic globalization.

This positive attitude towards economic and cultural globalization implies that the students surveyed can be potential consumers of global products.

INTRODUCTION

In 2007, Dr. Helena Czepiech, Dr. Juanita Roxas and Yin-Tzu Jao of California State University and the author wrote a paper on the College Women's Attitudes Towards Globalization: Comparing Views from the US, Taiwan and the Philippines. The study showed that college students surveyed in these three countries had favorable attitudes on globalization (Czepiech, Roxas, Jao and Suplico, 2007). While on a stint as visiting professor in Seoul, the author decided to study the attitudes towards globalization of college students in a private university.

The A.T. Kearney Globalization Index ranked South Korea as the 29th most global economy in the world based on rankings of 62 countries in 2006 (A.T. Kearney Globalization Index.

Retrieved February 11, 2008 from <http://www.atkearney.com>). The Globalization Index was based on technological, political and economic factors. The Index does not measure attitudes towards globalization. However, AC Nielsen's global online survey on consumers' attitudes on globalization showed that one-fifth of South Koreans did not agree that global companies allow consumers to gain access to the same quality of goods and services available to anyone else in the world (Consumer Insights into Globalization. Retrieved February 12, 2008 from http://www2.acnielsen.com/reports/index_consumer.shtml). This attitude reflects a concern that globalization may threaten the viability of Korean-made products.

Gi-Wook Shin (2006) stressed that Korea's strong nationalist character does not oppose globalization. On the contrary, this nationalism is a strong feature of Korean globalization. According to Shin (2006), the Koreans view globalization as a means to achieve a competitive edge for the nation. As an example, Shin cites the Korean attitude towards the English language. He pointed out that Koreans would support making English their second official language since it could enhance their national interests but they would not support it as the official language that would replace Korean. Further, Shin (2006) noted that nationalism and globalization can coexist in South Korea.

The South Korean government decided to pursue the "Segyehwa (globalization)" policy in late 1994 (Shin, 2006). As part of segyehwa, the government encouraged greater competition, privatization, and deregulation within the booming Korean economy (South Korea. Retrieved April 9, 2008 from <http://www.tiscali.co.uk/reference/encyclopaedia/hutchinson/m0019805.html>). To develop a competent workforce who can think and work globally, the government planned to shorten the compulsory military duty for young males who volunteer for foreign aid services as part of its efforts to encourage global youth leaders (Dae-wong, 2008). Further, the government, corporate and education sectors agreed to increase the number of young Koreans who will be familiar with foreign languages and culture.

Exposure to foreign languages and cultures have become easier with the popularity of Korean films, TV dramas and pop music. This phenomenon, known as the "Korean Wave", has exposed Koreans to foreign cultures in their own country (Chul-keun, 2008). The Korean Wave contributed to the increase of incoming tourists to South Korea. The number of foreign tourists traveling to South Korea leapt from 2.8 million in 2003 to 3.7 million in 2004 (Faola, 2006). The bulk of these tourists were Korean Wave-loving Asian women.

With the deregulation of outbound pleasure travel by the South Korean government in 1989, and the national obsession with globalization, overseas travel had increased at an annual average growth rate of 21.3% prior to the Asian economic downturn (Lim, 2003). South Koreans made the United States their No. 1 choice when they make their first trip abroad (Frank, 1995). In 1994, the South Koreans became the third largest national group, behind Japan and Hong Kong, in the number of incoming tourists to the US (Frank, 1995).

South Koreans also like to travel to Asian countries. The number of South Korean tourists to Japan exceeded the number of Japanese tourists to South Korea for the first time in about 40 years in 2007 (Retrieved April 10, 2008 from <http://search.japantimes.co.jp/cgi-bin/nn20071126a5.html>). Some 1.96 million South Koreans were estimated to have visited Japan between January and September 2007, an increase of 24.9 percent from 2006.

South Korea is one of Thailand's most rapidly-growing tourist markets (Retrieved April 10, 2008 from <http://sg.biz.yahoo.com/080212/16/4ejrb.html>). Thailand has become the third most popular destination for Korean tourists, following China and Japan. Next to the Japanese, the South Koreans were the second largest tourists in China (Retrieved April 10, 2008 from http://www.accessmylibrary.com/coms2/summary_0286-18874294_ITM).

South Koreans were the number one tourists in the Philippines as of 2007 (Espino, 2007 and Cerralbo, 2008). Government records showed a 51 percent increase in Korean tourist arrivals from 378,602 in 2003 to 572,133 in 2006. Likewise, South Koreans were the number one tourists in Vietnam as of 2007 based on records from Vietnam National Administration of Tourism (Retrieved April 11, 2008 from http://goliath.ecnext.com/coms2/gi_0199-6295156/South-Korea-knocks-China-off.html#abstract). The records showed that 422,000 South Koreans visited Vietnam in 2007, which showed an annual 29.4 percent increase.

Over 13 million Koreans traveled to foreign countries in 2007 (Retrieved April 11, 2008 from <http://www.mysin Chew.com/node/7714>). As the number of Koreans traveling overseas exceeded the expenditure of foreigners who visited South Korea in 2007, Korea's tourism deficit hit a record high of USD10.1 billion according to data from Korea Tourism Organization.

This study aims to find out if South Korean college students at a private university in Seoul have favorable or unfavorable attitudes towards globalization. Students represent an important consumer group that can be a large market for global products (Cateora and Graham, 2006). The "global youth" market consists of 500 million consumers with USD100 billion to spend (Kerin, Hartley, Berkowitz and Rudelius, 2006). These teenagers are in Europe, North and South America and industrialized nations of Asia such as South Korea. Their attitudes towards globalization can help marketers prepare effective marketing strategies.

THEORETICAL FRAMEWORK

The marketplace is becoming more dynamic as technological advances in transportation, shipping and communication have made it easier for firms to market in other countries and easier for consumers to buy global products (Kotler and Keller, 2006). Defined as the acceptance of the democratic free enterprise model and new communication technologies, such as the Internet, that connect countries, globalization is one of the forces that has changed marketing (Kotler and Keller, 2006). As a complex force, globalization has affected the economic, political and cultural spheres. Economic globalization refers to the greater global connectedness of livelihood especially the

production of goods and services while cultural globalization refers to the life influenced by the diffusion of commodities and ideas mediated by international travel and the Internet (Economic and Cultural Globalization. Retrieved November 1, 2007 from <http://www.britannica.com/eb/article-9344667/globalization>). This study was limited to attitudes towards economic and cultural globalization.

In the global marketplace, there are opportunities for firms to introduce products to foreign markets. The products' success depends on various factors such as effective marketing strategies. Some scholars argue that globalization has led to a global market for standardized products, particularly to the young middle class (Levitt, 1983). Other scholars, however, showed empirical evidence that global standardization may not be an effective marketing strategy due to cultural factors that will influence consumer behavior (De Mooij, 2000; Kotler and Keller, 2006; Suh and Kwon, 2002 and Yenyurt and Townsend, 2003).

Culture and Consumer Behavior

Since consumer behavior is influenced by cultural, social and personal factors, consumer needs vary and marketing strategies should be tailored to each target group (Kotler and Keller, 2006). Kotler and Keller define culture as the fundamental determinant of a person's wants and behavior that can affect a global product's acceptance (2006). Culture can be narrowed down to subcultures (2006). They refer to subcultures as nationalities, religions, racial groups and geographic regions. An example of subculture will be the Hispanic-Americans whose income levels are rising. Thus, companies, such as banks and insurance firms, adapted their financial services to attract the Hispanic-American consumers.

Like Kotler and Keller (2006), Kerin, Hartley, Berkowitz and Rudelius (2006) agree that culture and subculture affect consumer behavior. They define culture as the set of values, ideas and attitudes that are learned and shared among the members of the group while subcultures are subgroups such as Hispanic-Americans, African-Americans and Asian-Americans (2006). According to them, the Asian-Americans, which are the fastest growing subculture in the US, consist of Chinese, Japanese, Filipinos, Indians and Koreans. This subculture is so diverse that Anheuser-Busch adapted eight different varieties of California-grown rice to Asian-American consumers and different kind of rice bowls to Chinese, Japanese and Koreans (Kerin, Hartley, Berkowitz and Rudelius, 2006).

De Mooij argues that there is a need to adapt global marketing strategies to cultural factors in various countries (2000). Suh and Kwon point out that global adaptation is a better strategy since cultural dynamics are important in global markets (2002). Yenyurt and Townsends' study also showed that some of Hofstede's cultural dimensions, such as power distance, individualism and uncertainty avoidance affect the acceptance of global products (2003).

Hofstede's Cultural Dimensions and Consumer Behavior

Gert Hofstede defines culture as the collective mental programming which is being shared by members of a nation, region or group but not with members of other nations, regions or groups (1983). The cultural dimensions are measured on a scale from 0 to 100 index, although some countries may have a score below zero or above 100, because they were measured after the original score was finalized (De Mooij, 2000). According to De Mooij, Hofstede's cultural dimensions were based on an extensive IBM database of 116,000 questionnaires in 20 languages used in 72 countries (2000). Recent replications showed that Hofstede's country scores, based on findings in 1970, were still valid. Thus, a substantial number of crosscultural studies used Hofstede's cultural dimensions as part of their theoretical framework (De Mooij, 2000; Rhee, Yunna, 2002; Yeniyurt and Townsend, 2003 and Kim, Jinwoo; Lee, Inseong; Choi, Boreum; Hong, Se-Joon Hong; Tam, Kar Yan; Naruse, Kazuaki and Maeda, Yumi, 2004).

Hofstede defines cultures to have the following dimensions (1983):

Power Distance (PDI)

This refers to the extent to which the less powerful members of organizations and institutions, such as the family accept and expect that power is distributed unequally. Cultures with a high degree of power distance tend to be conservative. In a culture characterized by high power distance, consumer behavior tends to be less open to new ideas and products (Yeniyurt and Townsend, 2003).

Individualism (IDV)

This is the degree to which individuals are integrated into groups. Individualistic cultures are characterized as societies where the ties between individuals are loose while collective cultures are societies in which individuals are integrated into strong and cohesive groups. Individualistic cultures tend to give more importance on their own and their immediate family's well-being while people in collective cultures feel that they belong to a group, whose overall well-being supersedes the needs of the individual (Yeniyurt and Townsend, 2003). Consumers in individualistic cultures will be more open to new ideas and products (Yeniyurt and Townsend, 2003).

Masculinity (MAS)

This is the extent that cultures carry masculine values of assertiveness, achievement, wealth-acquisition and competitiveness. Masculine cultures tend to be assertive and competitive. On the other hand, feminine cultures tend to be caring and modest. Masculine cultures tend to have more innovative consumers who are likely to accept new ideas and products (Steinkamp et al as cited in Yenyurt and Townsend, 2003).

Uncertainty Avoidance Index (UAI)

This refers to extent in which people feel uncomfortable in the presence of vagueness and ambiguity. Uncertainty avoiding cultures tend to minimize the possibility of vagueness by strict laws and rules, safety and security measures. They tend to be emotional and motivated by nervous energy. On the other hand, uncertainty accepting cultures tend to tolerate the opinions different from what they are used to. Further, they have less laws and structures. Cultures with low uncertainty avoidance will tend to be more accepting of new ideas and products (Yenyurt and Townsend, 2003).

South Korean Culture and Consumer Behavior

Hofstede's Cultural Indices for South Korea and Implications to Consumer Behavior (Hofstede's Cultural Indices. Retrieved June 18 from http://www.geert-hofstede.com/hofstede_south_korea.shtml):

Power distance (PDI)

South Korea has a high PDI of 60 compared to the world average of 56.5. This index is higher than the Japanese PDI of 54 and the American PDI of 40. This implies that South Korean consumers will tend to be more conservative in accepting new ideas and products.

Individualism (IDV)

South Korea has a low IDV of 18 compared to the world average of 50. This is lower than the US IDV of 91 and the Japanese IDV of 46. As a collective culture, South Korean consumers will tend to be more conservative in accepting new ideas and products.

Masculinity (MAS)

South Korea has low MAS of 39 compared to the world average of 65. This is lower than the US MAS of 62 and the Japanese MAS of 95. This shows that South Korean culture is a feminine culture. It implies that South Korean consumers will tend to be more conservative in accepting new ideas and products. However, this dimension will not be used in the study's framework since this was not proven empirically in the study of Yenyurt and Townsend (2003).

Uncertainty Avoidance Index (UAI)

South Korea has a UAI of 85 which is higher than the world average of 51. This is higher than the US UAI of 46 and lower than the Japanese UAI of 92. The high UAI implies that South Korean consumers will tend to be more conservative in new ideas and products.

Literacy and Trade Openness Negatively Moderates Hofstede's Cultural Indices on Consumer Behavior

In their study of 56 countries, which included South Korea, Yenyurt and Townsend (2003) concluded that literacy and trade openness moderate the influence of Hofstede's cultural indices on consumer behavior. Literacy was defined as the percentage of adults ages 15 and above who can read and write a short and simple statement about their daily lives (World Bank definition as cited in Yenyurt and Townsend, 2003). On the other hand, trade openness was defined as the ratio of imports and exports of goods and services to the GDP of the country (Rodrik as cited in Yenyurt and Townsend, 2003). This study showed that literacy and trade openness have negative moderation effects on the relationship between cultural dimensions and new product acceptance.

In countries that have lower literacy rates, cultural dimensions on the acceptance of global products are stronger than in countries that have higher literacy rates (Yenyurt and Townsend, 2003). This implies that countries that have developed educational systems will have consumers who are less likely to be affected by their national cultural values than in countries with less developed educational systems. High literacy rates can encourage consumers to understand foreign cultures and, thus, accept foreign products (Yenyurt and Townsend, 2003). Consumers in countries that have a high degree of trade openness will have more exposure to foreign products and services and, thus, will be more open to new ideas and products. Strong educational infrastructure and an open market structure act as suppressors of the cultural differences among various countries (Yenyurt and Townsend, 2003). Consumers in these countries are likely to adopt new ideas and products.

Literacy

As of June 2008, South Korea's high literacy was 97.9% of the population (Retrieved June 25, 2008 from <https://www.cia.gov/library/publications/the-world-factbook/geos/ks.html#Econ>). Men had a 99.2% literacy while women had a 96.6% literacy. South Korea's economic success has been attributed to its obsession with education (Seth, 2002). As the country became an industrial power, the general level of educational attainment remained higher than in almost all other nations at a similar level of GNP level per capita (Seth, 2002). Parents send their children to study overseas and overseas travel has enhanced the understanding of foreign cultures and products.

Trade Openness

In constructing an index of country market potential, Cavusgil, Kiyak and Yeniyurt (2004) used market receptivity as a dimension. The measure of market receptivity was trade as a percent of GDP or trade openness. In terms of market receptivity (trade openness), South Korea ranked 18 out of 90 countries (Cavusgil, Kiyak and Yeniyurt, 2004). The lower the rank, the more open the country. Those who were ranked 1-5 respectively were Singapore, Canada, Hong Kong, Ireland and Malaysia. Countries that were considered least open were Peru and Pakistan (both ranked 84) and Argentina, Brazil, Bangladesh and India (all ranked 86th). This implies that S Korea showed more trade openness than other countries.

According to Cavusgil, Kiyak and Yeniyurt (2004), other dimensions of foreign market potential from the perspective of the US exporter were market size (measured by urban population), market growth rate (measured by GDP growth rate) and infrastructure (measured by paved roads, Internet access, phone, tv and radio). South ranked 13th in terms of market size, 8th in terms of market growth and 27th in term of infrastructure. This implies that South Korea is an attractive market for US exporters.

Literacy and Trade Openness Facilitates Favorable Attitudes Towards Globalization

Literacy and Globalization

Literacy can also promote favorable attitudes towards economic and cultural globalization (Hainmueller and Hiscox, 2006). Educated consumers in countries with high degree of trade openness are exposed to economic ideas about the efficiency of economies associated with foreign trade. These consumers are less prone to nationalist and anti-foreigner sentiments often linked with protectionism. They are likely to think of the benefits of globalization in their country and the world, especially if they are exposed to economics classes or world trade theories (Hainmueller and Hiscox, 2006). Increased education, especially college education, tends to socialize students to

have tolerant, cosmopolitan and globalized views of the world. These students learn to appreciate and understand foreign cultures. They are likely to have favorable attitudes towards globalization (Hainmueller and Hiscox, 2006). As consumer, they are likely to accept new ideas and products.

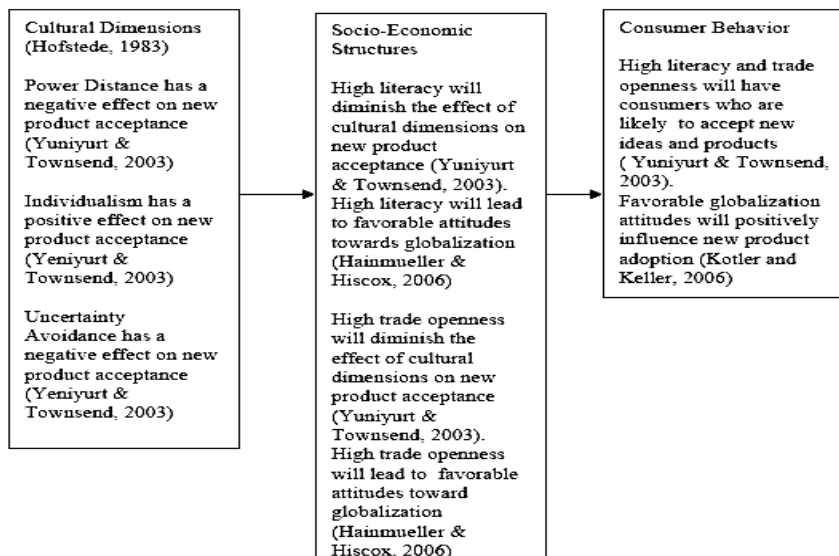
Trade Openness and Globalization

Trade openness, like education, expose college students to foreign products and services. Eventually, these college students experience the benefits of trade openness such as exposure to a wide variety of goods and services. Thus, they become consumers who have a flexible and broadminded view of the world (Hainmueller and Hiscox, 2006).

Attitude Influences Consumer Behavior

Kotler and Keller define an attitude as a person's enduring favorable or unfavorable evaluation, emotional feeling, and action tendencies toward an object or idea (2006). They stress that attitudes put people into frame of thinking; liking or disliking an object, moving toward or away from it. Attitudes can influence consumer behavior (Kotler and Keller, 2006). Thus, consumers who favor globalization are likely to adopt global products.

Figure 1 shows the study's framework (Kotler and Keller, 2006; Hainmueller and Hiscox, 2006; Hofstede, 1983 and Yuniyurt and Townsend, 2003):



METHODOLOGY

Survey Instrument

Attitudes towards globalization (Table 1) were classified into two major groups: 1. attitudes towards economic globalization and 2. attitudes towards cultural globalization. The survey instrument, which used a five-point Likert scale, used questions from the Program on International Policy Attitudes (PIPA) study (Americans on Globalization. A Study of US Public Attitudes. Retrieved on February 12, 2008 from http://www.pipa.org/OnlineReports/Globalization/AmericansGlobalization_Mar00/AmericansGlobalization_Mar00_rpt.pdf). This was also the same survey instrument that was used in the study on College Women's Attitudes Towards Globalization: Comparing Views from the US, Taiwan and the Philippines (Czepiech, Roxas, Jao and Suplico, 2007).

Table 1: Measures of Attitudes Towards Economic and Cultural Globalization

Economic Globalization

Globalization is good for the South Korean economy.

Globalization is good for the world economy.

Globalization is good for our environment.

Our country should actively promote international trade.

The growth of international trade has increased the gap between rich and poor in South Korea.

In international trade, our country receives more benefits than other countries.

Foreign investment in our country is necessary and has a positive influence on our economy.

I support the South Korean participation in the World Trade Organization.

I favor free trade to promote lower prices for consumers.

South Korea is more open to imports than other countries

I favor restrictions on foreign imports to protect jobs in South Korea.

South Korean students are well prepared for the kind of global economy that will emerge over the next twenty years.

Cultural Globalization

I would like to take a trip around the world.

I am interested in the culture of other countries.

I would feel lost if I were in a foreign country.

I like to visit places that are totally different from my home.

The South Korean news media covers enough international news.

Globalization has a positive impact on my culture.

Globalization is good for consumers like me.

Globalization is good for my own standard of living.

I am glad that more foreign stores (for example, McDonalds or Starbucks) are opening in our country.

I like foreign pop culture such as music, television and movies.

Source of Data: Program on International Policy Attitudes at the University of Maryland.

<http://www.worldpublicopinion.org/>

Prior to the main study, the researcher conducted a pilot test with 40 college students. The results from this pilot study provided the researcher ideas on how to further improve the questionnaire. Thus, survey questionnaires were pretested before these were officially administered. The Class President and the researcher assisted the respondents in answering the survey questionnaires. Since the questionnaires were in English, the Class Presidents translated each item to Korean in various Marketing and Economics classes. After each item was translated to Korean, the respondents answered the questionnaires. The items on economic and cultural globalization were randomly mixed to prevent a reference bias.

Sample

Four questionnaires were excluded because they have incomplete information. This study used a sample size of 95 college students. There were 53 male and 42 female respondents. They were college sophomores, juniors and seniors. These respondents majored at Business Administration at a private university in Seoul. Convenience sampling was used. A z-test was used to find out if the responses between male and female respondents were statistically significant using SPSS software (Hair, Bush and Ortinau, 2006 and Cooper and Schindler, 2006).

RESEARCH FINDINGS

Respondents Profiles

Age	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
20	1	1.89	2	4.76	3	3.16
21	2	3.77	5	11.90	7	7.37
22	3	5.66	9	21.43	12	12.63
23	47	88.68	26	61.90	73	76.84
Total	53	100.00	42	100.00	95	100.00

Table 2 shows that most respondents (76.84%) were 23 years old. This implies that the respondents' average age is older than the Asian median age of 20.3 years (Retrieved April 14, 2008 from <http://www.popline.org/docs/0825/054514.html>) and younger than the South Korean median age of 35.8 in 2007 (Retrieved April 14, 2008 from <https://www.cia.gov/library/publications/the-world-factbook/geos/ks.html>).

The South Korean population as of July 2007 reached 49,044,790 million (Retrieved April 14, 2008 from <https://www.cia.gov/library/publications/the-world-factbook/geos/ks.html>). Of those in the 15-64 years old, there were 18,004,719 men compared to only 17,346,594 women (Retrieved April 14, 2008 from <https://www.cia.gov/library/publications/the-world-factbook/geos/ks.html>)

Table 2 shows that there were only 4 age group classifications. Since the age difference between the respondents were small, age as a predictor of attitudes towards globalization was not used in this study.

Number	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
Below 444	2	3.77	0	0	2	2.11
445-888	0	0	5	11.90	5	5.26
889-1333	0	0	0	0	0	0
1334-1777	3	5.66	1	2.38	4	4.21
1778-2222	8	15.09	2	4.76	10	10.53
2223 and up	40	75.47	34	80.95	74	77.89
Total	53	100.00	42	100.00	95	100.00

Table 3 shows that 77.89% of the respondents' average family income is within the bracket of USD2223 and above. This implies that respondents come from well-to-do families.

Response	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
Yes	6	11.32	3	7.14	9	9.47
No	47	88.68	39	92.86	86	90.53
Total	53	100.00	42	100.00	95	100.00

Table 4 shows that 90.53% of the respondents during the last five years did not have a family member who lost a job, or leave because the plant or company closed or moved due to insufficient work or another similar reason. One of the anti-globalization sentiment is that globalization results to unemployment (Harrison, 2007).

Economic Globalization

	Males	SD	Females	SD
Globalization is good for the economy	4.094	0.791	4.024	0.811
Globalization is good for the world economy	4.038	0.999	3.786	0.951
Globalization is good for the environment	3.509*	1.049	3.000*	1.148
Country should promote international trade	4.245	0.830	4.143	0.843
International trade has increased the gap between rich and poor (Negative)	3.811	1.093	3.548	1.017
In international trade, our country receives more benefits than other countries	3.528	0.932	3.429	1.063
Foreign investment in our country is necessary and has a positive influence on our economy	4.000	0.877	3.643	0.983
Foreign investment is dangerous (Negative)	3.057	1.099	3.071	1.045
Support participation in the World Trade Organization	3.981	1.047	4.167	0.660
Favor free trade to promote lower prices for consumers	3.962	0.831	3.810	0.833
Country is more open to imports than other countries(Negative)	2.981	1.201	2.952	0.909
Favor restrictions on imports(negative)	3.038	0.96	2.976	1.115
Students ready for global Economy	3.264	1.129	3.119	0.993
1: Most Negative 5: Most Positive				
*Statistically significant at $\alpha = .05$				

When asked if globalization is good for the environment, the replies of male and female respondents showed statistically significant differences. The male respondents agreed that globalization was good for the environment while the female respondents tend to be cautious about the effect of globalization on the environment. This finding validates the results of College Women's Attitudes Towards Globalization where American females tend to be less enthusiastic towards globalization compared to American males (Czepiec, Roxas, Jao and Suplico, 2007).

As shown in Table 5, the male and female respondents favor economic globalization. Gender seems to have little impact on their views about globalization. Except for one item which related globalization to good environment, the mean scores were not statistically different. This finding validates studies that show that younger respondents, ages 16-29, are more positive towards globalization than those 50 years and older in France, Indonesia, Iran, Mexico, Poland, Russia,

Ukraine and the US (Retrieved April 14, 2008 from www.worldpublicopinion.org/pipa/articles/home_page/349.php?nid=&id=&pnt=349&lb=hmpg1). It also strengthens existing studies that show that there seems to be a stronger support for economic globalization in export-oriented economies such as China and South Korea (Retrieved April 14, 2008 from http://www.worldpublicopinion.org/pipa/articles/home_page/349.php?nid=&id=&pnt=349&lb=hmpg1).

Cultural Globalization

Table 6 shows that male and female respondents have favorable attitudes towards cultural globalization. The mean scores were not statistically different. This implies that gender does not have an impact on cultural globalization. Compared to economic globalization, respondents find cultural globalization an easier concept to embrace.

In the age of globalization, culture will influence acceptance of new ideas and products. Based on Hofstede's cultural dimension, the typical South Korean consumer will be conservative in accepting new ideas and products because of high power distance, low individualism, high uncertainty avoidance and a feminine society (Hofstede, 1983). This typical South Korean consumer is reflected in the AC Nielsen survey that one fifth of the South Koreans did not agree that global companies allow consumers to gain access to the same quality of goods and services available to anyone else in the world (Consumer Insights into Globalization. Retrieved February 12, 2008 from http://www2.acnielsen.com/reports/index_consumer.shtml).

	Males		Females	
	Mean	SD	Mean	SD
Travel around the world	4.453	1.153	4.619	0.623
Interested in other cultures	4.321	1.14	4.452	0.832
Feeling lost in a foreign country	2.226	1.12	2.310	1.22
Willingness to visit foreign places	4.075	1.253	3.929	0.997
News media covers enough international news	3.000	1.144	2.881	1.041
Positive impact on my culture	3.906	0.966	3.667	0.754
Globalization good for consumers	4.019	0.93	3.976	0.78
Globalization good for my own standard of living	3.925	0.958	3.972	0.906
Foreign stores are opening in my country is good	3.604	1.115	3.810	1.042
Like foreign pop culture	4.208	0.885	4.095	0.906
1: Most Negative 5: Most Positive				

The respondents' favorable attitudes towards economic and cultural globalization imply that they are more accepting of new ideas and products. The respondents' high literacy and familiarity with products and services from foreign countries tend to diminish the effects of Hofstede's cultural dimensions. It supports the observation that the new Koreans are different from their parents (Breen, 2004). According to Breen, the new Koreans are comfortable eating foreign food and drinking wine (2004). When they travel overseas, the new Koreans do not need an emergency kit containing kimchi and instant noodles. Familiar with the Internet, they are culturally globalized and go to places like Croatia for their summer holiday and to New Zealand for their honeymoon.

The study's results strengthen Yenyurt and Townsend's empirical investigation of 56 countries that proved that a strong educational infrastructure and an open market structure act as suppressors of cultural differences existing among nations (2003). This implies that South Korea will continue to be a global economy, which held the 29th spot out of 62 countries in 2006 (*A.T. Kearney Globalization Index*. Retrieved February 11, 2008 from www.atkearney.com).

Yenyurt and Townsend's study, which included South Korea, was based on secondary data. This study provides primary data that showed the diminishing effect of Hofstede's cultural dimensions on educated consumers who live in a country characterized by trade openness. It also strengthens studies that show that high literacy/education and high trade openness can enhance attitudes towards globalization (Hainmueller & Hiscox, 2006). Favorable attitudes towards globalization can promote the acceptance of new ideas and products (Kotler and Keller, 2006).

CONCLUSION

The results show that male and female respondents have favorable attitudes towards economic and cultural globalization. Except for one item under economic globalization, the attitudes of male and female respondents towards globalization were not statistically different. This implies that gender seems to have little impact on attitudes of South Korean male and female respondents towards globalization.

In this global age, culture can influence acceptance of new ideas and products (Hofstede, 1983; De Mooij, 2000; Suh and Kwon, 2002; Yenyurt and Townsend, 2003; Kerin, Kotler and Keller, 2006 and Hartley, Berkowitz and Rudelius, 2006). Socio-economic factors such as literacy and trade openness can moderate the effects of Hofstede's cultural dimensions on product acceptance (Yenyurt and Townsend, 2003). High literacy and trade openness can also positively influence attitudes towards globalization (Hainmueller & Hiscox, 2006). These positive attitudes imply a bright future for global products and services (Kotler and Keller, 2006).

LIMITATIONS AND FUTURE RESEARCH

Due to budget and time constraints, the respondents surveyed was limited to college students at a private university. Thus, the findings in this study cannot be generalized for the whole population of South Korean college students. In the future, students from other private and public universities can also be surveyed to increase the sample size. Bigger sample sizes can lead to more robust results. This study can also be expanded to other college students from other countries.

Although globalization can also include political globalization, this study is limited to economic and cultural globalization only. This is because of time and budget constraints. Future studies can be expanded to cover attitudes towards political globalization.

The study's theoretical framework was limited to the variables that were empirically proven in Yenyurt and Townsend's research *Does Culture Explain the Acceptance of New Products in a Country: An Empirical Investigation* (2005). Thus, Hofstede's masculinity and long-term versus short-term orientation were not included. Future studies can include these two dimensions and can yields insights on their effect on consumer behavior.

Due to the small difference in the respondents' ages (20, 21, 22 and 23), age was not tested as a predictor of attitudes towards cultural and economic globalization. In future studies, age can be used as a variable in samples with larger age gaps.

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ORGANIZATIONAL DETERMINANTS OF CONTINGENT EMPLOYMENT IN THE PHILIPPINES

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ABSTRACT

This study looks at organizational factors that determine the use of contingent employees. Cost and embeddedness perspectives inform the hypotheses in this study. Measures of contingent workers are the proportion of casual/temporary employees and those on fixed-term contract. The study is based on data derived from a convenience sample of 56 organizations that participated in the Cranfield Network (CRANET) survey on comparative human resource management conducted in 2004 in the Philippines. Results indicate that an organization's degree of flexibility reflected in skills of employees seems to strongly determine whether an organization will hire contingent workers (casual/temporary workers or those on fixed-term contract). When an organization's technology requires continuous training of workers, the demand for contingent workers, particularly casual employees who may be unskilled, is lower, but this factor does not influence hiring of project employees or those on fixed-term contract. On the other hand, unionization significantly influences employment of contingent employees, although it affects the two types of contingent employment differently. Unionization positively influences hiring of casual employees while negatively influences hiring of project employees or those on fixed-term contract.

Keywords: Contingent employment, Philippines, casual employees, fixed-term contract

INTRODUCTION

Contingent work pertains to a job arrangement in which workers have no long-term employment contract or one in which the workers' minimum hours of work vary randomly (Polivka & Nardone, 1989). Employment practices such as part-time work, temporary work, employee leasing, self-employment, job contracting, and home-based work may be considered contingent when the worker involved does not have a long-term employment contract. In the Philippines, work that does not provide workers with security of tenure is classified as nonregular employment. Examples of nonregular employees are contractual, casual, commission-paid, part-time, seasonal, and probationary workers (BLES, 1998, 2004).

Different forms of contingent employment have different characteristics, addressing different organizational needs. Organizations in the Philippines hire casual or temporary employees for service jobs—e.g., janitorial and messengerial—and hire project employees for professional and

technical work (Supangco, 2005). The more common types of contingent workers are contractual and casual employees. The Philippine Labor Code defines casual or temporary employees as those hired to do work outside what is considered necessary for the usual operations of the employer's business, while contractual employees are those employed by a contractor or subcontractor to perform a job within a definite period (Foz, 2001).

Organizations use contingent employees for various reasons. The use of these workers provides organizations with flexibility in cost as well as in responding to demand fluctuations (Abraham & Taylor, 1996; Davis-Blake & Uzzi, 1993). In addition, contingent workers instantly provide organizations with the necessary skilled labor when developing them inside the firms would have taken a much longer time (Abraham & Taylor, 1996). However, the use of contingent employment as a strategy to enjoy numerical flexibility becomes a controversial approach when such use is accompanied by downsizing of core employees to allow for the contingent workers to perform work considered necessary for the regular operations of an organization (Esguerra, 1996; Ofreneo, 2003). Indeed, Philippine data indicate higher incidence of retrenchment in organizations that have higher intensity of use of contingent workers (Torres, 1993). To address labor union concerns against abusive use of contingent workers, specifically contractual workers, the Department of Labor and Employment issued Department Order 18-02, listing prohibitions against specific types of labor contracting and entitling these workers with the same rights and privileges enjoyed by regular employees. While hiring contingent employees enables organizations to enjoy various forms of labor market flexibility (Lagos, 1994)—cost, numerical, and functional flexibility—these employees, however, continue to be marginalized due to income and employment instability (Torres, 1993; Ofreneo, 2002).

Clearly the growing use of contingent employment in the Philippines raises important questions. This study aims to address: what organizational factors determine the use of contingent employees?

Understanding organizational factors that facilitate or retard the use of contingent workers is important in many ways. Structural characteristics of organizations enable or hinder cost benefits of hiring contingent employees (Tilly, 1992), thus this study informs management of the ways to maximize potential benefits from hiring contingent employees. Moreover, human resource management practices influence employees' achievement of career goals as well as the ways in which rewards are distributed in organizations (Davis-Blake & Uzzi, 1993). Such outcomes have significant consequences in organizational behavior, particularly performance (Pfeffer & Davis-Blake, 1992). On the other hand, it becomes a social concern and ethical issue when such practices result in underpayment of contingent employees' wages and benefits (Ofreneo, 2002) or when hiring them enables organizations to downsize (Torres, 1993; Esguerra, 1996; Aguilar, 1990; Amante, 1995; Barranco-Fernando, 1995) or phase out regular jobs altogether (Ofreneo, 2002).

Studies on contingent workers in the Philippines are based on macro data and case studies of limited number of organizations; they are also generally descriptive in nature (Torres, 1993;

Esguerra, 1996; Barranco-Fernando, 1995). This study fills these gaps by looking at the patterns of utilization of contingent workers across several firms in different industries. In addition, by developing hypotheses based on theoretical frameworks, this study paves the way for a better understanding of how different factors derived from these frameworks explain contingent employment. Such an approach improves generalizability by going beyond description. Results based on different theoretical frameworks also provide a clearer picture by allowing us to see the convergent and divergent explanations of these perspectives.

This study thus focuses on organizational factors that explain differential use of contingent workers across firms, including labor cost, organization size, unionization, skills flexibility, and investment in employee training.

Hypotheses in this study are drawn from cost and institutional perspectives.

HYPOTHESES DEVELOPMENT

Cost Perspective

Economics-based theories assume that organizations operate in atomized markets and adopt structures, including employment arrangements, that maximize efficiency (Williamson, 1975). This study focuses on one efficiency concern—cost. Flexibility in cost—payroll, exit, and other hidden costs—is one of the most often cited arguments for hiring contingent workers. The reason is that organizations do not necessarily give fringe benefits and training to contingent employees hired either on temporary basis or on fixed contract. Contingent work is usually linked to jobs in the secondary sector—characterized by short-term employment, absence of advancement opportunities, and low wages (Milgrom & Roberts, 1992). It is therefore expected that contingent workers enjoy fewer benefits and uncertain employment relations.

Empirical studies, however, do not show consistent results. Mangum, Mayall, and Nelson (1985), for instance, observed a positive relationship between hiring more call-ins and temporary service employees and firms providing fringe benefits, but the use of temporary workers hired and managed by the firm does not have any relationship with fringe benefits. In the Philippines, contingent workers receive lower remuneration compared to regular workers (Torres, 1993). Moreover, Davis-Blake and Uzzi (1993) found an inverse relationship between the degree of firm-specific training and the use of temporary workers; however, the degree of firm-specific training had direct relationship with the use of independent contractors. These studies imply that organizations use different types of contingent employees to serve different purposes.

Organizations that face fluctuating demand are also burdened by exit costs. This occurs when organizations heighten hiring during high labor demand and routinely release workers during low demand. Such organizations incur additional expenses in terms of severance pay (Matusik & Hill, 1998). Other indirect costs to contend with are low morale, negative behavior, and lower motivation

among surviving employees (Matusik & Hill, 1998; Brockner, 1987; McLean Parks & Kidder, 1994). To diminish the damaging impact of such situations, organizations may hire contingent workers—specifically fixed-term workers—because then there are no expectations of long-term employment. Thus it is predicted that

Hypothesis 1: There is a positive relationship between an organization's labor cost and the utilization of contingent employees.

Labor cost, however, may be influenced by the degree to which organizations are unionized. Indeed, wages and benefits are higher in unionized firms (Mondy, Noe & Premeaux, 2002; Abraham & Taylor, 1996; Labstat, 1999). Organizations mitigate this situation by hiring contingent employees. In the Philippines, unionized establishments had more agency workers compared to non-unionized establishments (Labstat, 2005). In terms of benefits, the gap between the benefits received by regular employees and those received by contingent ones is wider in unionized compared to non-unionized organizations, implying higher benefits costs in the former (Supangco, 2005). Thus it is hypothesized that

Hypothesis 2: There is a positive relationship between the degree of unionization and the utilization of contingent employees.

The relationship between size and the use of contingent employees has been widely studied (Torres, 1993; Davis-Blake & Uzzi, 1993; Uzzi and Barsness, 1998; Supangco, 2005). Again, empirical results vary and appear to be dependent on the type of contingent worker employed. For instance, Abraham (1988) and Davis-Blake and Uzzi (1993) reported a negative relationship between use of temporary workers and organization size while Mangum, Mayall, and Nelson (1985) and Uzzi and Barsness (1998) reported a positive relationship between these variables. Moreover, Uzzi and Barsness (1998) and Davis-Blake and Uzzi (1993) reported a positive relationship between independent contractors and organization size while Torres (1993) reported a positive relationship between the latter and temporary/contract workers.

One argument advanced to explain the relationship between organization size and contingent employment is hinged on the concept of economies of scale. Because large organizations can spread cost over a larger base, average cost of training new employees, including contingent employees, is lower in these organizations (Knoke & Kalleberg, 1994). Large organizations are also better able to enjoy economies of scale in supervising contingent employees compared to smaller firms (Uzzi & Barsness, 1998). The above arguments lead to the following prediction:

Hypothesis 3: There is a positive relationship between organization size and utilization of contingent employees.

One of the goals of an organization is flexibility in terms of staffing levels, deployment of labor, and employees' skills (Osterman 1987). These are interrelated. For instance, an organization's ability to deploy workers to maximize performance is contingent on their skills. Thus organizations that prioritize flexibility hire broadly trained workers. But to ensure that only individuals with the right qualifications are hired, organizations invest in stringent recruitment and selection process entailing higher costs, which may be recouped only when the individuals stay long in the organization.

However, organizations are not truly free in deciding an employment system that supports their goals. They face constraints, such as physical technology. Physical technology encompasses the process employed in producing a good or a service, which will have implications on employment systems in organizations (Osterman, 1987). Technology determines the complexity of tasks, which in turn influences the degree to which organizations hire contingent workers (Jacobs, 1981). Technically complex jobs require high skill levels. The skills are also further honed in organizations, which require employees to learn such in the organization (Davis-Blake & Uzzi, 1993). Thus it is predicted that

Hypothesis 4: There is a negative relationship between degree of skills flexibility of an organization and utilization of contingent employees.

However, there are situations in which an organization has to regularly invest in training either because the technology requires that workers constantly update skills or because the current pool of labor supply may not be sufficiently prepared to undertake work in an organization. When these skills and knowledge are combined with specific applications and practices in the organization, they become firm specific. Firm-specific capital includes skills, knowledge, and interpersonal relationships that enhance productivity of employees in their current organization but are useless in other organizations (Milgrom & Roberts, 1992; Becker, 1975). Firm-specific capital may be developed through training or by investing time with employees.

It is argued that organizations that cannot provide training internally will invest in external training that enhances productivity of employees in their current jobs. Turnover of employees with firm-specific skills can be costly to an organization because there is need to train replacements to be able to perform at a comparable level (Pfeffer & Cohen, 1984). Such investment may be recouped only if the employee stays in the organization for a long time (Williamson, 1981), which is ensured by creating an environment that supports retention of employee with firm-specific skills (Baron, Davis-Blake & Bielby 1986; Pfeffer & Cohen, 1984). Thus it is predicted that

Hypothesis 5: There is a negative relationship between investment in training and utilization of contingent employees.

Embeddedness Perspectives

In contrast to the view that employment arrangements are designed to maximize efficiency, organizations are also viewed as embedded in social networks and they adopt structures regardless of efficiency considerations (Granoveter, 1985). Within the context of embeddedness, political considerations point to competing coalitions that are characterized by different interests and capacities to influence the result of such differences in interests. As a consequence, organizations adopt structures and, to some extent, employment arrangements to enhance a coalition's power (Pfeffer, 1981).

One coalition that is often the subject of studies with reference to contingent employment is the workers' union. It is often argued that organizations use contingent employees to weaken union power because contingent employees are beyond the union's reach. It is advanced that labor flexibility is accompanied by diminishing union power (Lagos, 1994). In the Philippines, subcontracting and the use of casual labor were observed to be associated with a decreasing number of regular workers and union membership (Barranco-Fernando, 1995). Abraham and Taylor (1996) reported higher utilization of independent contractor for trucking services, but unionization did not explain the use of independent contractors in the other types of services studied. From the above discussion, it is predicted that

Hypothesis 6: There is a positive relationship between unionization and utilization of contingent employees.

The union as an organization, on the other hand, can also influence what happens to itself through either pro-action or reaction. From the strategic choice perspective (Child, 1972, 1997), organizations can take initiatives with respect to their environments as much as adapt to environmental influences. Unions will resist the employment of contingent workers who have no secure tenure and are thus difficult to organize (Pfeffer & Baron, 1988). Abraham (cited in Davis-Blake & Uzzi, 1993) found that the higher the percentage of unionized workers, the lower the firm's utilization of temporary workers. Uzzi and Barsness (1998) reported a nonlinear relationship between the degree of unionization and the utilization of contingent workers. Unionized firms in the Philippines are less likely to hire contingent employees (Torres, 1993). It is predicted that

Hypothesis 7: There is a negative relationship between unionization and use of contingent employees.

Moreover, the institutional perspective views that an organization is embedded in a network of social relationships and that structures are adopted—including employment arrangements—to gain legitimacy in this social network (DiMaggio & Powell, 1983). Organizations strive to gain legitimacy to the extent that it affects chances of survival. Isomorphism, the extent to which

organizations resemble one another, enhances legitimacy (DiMaggio & Powell, 1983; Deephouse, 1996).

Several factors influence the institutionalization of practices. These include coercive, mimetic, and normative forces. Examples of coercive force are government regulations and cultural expectations that come from other organizations. Mimetic pressures develop from uncertainty or when ends–means relationship is ambiguous. In such cases, organizations often adopt practices of successful organizations or practices perceived to be effective. On the other hand, normative pressures are developed from professionalism—training received from universities or professional networks (DiMaggio & Powell, 1983). Organizations belonging to professional organizations or organizational leaders trained in a particular university tend to adopt practices learned from these institutions. Thus some HR practices are adopted not necessarily for reasons of efficiency and impact on the bottom line (Martell & Carroll, 1995).

Oliver (1991) argued that large organizations attract the attention of the media, government, and other actors in the network. These external organizations have varying expectations from the focal organization, thus increasing the need for this focal organization to engage in behaviors that enhance legitimacy. It is argued here that the use of contingent employment increases flexibility to adjust to market fluctuations, making it an action that enhances legitimacy. Thus it is predicted that

Hypothesis 8: There is a positive relationship between organization size and utilization of contingent employees.

METHODS

This study is based on the Cranfield Network (CRANET) survey on comparative human resource management conducted in 2004 in the Philippines. The data are derived from a convenience sample of 56 organizations in Metro Manila. The structured questionnaire used in this study was developed by CRANET and sent through e-mail to heads of human resource of companies listed in the 2004 Personnel Management Association of the Philippines (PMAP). In addition, the author distributed the questionnaire to students of the MBA Evening Program of the University of the Philippines to be accomplished by their respective organization's human resource management department head. The number of questionnaires distributed totaled 730.

The author tested for the existence of a systematic bias in the sample by comparing the proportion of managers and the proportion of unionized organizations in the sample with the characteristics obtaining in the companies in the PMAP list. The test reveals that no systematic bias exists (Appendix A).

To maintain the number of cases, missing values were replaced with the mean or median of nonmissing values.

The dependent variable in this study is intensity of use of contingent workers, which is measured in terms of the proportion of casual/temporary workers and employees on fixed-term contract to total number of workers.

On the other hand, independent variables include labor cost, unionization, organization size, and firm-specific capital. The following details the measures of these variables:

- Labor cost: the proportion of labor cost to total operating cost
- Unionization: the proportion of union members to total number of employees
- Organizational size: measured as total employment
- Investment in training: the proportion of employees that received external training
- Degree of skills flexibility: measured in terms of the percentage of graduates among employees

The effects of variables known to influence both the dependent and independent variables are controlled. These variables include organizational performance, main market served, and organization age. It has been argued that change initiatives are undertaken to avert poor performance (Palmer, Jennings & Zhou, 1993). In addition, organizations that serve the global market face more environmental uncertainties. In the Philippines, for instance, organizations producing for exports use more contingent workers (Soriano, 1993; Labstat, 2005). On the other hand, interest in age of organization stems from the argument that older firms were designed for stable environments (Rousseau & Libuser, 1997), and practices become standardized and resistant to change over the long run (Hannan & Freeman, 1989). Empirical results show that the relationship between organization age and the use of contingent workers was negative for independent contractors but positive for part-time workers (Uzzi & Barsness, 1998).

It has also been argued that the use of contingent workers serves to complement internal labor markets (Davis-Blake & Uzzi, 1993; Ko, 2003). Organizations with internal labor markets practice promotion from within, thus ports of entry are usually at the lower end of the hierarchy. There are formal grievance procedures and seniority-based rewards, thus these organizations enjoy low turnover. In addition, organizations have high levels of firm-specific skills, creating career paths heavily defined by skills (Baron, Davis-Blake & Bielby, 1986). Thus outcomes of these characteristics, such as security of employment, are also controlled.

The following are the measures of the control variables:

- Organizational Performance: the variable, measured as a binary variable, is assigned the value 1, if the organization made a profit, and zero otherwise.
- Main Market Served: the variable, measured as a binary variable, is assigned the value 1, if the organization's main market is domestic, and zero otherwise.

- Organization Age: the difference between date established and 2004.
- Security of Employment: measured in terms of the proportion of employees who are more than 45 years old.

PROFILE OF THE SAMPLE

Table 1 provides the measures of central tendency and dispersion of the main variables used in this study, while Table 2 presents correlation matrix of selected variables.

The respondent companies have operated for the past 33.06 years, employing an average of 1,931.8 workers. About 87.2 percent of these companies hire casual or temporary workers and 74.5 percent hire project or contractual workers. On average, casual employees constitute up to 5 percent of the total employed while project and fixed-term contract employees constitute up to 5 percent of the total employed.

These organizations generally serve the local market (68.6 percent), and about 75.0 percent of them earned at least enough to make a profit. About a third of the organizations (28.6 percent) are unionized.

Variable	Mean/ Mode	Standard Deviation	N
Organizations employing casual employees	87.20%		
Proportion of temporary/casual employees	0-5%		47
Organizations employing fixed-term contract employees	74.50%		
Proportion of fixed-term contracts	0-5%		47
Labor cost	32.00%	22.5	22
Proportion of employees who are members of the union	No union: 71.4%		49
Proportion of employees who received external training	26.40%	24,8	40
Size (number of employees)	1931.8	3282.6	41
Company age (number of years)	33.6	30.4	49
Percentage of graduates	73.90%	27.9	45
Percentage of employees more than 45 years old	24.20%	23.5	40
Gross Revenue:	At least enough to make profit: 75%		48
11. Main market	Local: 68.6%		51

Table 2: Correlation Matrix of Selected Variables

Variables	1	2	3	4	5	6	7	8	9
1. % of temporary/casual employees	100%	0.223	0.184	0.28	-.383*	-0.022	0.156	-.485**	0.272
2. % of fixed-term contracts		1	-0.11	-0.133	0.043	0.052	.286+	-0.255	-0.171
3. Labor cost			1	0.377	0.091	0.014	.404+	.383+	-0.004
4. % of employees who are members of the union				1	-0.178	0.227	.440**	0.069	-0.058
5. Proportion of employees who received external training					1	0.001	-0.206	0.274	0.044
6. Size						1	.314+	-0.147	-0.086
7. Company age							1	0.045	0.19
8. % of graduates								1	-0.242
9. % employees more than 45 years old									1

+p<.10 *p<.05 **p<.0

RESULTS AND DISCUSSION

Table 3 presents the main results of this study. Model 1 explains the proportion of temporary/casual employees. The proportion of temporary/casual employees is positively associated with the proportion of union-member employees (significant at $p < .08$) and negatively associated with the proportion of employees with external training (significant at $p < .052$) and with the proportion of college-graduate employees. The overall model fit is significant at $p < .001$, and 44 percent of the variation in the proportion of temporary/casual employees is accounted for by the model. Among the four control variables, only the main market served was significant. The proportion of temporary/casual employees is higher among organizations that serve the local market.

The positive relationship between the proportion of casual/temporary workers and unionization supports hypotheses 2 and 6. The positive relationship reveals convergence of both the cost and embeddedness perspectives. From the cost perspective, organizations hire contingent workers to minimize the effect of high wages inherent in unionized organizations. From the embeddedness perspective, organizations hire contingent workers to weaken the power of the union.

The result strongly supports hypothesis 4, which predicts a negative relationship between the proportion of casual or temporary workers and the organization's degree of flexibility (p almost zero). It is argued that complex tasks require high levels of skills that present a limit to the use of contingent workers. In addition, broadly trained workers allow an organization the flexibility to deploy them to maximize performance. To ensure that qualified individuals are hired by the organization, it undertakes a comprehensive recruitment and selection process that may be costly

and may be recouped only when employees stay long in the organization. This further discourages employment of contingent workers.

Moreover, results show that there is a negative relationship between training and the use of contingent employment (hypothesis 5). Casual or temporary workers are hired obviously for temporary reasons and, as such, organizations do not invest in enhancing these employees' skills through training. On the other hand, when the nature of the job requires that employees be provided with constant training, organizations try to keep these trained employees because it is costly for the organizations to lose them. Thus for organizations in these situations, hiring contingent employees becomes a less attractive employment arrangement.

The results of this study do not show significant relationship between the proportion of casual/temporary workers and labor cost and organization size. A decomposition of labor cost may be in order to determine which may be relevant in explaining the use of contingent employees. On the other hand, the null result of size and utilization of contingent employees is consistent with Supangco (2005). Organization size did not have an independent effect on the utilization of casual employees, but its effect was contingent on the degree of unionization (Supangco, 2005).

Table 3: Results of Regression Analyses		
Independent Variables	Standardized Coefficients	
	Model 1 Dependent Variable: Proportion of Temporary/Casual	Model 2 Dependent Variable: Proportion of Fixed-Term Contract
Labor cost	0.134	-0.023
% of employees who are union members	.229+	-.301*
Proportion of employees who received external training	-.238+	0.072
% of graduates	-.461**	-.297*
Employment size	-0.04	-0.031
% employees who are more than 45 years old	0.105	-.303*
Company age	-0.044	.441**
Gross revenue	-0.015	-0.214
Main market	.248*	0.145
Constant (unstandardized)	3.177**	3.791**
R2	0.44	0.31
F	4.02**	2.25*
+p<. 10 *p<.05 **p<. 01		

Model 2 explains the proportion of employees on fixed-term contract. The proportion of employees on fixed-term contract is negatively associated with the proportion of union-member employees ($p < .04$) and the proportion of college-graduate employees ($p < .04$). The overall model fit is significant at $p < .05$, and 31 percent of the variation in the proportion of employees on fixed-term contract is accounted for by the model. Among the four control variables, the percentage of employees who are more than 45 years old and organization age are significant. The proportion of employees who are on fixed-term contract is negatively associated with the proportion of employees who are more than 45 years old, but positively related to organization age.

The results of regression show strong support for hypothesis 7, which states that there is a negative relationship between unionization and employment of contingent workers. The embeddedness perspective explains this negative relationship. While it has been earlier argued that organizations will try to weaken union power by hiring contingent workers, it can likewise be argued that a union can exercise choice to affect its course, given the constraints imposed by its environment (Child, 1997). Contingent workers, especially those on fixed-term contract, by the nature of their employment tenure, are difficult to organize, thus the union will resist the employment of contingent workers. The higher the degree of unionization, the more effective the union is in resisting the organization's attempt to hire employees on fixed-term contract.

The results also show that there is a negative relationship between the proportion of employees on fixed-term contract and the proportion of employees with college degree. A clearer picture may emerge when job assignments are considered. Supangco (2005) reported that casual or temporary employees take on service jobs—e.g., janitorial, messengerial, etc.—while project employees handle professional and technical jobs. A high proportion of college graduates in organizations may imply that such organizations already enjoy flexibility in deploying workers to maximize performance, thus the need to hire contingent workers, particularly those on a fixed-term contract, is lower.

The result of this study does not show significant relationship between the use of contingent employees, measured in terms of the proportion of employees on fixed-term contract, and labor cost, organization size, and proportion of employees receiving external training. While the latter variable was significant in explaining the proportion of casual/temporary workers, it does not explain proportion of project employees or those on fixed-term contract. It is advanced that project employees are more skilled than casual employees, thus there is no further need to train project employees or that they are hired precisely because they already have the skills. Thus training considerations do not affect the decision to hire employees on fixed-term contract.

CONCLUSION

This research looked into organizational factors that explain the use of contingent workers. Measures of contingent workers are the proportion of casual and temporary employees and that of

employees on fixed-term contract. Results show that hiring different types of contingent workers is explained by different factors. Degree of labor flexibility in organizations measured in terms of proportion of employees with college degrees influences both types of contingent workers in the same direction, but unionization influences the two types of contingent employees in different directions. Moreover, investment in training, measured as proportion of employees that were provided with external training, significantly influenced hiring of casual or temporary employees but did not affect hiring of employees on fixed-term contract. These results imply that different types of contingent employees behave differently, consistent with earlier works on contingent employment (Supangco, 2005; Torres, 1993; Davis-Blake & Uzzi, 1993).

A better understanding of results emerges when job assignments are considered. The Philippine Labor Code defines casual or temporary employees as those hired to do work outside what is considered necessary for the usual operations of the employer's business while contractual employees are those employed by a contractor or subcontractor to perform a job within a definite period (Foz, 2001). However, in practice, temporary workers are hired to fill up vacancy for a specified duration (usually less than six months), while project employees or those on fixed-term contract are hired on a fixed term or for a specific project whose duration is determined at the outset (Torres, 1993). This gives employers the leeway to employ workers on fixed-term contract for periods over six months. Supangco (2005) reported that organizations in the Philippines hire casual or temporary employees for service jobs and hire project employees for professional and technical work. This implies that casuals or temporary workers are unskilled or low-skilled workers while project employees or those on fixed-term contract are skilled workers.

An organization's degree of flexibility in deploying workers, reflected in skills of employees, seems to be the strongest and most consistent determinant of hiring contingent workers. Again an organization's goal of flexibility in deploying employees is constrained by the technology used in the organization. Technology has implications on how jobs are designed and subsequently on the skills required to do the job. In organizations where jobs are mostly done by broadly trained individuals, there is limited room for contingent workers either because they already enjoy the flexibility to deploy workers to maximize performance (Osterman, 1987) or because the jobs are complex that they are better embedded in job ladders so that they become conducive to skills development and job experiences in the organization (Baron, Davis-Blake & Bielby, 1986; Davis-Blake & Uzzi 1993). In this case, hiring contingent employees is a more costly alternative.

When an organization's technology also requires continuous training of workers, the demand for contingent workers, particularly casual employees, who may be unskilled, is lower, but this factor does not influence hiring of project employees or employees on fixed-term contract. Again, it is going to be costly for organizations to hire and train unskilled casual employees when their tenure in the organization is short. However, this factor does not matter in hiring fixed-term employees because they might already have the skills needed for the job.

Moreover, unionization significantly influences employment of contingent employees. However, it affects hiring of the two types of contingent employees differently: unionization positively influences hiring of casual employees while negatively influences hiring of project employees or those on fixed-term contract. From the cost perspective, hiring of casuals or temporary employees, who may be given lower wages and little benefits, for jobs that do not require high skills may be advantageous to the organization because the tasks are not complex and can be easily learned. Thus the organization can enjoy some cost savings from hiring casual workers. From the power perspective, low-skilled workers are the usual targets of unions. To curb potential increase in union power, organizations will maximize hiring of casual workers, thus the positive relationship between unionization and the proportion of casual or temporary employees.

However, it appears that unions are successful in opposing the hiring of project employees or those on fixed-term contract. The labor code defined project employees as those employed by a contractor or subcontractor to perform a job within a definite period. As such, contractors can actually substitute for permanent jobs (Uzzi & Barsness, 1998), and indeed evidence in the Philippines shows that hiring contingent workers enables organizations to downsize (Torres, 1993; Esguerra, 1996; Aguilar, 1990; Amante, 1995; Barranco-Fernando, 1995) or phase out regular jobs altogether (Ofreneo, 2002).

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

This study uncovered interesting relationships between the use of contingent employees and organizational factors. However, conclusions may be considered tentative because this study is limited by a small sample size. In addition, some important variables, such as ownership or whether the organization was a multinational establishment, could not be ascertained in the data set, thus limiting the variables that could be studied. This study has also used proportion of employees who are over 45 years old as a measure of security of tenure rather than the direct measure, organization tenure, because the latter variable is not available in the data set. The proportion of employees who are more than 45 years old is a close proxy because of the well-known positive relationship between age and tenure (O' Boyle, 1969; Sehgal, 1984). In addition, company retirement plans are not portable so it is unlikely that an employee still wants to move after a certain age or that an organization would like to hire applicants beyond a certain age. A cursory look at job advertisements in Philippine dailies shows that companies set age limit to applicants: 30 for rank-and-file positions, 35 for managerial positions, and 40 for senior executives (vice president and above). While the labor code encourages equal opportunity, management clearly exercises its right to set criteria for employment, and one of these is age.

While this study has contributed to our understanding of the factors that explain the use of contingent workers, the study also uncovered interesting relationships that need further research. A possible research question may revolve around the relationship between performance and the use

of contingent employees. In addition, while market served was a significant control variable in the equation explaining use of casual workers, this factor was not significant in the equation explaining project employees. This factor may be explored further. Company age was also significant as control variable in the equation explaining project employees, and the reason for this may be looked into.

Most researchers of the use of contingent workers employ the theory of internal labor market as a starting point. This may also be explicitly factored in future research. Inasmuch as several studies have concluded that different types of contingent worker have different determinants, hypotheses may be developed specific to the type of contingent employee. Two variables commonly identified as affecting the use of contingent employment—labor cost and organizational size—are not significant in this study. There may be a need to break down labor cost into basic wage and benefits to determine which influences the utilization of contingent employees. In addition, the interaction of these variables with other variables such as unionization may be explored in future research. This study looked into one coalition that is often the subject of studies with reference to contingent employment—the union. Other coalitions may also be looked into to further our understanding of contingent employment.

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Appendix A
Confidence Interval of Percentage Unionized and Percentage Managers

Variable	Percentage (Sample)	Percentage (Other)	Lower Limit	Upper Limit
Percentage Unionized (Sample-PMAP)	0.29	0.27	0.16	0.42
Percentage Managers (Sample-PMAP)	0.17	0.16	0.07	0.28

SUPPLY CHAIN COLLABORATION IN THE PHILIPPINES

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ABSTRACT

This study was conducted to determine the extent of supply chain collaboration in selected Philippine manufacturing and service companies. A supply chain collaboration index was developed to measure to what extent Philippine companies collaborate with their customers and suppliers in the areas of demand forecasting, materials planning, and information sharing. A supply chain collaboration grid was also proposed. The factors correlated with supply chain collaboration were also identified.

Results show the respondent firms' very low adoption of supply chain collaboration. There were no significant differences in the adoption scores between industries. Supply chain collaboration was found to be significantly associated with firm size and the motivation to adopt collaboration such as globalization, cost reduction, and development in information technology.

Keywords: Supply chain management, collaboration, partnerships, strategic alliances, supplier relationships, customer relationships, external integration, internal integration

INTRODUCTION

One of the strategic operations management decisions of any manufacturing or service company is the management of its supply chain. Since the supply chain is the most recognizable part of a firm's value chain, companies would usually form partnerships with their suppliers to streamline production cycle time and reduce production costs. Nowadays, supply chain management becomes even more critical since supply chain encompasses not only the firm's suppliers but also the suppliers' suppliers and the network of indirect manufacturing and distribution professionals that provide firms with the capability to design, manufacture, and deliver products and services to customers. There is also an increasing emphasis on the demand chain, which includes the customers, the customers' customers, and the network of indirect marketing and service professionals that allow firms to get information about customers' needs.

The field of supply chain management (SCM) is a well-established discipline that involves the coordination of an organization's internal planning, manufacturing, and procurement efforts with its external partners such as suppliers and customers (McLaren et al., 2002). To ensure that products and services are available where and when they are needed, there is a need for integration across

organizations (internal or interorganizational integration) and throughout the supply chain (external or interorganizational integration) (Gimenez & Ventura, 2005). This makes supply chain collaboration very important.

This study presents the extent of supply chain collaboration among selected Philippine manufacturing and service companies, an empirical work that has yet to be fully explored. The study also determined if a significant difference exists in the supply chain collaboration among industries. The factors significantly associated with supply chain collaboration were likewise investigated.

LITERATURE REVIEW

This section presents a review of literature on the importance of supply chain collaboration in implementing SCM, the previous studies depicting the experience of other countries in adopting collaboration, and a related study on measuring supply chain collaboration. The section ends with a description of how the author's research will help address the gap in the literature.

The Council of Logistics Management (1991) defined supply chain management as a business process system that involves the planning, implementation, and control of the efficient, effective flow and storage of goods, services, and related information from the point of origin to the point of consumption for the purpose of conforming to customer requirements (Council of Logistics Management, 1991). Anderson et al. (1997) likewise described SCM as a collection of seven principles of SCM consisting of customer segmentation, customized logistics, demand planning, customization, strategic sourcing, supply chain strategy, and supply chain performance measurement. Inherent in both process-based definitions is the need for the internal and external players of the supply chain to coordinate to ensure that supply chain operations (demand planning, logistics, and supply management) address specific customer requirements.

Literature presents SCM, however, not only as a process-oriented system but also as a discipline founded on the management of relationships between corporate functions and across companies (Ellram and Cooper 1993). Blackwell and Blackwell (1999) emphasized as early as the 1990s to look at SCM from the supply chain point of view as well as from the demand chain point of view given the critical role of customers in the value chain. SCM, therefore, includes exchanging and integrating information between the supply chain entities, and linking together critical supply chain operations such as collaborative planning, forecasting, distribution, and product design (Kumar, 2001). In 2006, Lambert likewise emphasized the supply and demand orientations of SCM by viewing SCM as the integration of key business processes from the end user through the original suppliers, for the customers and other stakeholders. Given this integration dimension, the Council of Supply Chain Management Professionals (2008) now describes SCM simply as the integration of supply chain operations within companies (internal integration) and across companies (external integration).

This study focuses on the collaboration aspect of SCM (referred to in the study as supply chain collaboration or simply *collaboration*). By working together as a team, supply chain members are able to share information, make joint decisions, and share benefits (Simatupang & Sridharan, 2005). However, Blackwell and Blackwell (1999) emphasized the reality that sharing strategic information among supply chain partners is difficult to do. It is important that they trust one another and share common values to succeed in the partnership. Collaboration is also more than just information sharing. It is a commitment to share decision-making power in critical supply chain operations such as collaborative planning, forecasting, distribution, and product design (Kumar, 2001).

Supply chain collaboration involves a long-term relationship among organizations that work together to achieve a common goal (Mentzer et al., 2000). To achieve collaboration, Chin et al. (2004) emphasized that a good relationship management between buyers and suppliers is important. They also noted that developing and maintaining trustworthy relationships, engaging in joint decision making and problem solving, and sharing accurate information are critical to make supply chain collaboration work (Chin et al., 2004). Myhr and Spekman (2005) pointed out that for firms that produce customized products, collaborative partnerships are achieved through trust while companies with standardized products achieve collaboration through electronically mediated exchange. Supply chain collaboration, however, does not only refer to external integration but also to internal integration. Internal integration involves coordinating purchasing, production, and information systems and logistics while external integration involves coordinating with suppliers and customers (Waller, 1999).

A review of literature of supply chain collaboration in selected countries reveals a limited to moderate extent of adoption. Sahay and Mohan (2003) reported that fostering trust and collaboration with suppliers, customers, and service providers is a new thing for Indian companies. In their study of 156 Indian companies belonging to several industries (agricultural products, automotive, chemicals / fertilizers, computers, consumer durables, engineering, fast-moving consumer goods, oil/gas, pharmaceuticals, retail, telecommunications, textile, and transportation), they noted that Indian organizations were more focused on customer orientation as opposed to American firms that focused their SCM efforts toward cost reduction, streamlining of operations, and demand-supply alignment.

The same can be observed for Saudi manufacturing companies (Falal et al., 2003), which had been facing stiff competition due to the imposition of low tariffs on their imports and rationalized subsidies. Based on Falal et al.'s (2003) study of 107 respondent firms in terms of the adoption of suppliers' database, electronic link with suppliers, reduction in number of suppliers, and inventory reduction strategies, Saudi manufacturers can be described as still in the initial stages of SCM adoption. In the case of German manufacturing organizations belonging to the electronics, engineering, and process industries, Szejczewski et al. (2005) noted the diversity in the understanding of their relationship with suppliers. Majority of the respondents reported having a

“partnership-like” relationship with suppliers, and majority of them are also engaged in multiple sourcing strategies.

With regard to measuring supply chain collaboration, Simatupang and Sridharan (2005) attempted to measure a supply chain collaboration index based on three dimensions: information sharing, decision synchronization, and incentive alignment. Information sharing refers to the act of capturing relevant information that can be used by operations managers for decision making. Decision synchronization, on the other hand, refers to joint decision making in long-term and operational planning. Lastly, incentive alignment refers to the degree to which chain members share costs, risks, and benefits. A collaboration index was developed as an average of the scores aggregated across these three dimensions. Their index, however, did not specify as to which group of stakeholders the collaboration is directed.

Thus, this study was conducted to determine to what extent Philippine companies adopt collaboration with their critical stakeholders—the suppliers and the customers. A supply chain collaboration index was developed to determine the extent of collaboration of respondent firms from selected Philippine industries with their customers and suppliers in the areas of demand forecasting, materials planning, and production planning. A supply chain collaboration grid was also proposed (refer to Figure 1). The grid presents four possible quadrants under which a firm may be classified depending on the extent of its collaboration with suppliers and customers. Firms classified under the first quadrant are those that do not practice inter-firm collaboration and deal with customers and suppliers in a traditional way, i.e., in a transactional manner. There is no presence of internal as well as external integration. Firms in quadrant 2 present a high degree of collaboration with suppliers while firms in quadrant 3 reflect a high degree of collaboration with customers. Quadrant 4 describes the presence of supply chain collaboration, reflecting a high degree of integration with both customers and suppliers.

Figure 1
Supply Chain Collaboration Grid

High Extent of Collaboration with Suppliers	II Supplier-Oriented	IV Externally-Integrated
	I Independent	III Customer-Oriented
Low	Low	High

Extent of Collaboration with Customers

In an externally integrated supply chain, firms no longer have adversarial relationships with their customers and suppliers. Rather, buyers and suppliers treat each other as partners that share the

common goal of reducing costs across the supply chain. They meet together to align demand planning accordingly across the supply chain to ensure consistent forecasts and optimal resource allocation (Anderson et al., 1997). Forecasts are developed collaboratively by the key players in the supply chain. Information technology (IT) plays a critical role in the firm's supply chain strategy.

RESEARCH HYPOTHESES

Supply Chain Collaboration in Different Industries

It is the main hypothesis of the study that there will be significant differences in the extent of collaboration between industries primarily because industries have different needs, motivations, and pressures to engage in collaboration. The specific demands or situation of the industry will influence firms to seek inter-firm collaboration. A firm in a very competitive and dynamic industry will most likely work closely with its key stakeholders such as suppliers and customers to have a better control of the value chain. In 2001, Spina and Zotteri noted a high level of collaborative practices (measured in terms of operations integration and co-design) in industries other than automotive industry. They observed that operations integration was widely used in industries characterized by high volumes, complex products, and high inventories. On the other hand, industries characterized by simpler or more stable products were poorly oriented toward supplier involvement in the customer's product development process.

Danese et al. (2006) investigated four supply networks whose central firms are leading pharmaceutical companies. They observed that industry factors such as highly unsaturated markets and patent protection have driven the prosperity of this industry. However, the dramatic price moderations demanded by public health systems and marketing organizations, the competitive forces from generic drug makers, and the reduction of the effective patent protection period have changed the name of the game in the pharmaceutical industry. There is a pressure now to reduce costs. This resulted in changes in operations strategy and, consequently, in supply chain strategy. It is hypothesized that significant differences exist in the extent of supply chain collaboration between industries (*Hypothesis 1*).

Determinants of Supply Chain Collaboration

The following factors are hypothesized to have a significant association with supply chain collaboration: (1) firm size, (2) extent of foreign ownership, (3) extent of internal integration, and (4) motivations to engage in collaboration.

Arku (2002) hypothesized that a higher rate of adoption of inter-firm collaboration practices is expected among small electronic firms in Toronto since small firms lack adequate resources, both manpower and financial. Thus, small firms also need to collaborate with one another to establish

their presence in the market. Arku's study (2002), however, observed that the relationship of firm size with supply chain collaboration was positive, i.e., as the firm size increases, the extent of supply chain collaboration increases. In the context of supply chain management, it is more imperative for a big company to coordinate its activities internally and to seek collaboration with its stakeholders. Supply chain collaboration is hypothesized to be significantly associated with firm size (*Hypothesis 2*).

Arku (2002) also argued that the adoption of collaborative practices is likely to depend on the ownership structure and nationality of the firm. He noted in his study that there were mixed results with regard to this relationship. He cited that in the study of Britton and Gilmour (1978) and Britton (1999), the prominence of foreign ownership in Toronto weakened inter-firm linkages. However, he noted that in the study of Gertler et al. (2000), higher rates of adoption of inter-firm practices were observed for foreign-owned small and medium enterprises (SMEs). Ownership structure is hypothesized to be a significant determinant of supply chain collaboration. Since collaboration requires trust, information sharing, and even sharing of databases, firms that have foreign ownership are expected to be more open to supply chain collaboration. This is so because manufacturing and service firms with foreign ownership are already more open in terms of culture to share confidential information with other parties. These firms also have more resources to invest in systems that will allow for information sharing. Supply chain collaboration is hypothesized to be significantly associated with foreign ownership of the firm (*Hypothesis 3*).

In 2005, Gimenez and Ventura highlighted the relationship between internal and external integration. Internal integration was measured as the extent to which logistics activities interface with other functional areas (logistics, production, and marketing) while external integration refers to the integration of the logistics activities across firm boundaries. Their study shows that internal integration and external integration influence one another and that internal integration is an important prerequisite to external integration. Firms that have internal coordination and communication systems are more prepared to engage in inter-firm collaboration activities since this will simply be an extension of their existing systems. Suppliers and customers will likewise be more open to collaborate with firms that have good internal planning and communication systems.

For example, McCarthy and Golicic (2002) noted that to successfully engage in collaborative forecasting, a company must establish first its own internal forecasting process. In their study, internal integration was measured in terms of the following: (1) use of cross-functional teams in demand forecasting and materials planning, and (2) use of communication systems. It is hypothesized that supply chain collaboration is significantly associated with the extent of internal integration in the company (*Hypothesis 4*).

There are various motivations why a company will decide to adopt SCM and consequently establish collaboration with its supply chain partners. According to Bovet and Sheffi (1998), major business and economic forces will most impact future supply chain management and therefore will lead supply chain players to collaborate. Spina and Zotteri (2001) also pointed out that a firm's

strategic priorities have a significant impact on the adoption of customer-supplier partnerships. Thus, it is hypothesized that the decision of a firm to collaborate with its suppliers is significantly associated with its primary motivation to engage in inter-firm collaborative activities. The study considered the following motivations: (1) competition, (2) cost reduction, (3) globalization, (4) need to manage risk, and (5) development in information technology.

The intensity of competition in an industry forces companies to seek ways to have competitive advantage. Since firms have limited resources, they need to collaborate with other firms either through joint ventures or strategic alliances to establish its market presence in a particular location. Strategic alliances can also be pursued in the areas of research and development, market development, process and technology adoption, and other strategic activities. Accenture noted that true high-performance businesses are able to attain global competitiveness through holistic and coordinated supply chain strategies such as collaborative product development, sales and operations planning, order management, logistics, procurement, and manufacturing (Ferrer et al., 2007). These supply chain operations require collaboration with key suppliers and customers. It is hypothesized, therefore, that supply chain collaboration is significantly associated with the motivation of the company to respond to intense competition (*Hypothesis 5a*).

There has been a significant shift in demand and supply situation from local to the global arena. Manufacturing companies in developed countries such as the United States and Japan have realized the attractiveness of material and product sourcing from China, Mexico, Thailand, Vietnam, and other emerging economies. Similarly, manufacturing firms previously based in the Philippines have also found it more attractive to locate in other ASEAN countries like Thailand and Vietnam due to cost and market considerations. Such behavior of supply and demand, particularly global sourcing, has been facilitated by GATT-induced tariff reductions. The recent research conducted by Accenture reported that high-performance businesses source materials and finished products from low-cost countries to achieve cost savings while achieving also their quality considerations (Ferrer et al., 2007). Thus, it is hypothesized that the direction toward more cost-competitive manufacturing operations is a significant determinant of collaboration (*Hypothesis 5b*).

Crone (2006) noted that with the increasing globalization of supply chains, products move over greater distances in areas where the market, regulatory, and security conditions are different. The management of supply chain operations has become more difficult and challenging. Manufacturing and service entities have to be ready to serve far-flung markets with products that fit varied demographic requirements at an acceptable level of customer service. A single firm cannot realistically do this by itself unless it holds a bargaining power both in supply and demand and it has adequate financial resources. In India, for example, the increasing uncertainty of supply chain networks, the globalization of the businesses, the proliferation of product variety, and the shortening of product life cycles have forced Indian companies to establish collaboration with their supply chain partners (Sahay & Mohan, 2003). It is therefore hypothesized that firms will seek inter-firm collaboration to establish an international presence in certain location (*Hypothesis 5C*).

The development in information technology has significantly affected the way products are bought and distributed, and it is expected to dramatically change the way of doing business. Collaborative demand forecasting, materials planning, order fulfillment, procurement, logistics, and distribution have been facilitated through IT. In the automotive industry, information and communications technologies (ICTs) were found crucial to making their operations responsive to customer requirements. Firms adopting web-enabled ICT were also found to seek interorganizational collaboration (Howard, 2005). Successful supply chain collaboration, on the other hand, needs technical support in terms of information sharing channels and IT capabilities (Sheu et al., 2006). However, Chae et al. (2005) pointed out that IT's effect on interorganizational collaboration depends on the interplay between IT and the existing relationship between the supply chain partners. The development in information technology is hypothesized to be an important enabler for firms to engage in information sharing and collaborative planning. It is therefore hypothesized that supply chain collaboration is significantly associated with the development in information technology (*Hypothesis 5D*).

The firm's supply chain faces many types of risk, which can be classified into external and internal risks (Kiser & Cantrell, 2006). External risks are those driven by the events in either the downstream or upstream part of the supply chain. These include the demand, supply, and environment risks. On the other hand, internal risks include the manufacturing, business, planning and control, and contingency risks. Partnership with the firm's critical suppliers and customers especially in the area of information sharing can help mitigate the effects of these risks. It is hypothesized that supply chain collaboration is significantly associated with the firm's motivation to manage the supply chain risks (*Hypothesis 5E*).

RESEARCH DESIGN

Philippine manufacturing experts were consulted to validate the appropriate measures for supply chain collaboration. The participation of member firms of the University of the Philippines Manufacturing Linkage Program (UP-MLP) and the Production Management Association of the Philippines (PMDP) was sought. One hundred firms were targeted, with 79 firms participating in the study. A survey method was conducted. The persons responsible for supply chain management, materials management, or procurement were the respondents in the study. They were asked to fill out a survey questionnaire to elicit their responses on the following: (1) their motivations to adopt supply chain collaboration, and (2) the extent of their adoption of supply chain collaboration (see Appendix 1).

The extent of supply chain collaboration was measured in terms of two variables: (1) customer collaboration (CC) and (2) supplier collaboration (SC). The respondents were asked to what extent they collaborate with customers and suppliers in the areas of demand forecasting, materials planning, and production planning. They were also asked about the extent of adoption of

shared customer databases with critical customers and suppliers. A supply chain collaboration index (SCCI) was computed using the scores of the respondent firms for both the SC and CC variables. The six supply chain collaboration measures were subjected to a reliability test using cronbach alpha to determine the reliability of the index. Results show that the six-item index has a cronbach alpha of 0.864, which is acceptable for a basic research (Davis, 2000) (refer to Table 1).

Descriptive statistics were used to describe the position of the respondent firms vis-à-vis the proposed supply chain collaboration grid. The data were subjected to multiple regression analyses to test the hypotheses set for the study. The supply chain collaboration index was regressed with the following independent variables: firm size, ownership structure, level of internal integration, and the motivations to adopt supply chain collaboration (refer back to the research hypotheses).

Description	Mean	SD	N
CC1. Demand forecast is done in collaboration with customers.	2.48	1.907	79
CC2. Materials and production planning is done in collaboration with customers.	2.23	1.915	79
CC3. The firm has shared databases with its customers.	1.30	1.778	79
SC1. Demand forecast is done in collaboration with suppliers.	2.48	1.907	79
SC2. Materials and production planning is done in collaboration with suppliers.	2.23	1.915	79
SC3. The firm has shared databases with its suppliers.	1.30	1.778	79

Notes: 1. Cronbach's alpha (6 items) = 0.864; 2. CC – Customer collaboration, SC – Supplier collaboration

FINDINGS

A total of 79 companies participated in the study (as shown in Table 2). Sixty-three percent of the respondent firms were from the manufacturing industry while 37 percent were from the service sector. The three major manufacturing industries that participated were the garments (17.7 percent), pharmaceutical (16.5 percent), and food processing (12.6 percent) industries. The service sector respondents consisted mostly of companies in the food service sector. Majority (77.2 percent) of the respondent firms had employee size less than 500. The companies were owned mostly by Filipinos (70.9 percent).

The scatter plot diagram in Figure 2 shows the position of each of the respondent firms vis-à-vis the proposed SC positioning grid. Majority of the respondent firms belong in quadrant 1, i.e., firms operate independently with little collaboration with suppliers and customers. A significant number of firms can also be found in quadrant 4, indicating that some firms are already adopting supplier and customer collaboration.

Table 2: Profile of Respondent Firms		
Description	Frequency	% to Total
Industry		
Food service/restaurant	20	25.3
Garments/accessories	14	17.7
Pharmaceutical	13	16.5
Food processing	10	12.6
Publishing	6	7.6
Semiconductor/electronics	4	5.1
Other companies	12	15.2
Employee size		
<500	61	77.2
500-1000	6	7.6
1001-1500	6	7.6
1501-2000	1	1.3
>2000	5	6.3
Foreign ownership		
100% Filipino-owned	56	70.9
100% Foreign-owned	10	12.7
With foreign ownership	13	16.5

Notes: 1. Other manufacturing industries include manufacturers of toys, aluminum, food container, etc.
2. Service companies involve elevator repair and maintenance, restaurants, retail shops, etc.

Figure 2: Scatter Plot Diagram: Supplier (SC) and Customer Collaboration (CC) in Selected Companies

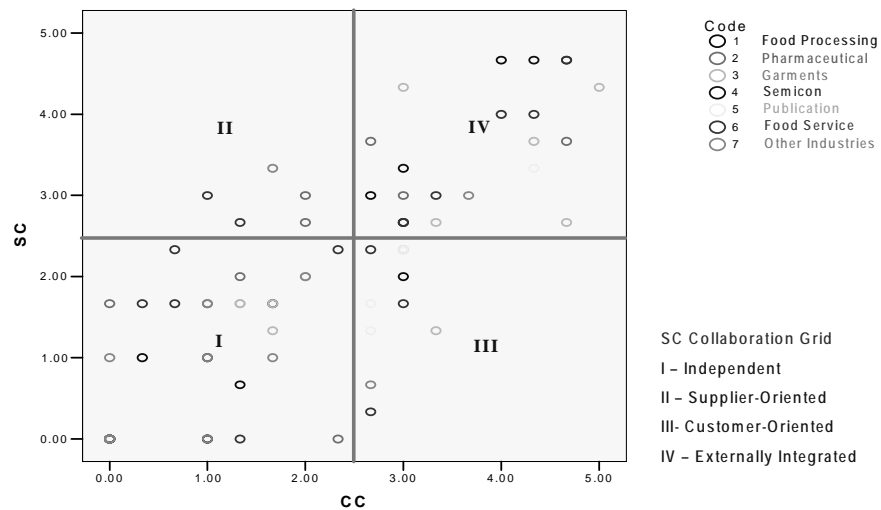


Table 3 shows a large variation in supplier collaboration (77.39 percent) and customer collaboration (76.01 percent) scores, indicating the large heterogeneity in the sample. This is expected given the multiple industry representation in the sample size.

Variable	N	Mean	Std. Dev.	Coefficient of Variation
Customer collaboration	79	2.0042	1.52332	76.01%
Supplier collaboration	79	1.8945	1.46619	77.39%

Table 4 shows the collaboration index by industry type. As shown, only the garments and publication industries reflected relatively higher indices of 55.64 percent and 48.89 percent, respectively, much higher than the Philippine average of 39.49 percent. In terms of process type, the garments and the publishing industries can be classified as having make-to-order production systems; as such, interaction with customers as early as the product design and demand planning is very critical. Collaboration with suppliers is also very important to ensure that the right quantity and quality of materials arrive in time for the production schedule. In general, however, results show the limited adoption of supply chain collaboration in the Philippines. The low adoption is in the area of information sharing, particularly the sharing of databases with customers and suppliers.

DISCUSSION

To test the first hypothesis that there is significant difference in the supply chain collaboration index among industries, an ANOVA analysis was conducted. Results indicate that there are no significant differences in the collaboration index between industries as shown by the F-value of only 1.883. This validates the results in Table 4, which shows the low extent of supplier and customer collaboration among the industries included in the study.

While the results may not be fully consistent with the findings of Spina and Zotteri (2001) about the high incidence of collaborative activities in industries characterized by high volumes, complex products, and high costs of inventories, the findings still support Spina and Zotteri's contention that while industry affiliation may matter, collaborative activities may be scattered across sub-industries and their adoption will depend on the degree of innovativeness and complexity of the product. Multiple linear regression analysis was used to test Hypotheses 2-5E. The study looked into the factors correlated with supply chain collaboration. The following variables were hypothesized to be significantly correlated with the supply chain collaboration index: (1) industry type, (2) employee size, (3) ownership structure, and (4) the seven motivations to adopt supply chain collaboration.

Description	1	2	3	4	5	6	7	Phils.
CC1. Demand forecast done in collaboration with customers	1.80	1.69	2.76	2.08	2.78	2.00	1.22	2.00
CC2. Materials and production planning in collaboration with customers	2.50	2.15	3.50	2.00	3.17	2.35	1.67	2.48
CC3. Shared databases with customers	1.10	1.00	1.71	2.50	2.00	1.35	0.50	1.30
SC1. Demand forecast done in collaboration with suppliers	1.60	1.62	3.07	1.75	2.33	2.15	1.75	2.09
SC2. Materials and production planning in collaboration with suppliers	2.60	2.62	3.07	1.75	2.50	2.65	1.08	2.42
SC3. Shared databases with suppliers	1.00	1.31	1.07	2.00	1.50	1.35	0.58	1.18
Supply Chain Collaboration Index (%)	35.33	35.38	55.64	39.17	48.89	40.50	23.61	39.49
Notes:								
1. CC – Customer Collaboration, SC – Supplier Collaboration								
2. The numbers for CC1, CC2, CC3, SC1, SC2, and SC3 refer to the mean responses by industry.								
3. The codes refer to the following: 1 (Food Processing, n=10), 2 (Pharmaceutical, n=13), 3 (Garments, n=14), 4 (Semiconductor/Electronics, n=4), 5 (Publishing, n=5), 6 (Food Service, n=20).								
4. Code 7 refers to the other respondent manufacturing companies (n=12) engaged in the production of toys, aluminum doors and windows, industrial gases, feeds, flour, food containers, leather goods, and tin cans.								
5. Supply Chain Collaboration Index (Col Index) = (scores for CC and SC)/ maximum score of 10) x 100%								

Table 5 shows that of the ten independent variables, only four were found to be significantly correlated with supply chain collaboration: firm size and three motivators (globalization, information technology development, and cost reduction).

The variables that were not significantly correlated with the supply chain collaboration index were ownership structure, internal integration, and the following motivators: competition, IT development, and risk management. The lack of significant correlation between supply chain collaboration (which involves collaboration with customers and suppliers) and internal integration was surprising. Gimenez and Ventura (2005) clearly emphasized that internal integration is an important prerequisite to external integration. Vargas et al. (2000) noted that for Spanish assembly manufacturing firms, greater correlation was observed between strategic goals and internal integration programs than between strategic goals and external integration programs. They also pointed out that the potential of logistical integration to become a source of competitive advantage can be achieved through internal integration.

Table 5: Factors Correlated with the Supply Chain Collaboration Index

Hypothesis	b	T	Sig
(Constant)	-	-.874	.387
H2: Firm size	.729	4.535	.000**
H3: Ownership structure	.158	1.243	.221
H4: Internal integration	-.042	-.311	.757
H5a: Motivation-Competition	-.061	-.391	.698
H5b: Motivation-Cost reduction	.505	2.856	.007**
H5c: Motivation-Globalization	-.351	-2.196	.034*
H5d: Motivation-IT development	.347	1.893	.066
H5e: Motivation-Risk management	-.082	-.594	.556

* p < 0.05, significant
**p < 0.01, highly significant

With regard to supply chain collaboration and firm size, Arku (2002) noted that inter-firm collaboration was a moderately important phenomenon but not an important corporate strategy for small firms, although he also found out an increasing incidence of collaboration with firm size. This study was able to show as well that supply chain collaboration is significantly associated with firm size at $p \leq .01$ level of significance. The study argues that as firm size increases, information sharing and coordination within the firm and with the other stakeholders of the firm become more critical. It is therefore necessary for the firms to formally link or collaborate with these key stakeholders, especially in the areas of demand forecasting and materials planning. Sharing of databases also becomes more important and can facilitate real-time sharing of critical information.

Supply chain collaboration was also found to be significantly associated with the motivation to reduce cost ($p \leq .01$ level of significance). The finding supports the hypothesis that firms that are motivated or even pressured to reduce materials and total supply chain costs are more open to inter-firm collaboration. Thus, collaboration with the firm's suppliers and customers provides the players in the supply chain with a win-win situation. The development in information technology, particularly the adoption of shared databases, is an important driver in facilitating inter-firm collaboration (Howard, 2005) but was not found in the study to be significantly associated with supply chain collaboration. Chae et al. (2005) pointed out that the existing relationships between supply chain partners could either enable or constrain the effect of IT on interorganizational collaboration. Since the study presented a very low adoption of external and internal supply chain integration in the Philippines, this could have affected the association between supply chain collaboration and IT development.

Supply chain collaboration was found to be significantly associated with globalization at $p \leq .05$ level of significance, but the variables were inversely related. This means that while firms may

view globalization as an important motivator to seek collaboration, the firms may not necessarily engage in inter-firm collaboration. Shrader (2001) pointed out that multinational companies may engage in various inter-firm activities to penetrate a market. These activities could include providing local firms with licenses or international franchises or forming joint ventures or strategic alliances. However, he also noted that multinational firms may choose not to engage in collaboration with outside partners and instead decide to manufacture, market, and distribute the products internationally through their own organization structures for better resource control. Shrader (2001) pointed out that only one-third of the companies that had international new ventures actually collaborated. He argued that many of these firms may have obtained enough financial resources to enter the markets on their own and not seek collaboration. As for the finding of this study, it is possible that since 70 percent of the respondent firms are domestic companies, there may still be some reservation on the part of these Philippine companies to fully explore the benefits of inter-firm collaboration.

Regression analysis shows that about 40 percent of the variation in the model can be accounted for by the independent variables of the study. The combined effect of the independent variables on the supply chain collaboration index, as shown in the F value of 3.333, is significant at 0.01 level of significance.

CONCLUSION

The study shows that the adoption of supply chain collaboration in the Philippines is still at a very low level. No significant differences in the supply chain collaboration index were observed between industries, even in industries where some form of collaboration was expected to exist. The Philippine experience is not surprising as even Hong Kong manufacturers were found to be exerting efforts in adopting SCM and collaboration with customers and suppliers (Chin et al., 2004). In their study of 156 Indian companies, Sahay and Mohan (2003) also observed that fostering trust and collaboration with suppliers, customers, and service providers is a difficult endeavor for Indian companies.

Vereecke and Muylle (2006) in their study of 374 firms from the engineering/assembly industry across 11 European countries also noted that while collaboration is an important strategy for manufacturers, collaboration efforts are implemented in an un-orchestrated manner. They recommended that supply chain collaboration should go beyond information exchange and move toward structural collaboration, which means that information exchange should be embedded in standardized systems directed toward process integration. A study of Saudi manufacturing companies (Falal et al., 2003) also revealed that Saudi manufacturers were adopting to a limited extent an electronic link with suppliers, reduction in number of suppliers, and inventory reduction strategies.

To achieve long-term partnership, trust between the supply chain partners is critical since collaboration is more than information sharing but a commitment to share decision-making power in critical supply chain operations such as collaborative planning, forecasting, distribution, and product design (Blackwell and Blackwell, 1999; Kumar, 2001). Thus, a possible reason for the low adoption rate of supply chain collaboration in selected Philippine industries may be attributed to the nature of relationship that exists between manufacturers, suppliers, and customers in the country, which can still be characterized as “arm’s length” or transactional, if not totally adversarial. The data illustrate that Philippine firms have yet to be open about collaboration and strategic alliances.

This study contributes to the literature on supply chain collaboration in both theory and practice. First, the study presented some internal and external factors that could motivate firms to adopt inter-firm collaboration. Second, the study helped identify the areas for collaboration that manufacturers should consider to effectively link with suppliers and customers. Lastly, the study presented an empirical work on the state of supply chain collaboration in a Southeast Asian country, a work that has not been fully explored. This study highlighted the need for SCM practitioners and proponents to help educate manufacturing and service companies about the value and the implications of supply chain collaboration.

FUTURE RESEARCH DIRECTIONS

Since the study employed the survey method and utilized aggregate data for analysis, the results presented in general terms the status of supply chain collaboration in selected Philippine industries. However, the study was not able to clearly identify why there was a low adoption rate of supply chain collaboration in the selected industries. Future studies may use a longitudinal or a case study method to fully understand the motivations, benefits, and even difficulties of firms engaged in inter-firm collaboration as well as the possible apprehension or reservation of firms that have yet to engage in collaboration. Selected companies from a particular industry may be interviewed using focus group discussions to describe their best practices on supply chain collaboration as well as their struggles and experiences in their collaborative arrangements. The literature highlighted the importance of trust in achieving effective supply chain relationships. The level of trust that exists between manufacturers, suppliers, and customers in the Philippines and other countries is worth investigating.

The study looked into the association of supply chain collaboration with the following independent variables: firm size, ownership structure, internal integration, and supply chain motivations. Future studies should explore the association of supply chain collaboration with other variables like degree of vertical integration of the firm, level of technological innovation, strategic priorities of the company, and existing joint venture agreements with their suppliers and/or customers. It is also surprising that the level of internal integration was not found to be significantly correlated with supply chain collaboration. A more comprehensive index for both internal and

external supply chain integration could have been developed to see more clearly the relationship of these two integration parameters.

Other dimensions of supply chain collaboration could also be considered, particularly the involvement of suppliers and customers in product development, process planning, and technology adoption. Future studies should also look into the association of supply chain collaboration and supply chain performance measures. Lastly, the study described the extent of supply chain collaboration in the Philippines using descriptive statistics and a scatter plot diagram. The cluster analysis could have also been employed to describe the extent of supply chain collaboration among industries.

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Appendix 1
Survey Instrument: Extent of Supply Chain Collaboration in the Philippines

COMPANY PROFILE

1. Name of Company _____
2. Address / Contact Numbers
 - a. Office _____ Tel. Nos. _____, Fax No. _____
 - b. Plant _____ Tel. Nos. _____, Fax No. _____
3. Year the company started operations _____
4. Industry Category _____
5. Product Line(s) _____
6. Number of Employees _____ Total _____ % Manufacturing
7. Total Assets as of 2005 _____
8. Ownership Structure: ____ % Local ____ % Foreign (specify nationality _____)

PART 1

What do you think are the important reasons why manufacturing companies should employ supply chain collaboration? Please check your response (s) and rate the following motivations to adopt supply chain collaboration according to degree of importance.

Consumer demands	1	2	3	4	5
Globalization	1	2	3	4	5
Information					
technology development	1	2	3	4	5
Competition	1	2	3	4	5
Cost reduction	1	2	3	4	5
Environmental concerns	1	2	3	4	5
Risk management	1	2	3	4	5
Others (Please specify)	1	2	3	4	5

PART 2

Instructions: Kindly evaluate the extent by which your company is implementing the following operations listed in Column A. Please encircle the letter corresponding to your response (Column B) using the scale below:

0 – NOT IMPLEMENTING	3 – Moderate Extent
1 – Very limited extent	4 – Large extent
2 – Limited extent	5 – Very large extent

Encircle the number corresponding to the extent of implementation of this strategy in your company.

1.	Our firm prepares demand forecast through a multifunctional (e.g., sales operations planning) team.	1	2	3	4	5	6
2.	Our firm prepares materials and production plan through a multifunctional (e.g., sales operations planning) team.	1	2	3	4	5	6
3.	Our firm communicates with our customers through regular communication systems (telephone calls, letters).	1	2	3	4	5	6
4.	Our firm communicates with our suppliers through regular communication systems (telephone calls, letters).	1	2	3	4	5	6
5.	Our firm collaborates with customers in preparing demand forecast.	1	2	3	4	5	6
6.	Our firm collaborates with suppliers in preparing demand forecast.	1	2	3	4	5	6
7.	Our firm collaborates with customers in preparing materials and production plans.	1	2	3	4	5	6
8.	Our firm collaborates with suppliers in preparing materials and production plans.	1	2	3	4	5	6
9.	Our firm shares databases with our customers.	1	2	3	4	5	6
10.	Our firm shares databases with our suppliers.	1	2	3	4	5	6

FINANCIAL SYSTEMS AND BUSINESS ACTIVITY IN BULGARIA, CZECH REPUBLIC, HUNGARY, ROMANIA, AND SLOVAKIA

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ABSTRACT

Working capital (WC) is the life's blood of business. WC, or short term capital, provides the means for a firm to acquire raw materials, pay periodic expenses, finance accounts receivable and hold inventories. Without WC firms would wither and die.

Availability of reasonably priced WC is key to business growth. Each of the ten new European Union (EU) countries has a different system for the acquisition of WC and for the cost structure of short term capital. The purpose of this paper is to explore the WC systems and costs currently in place in the five eastern EU nations (Bulgaria, Czech Republic, Hungary, Romania, and Slovakia) two of which are brand new to the EU. An understanding of WC availability and cost assists understanding of the current competitiveness of each of the countries as they enter the EU. Without access to reasonably priced and easily available WC, firms in newer EU countries will not be competitive with older more established firms in older EU countries.

INTRODUCTION

Study Countries

In 2004 ten countries were admitted to the European Union and in January 2007 two additional countries were admitted. Each of the new EU members has a unique background, culture, and economic outlook, but each has now committed itself to economic convergence with the EU. Part of the impetus for joining the EU is to improve domestic economic conditions by creating business relationships with the more prosperous current EU members. For most of the new EU countries the past 15 years have brought dramatic internal economic changes as countries have moved away from a command economy and toward a market system. Gaining access to the increasingly large EU market is viewed as an economic step forward.

The newest EU members, Bulgaria and Romania, were delayed as entrants because they needed additional time to adapt to EU Rules and Policies. The delay has put them behind

neighboring countries in terms of building relationships to the older countries of the EU. Bulgaria and Romania are on the southern borders of the EU and goods shipped from these two countries most likely will have to go through one or more of the other three countries in the current study. Hungary, the Czech Republic and Slovakia have been part of the EU since 2004. Since they border larger EU markets, these countries have gained employment by building parts using low cost labor and shipping to existing firms in other EU countries. Shipping costs are lower than costs from countries further away. Firms in the two new countries will have to update manufacturing facilities and cut costs to follow strategies similar to the 2004 entrants. Availability of low cost WC will have a strong influence on their ability to compete.

The BEEPS Database

The European Bank for Reconstruction and Development (EBRD) and the World Bank (WB) have developed a methodology for studying the performance of transition economies such as the new EU entrants. The Business Environment and Enterprise Performance Survey (BEEPS I 1999) was developed to capture a wide variety of data from firms in countries undergoing political and economic transition. Data was collected on numerous aspects of business performance including sources of financing, corruption and business relationships with government.

In 2002 the EBRD and WB developed a new version of the survey (BEEPS II, 2002) which was administered to managers and business owners in 23 transition economies in Eastern Europe and in new states created by the break up of the former Soviet Union. The purpose was to gain business leaders' perceptions about the "quality of governance, sources of financing, the investment climate and the competitive environment." The BEEPS study also collected information about firm characteristics.

The BEEPS data base covers several subject areas from business regulation to the rule of law. The current study used questions from the section of BEEPS called Financial Systems. In this section various issues concerning WC were explored including accounting systems, sources of financing, interest rates and loan terms, arrears, collateral requirements, subsidies, and the payment systems used in each country. Within each of these issues several questions were asked to gain understanding of the situation. In the current study, the authors selected questions related to the availability and cost of working capital. Appendix A lists the questions from the BEEPS survey used in the current study.

DATA ANALYSIS

Data from the 2002 World Bank BEEPS study were analyzed by country using One-Way Analysis of Variance with the country as the single factor. One-Way Analysis of Variance (ANOVA) is used to test for differences between means when only a single factor, such as country,

is used to explain mean value differences. When appropriate, midpoint values for response ranges were used as the data points. For example, if a question response category was 0-10%, the midpoint value of 5% was entered as the value for the data analysis. Question responses of No or Yes were coded as zero and one. Results from the statistical analysis are presented with each section of the discussion.

RESULTS AND DISCUSSION

Accounting Standards

Czech Republic firms are the least likely to use international accounting standards, with only about 13% of firms using IAS standards (Table 1). Just over a quarter of Hungarian firms use IAS standards and 40% of Bulgarian and Romanian firms use international accounting standards. While Romanian firms were most likely to use international accounting standards, they were the least likely to have their financial statement audited by an external auditor. About half of Czech, Bulgarian, and Slovakian firms use an external auditor. Two-thirds of Hungarian firms use an external auditor to review their financial statements.

Question	Results	P-Value
Does your firm use international accounting standards (IAS)? (0 = No, 1 = Yes)	Czech (.13) < Hungary (.26) < Bulgaria (.40), Romania (.40)	.000
Does your establishment have its annual financial statements reviewed by an external auditor? (0 = No, 1 = Yes)	Romania (.32) < Czech (.46), Bulgaria (.53), Slovakia (.53) < Hungary (.66)	.000

Countries that seek foreign direct investment and firms that seek foreign capital must have financial records that are compatible with the needs of investors and lenders. German firms did not enter international financial markets and thus developed a financial reporting system that fit the needs of German banks (Hill, 2005). The use of IAS and audited financial statements should increase loan availability to firms seeking to borrow funds in international financial markets. The lack of standards and auditing makes the availability of funds from banks with foreign capital or foreign banks less likely. Banks would require firms to use known accounting standards such as IAS or generally accepted accounting practices (GAAP) and audited financial statements as a loan requirement. German accounting practices are unique to the country but German lenders use and understand IAS and GAAP.

Arrears

Results show 89% of Slovakian firms have resolved an overdue payment by court action, which is a level significantly higher than Czech firms at 74% (Table 2). The percent of Bulgarian firms (61%) resolving an overdue payment are significantly less than Czech firms. Czech and Slovakian firms take on average a half year to resolve overdue payments, while Romanian firms take about six weeks longer.

Except for Czech firms (12%), less than seven percent of firms in the other countries currently have overdue payments to utilities. When asked about overdue tax payments, less than five percent of firms in the Czech Republic, Hungary, and Slovakia owe tax payments. A significantly higher percent of firms in Bulgaria and Romania (16% and 17% respectively) have overdue tax bills. About seven percent of Bulgarian firms owe money to their employees, a level significantly higher than firms in the other countries. About six percent of Hungarian firms have overdue payments to their material input suppliers, significantly less than Bulgarian firms (16%). A significantly higher number of Slovakian firms (18%) have overdue payments to material input suppliers than Bulgarian firms. When asked about the amount of overdue payments, there were no significant differences on the sources owed payments except for the material input suppliers. Firms in the Czech Republic, Hungary, and Slovakia owe less than five percent of their annual sales to input suppliers, while firms in Bulgaria and Romania owe on average 16% and 17% respectively of their annual sales in overdue payments to material input suppliers.

Question	Results	P-Value
Have you ever had to resolve an overdue payment? (0 = No, 1 = Yes)	Bulgaria (.61) < Czech (.74) < Slovakia (.89)	.000
How long did it typically take (in weeks) to resolve an overdue payment?	Czech (26.4), Slovakia (26.6) < Romania (32.0)	.012
Do you currently have any payments overdue (by more than 90 days) to Utilities? (0 = No, 1 = Yes)	Hungary (.02), Slovakia (.03), Bulgaria (.03), Romania (.07) < Czech (.12)	.000
Do you currently have any payments overdue (by more than 90 days) to Taxes? (0 = No, 1 = Yes)	Czech (.02), Hungary (.02), Slovakia (.04) < Bulgaria (.16), Romania (.17)	.000
Do you currently have any payments overdue (by more than 90 days) to Employees? (0 = No, 1 = Yes)	Czech (.00), Hungary (.00), Slovakia (.01), Romania (.04) < Bulgaria (.07)	.000

Question	Results	P-Value
Do you currently have any payments overdue (by more than 90 days) to Material Input suppliers? (0 = No, 1 = Yes)	Hungary (.06) < Bulgaria (.16) < Slovakia (.18)	.001
If yes, what is the amount of the overdue payment as a % of your total annual sales? Material Input suppliers	Czech (.02), Hungary (.02), Slovakia (.04) < Bulgaria (.16), Romania (.17)	.000

Collateral Requirements

Almost all Bulgarian (96%) and Romanian (97%) firms were required to use collateral to obtain a bank loan or overdraft (Table 3). These percentages were significantly higher than the percentages in the Czech Republic (84%) and Slovakia (85%). Czech and Slovakian firms were also required to use less collateral as a percentage of the loan, to obtain the loan (130% and 146% respectively) than firms in Hungary (182%) and Bulgaria (195%).

Most of the firms in all of the countries had loans for which collateral was required (Table 4). Buildings were the most common form of loan collateral, with about half of loans requiring buildings as collateral (Table 5). Homes and Other were the other two popular forms of loan collateral. Machinery and land were not used very often as collateral for a loan.

Question	Results	P-Value
Thinking of the most recent bank loan or overdraft you obtained, did the financing require collateral? (0 = No, 1 = Yes)	Czech (.84), Slovakia (.85) < Bulgaria (.96), Romania (.97)	.003
What was the approximate value of the collateral required as a percent of the loan value?	Czech (130%), Slovakia (146%) < Hungary (182%), Bulgaria (185%)	.000

Country	N	Firms with loans that required collateral	Firms with loans that did not require collateral
Bulgaria	75	96.0%	4.0%
Czech Republic	123	83.7%	16.3%
Hungary	123	91.1%	8.9%
Romania	97	96.9%	3.1%
Slovakia	67	85.1%	14.9%

Table 5: Types of Collateral Used When Collateral was Required

Country	N	Land	Buildings	Machinery	Your Home	Other
Bulgaria	28	3.6%	50.0%	7.1%	17.9%	21.4%
Czech Republic	48	0%	52.1%	12.4%	8.3%	27.1%
Hungary	67	3%	58.2%	6%	4.5%	28.4%
Romania	52	5.8%	55.8%	1.9%	17.3%	19.2%
Slovakia	24	4.2%	41.7%	0%	12.5%	41.7%

Interest Rates and Loan Terms

Czech firms have the lowest loan interest rates at 9%, significantly lower than firms in Bulgaria at almost 14% (Table 6). Romanian firms have the statistically highest loan rates at almost 35%. While Romanian firms have the highest interest rates, the average duration of their loans is the shortest at just under 20 months. At 28 months Hungarian firms had significantly longer loan terms than Romanian firms. Romanian firms got their loans the fastest at 28 days, significantly shorter than Bulgaria and Czech firms at about six weeks. Slovakian firms need the longest time period to get their loan approval at two months.

Table 6: Interest Rates and Loan Terms

Question	Results	P-Value
What is the loan's annual cost (rate of return)?	Czech (9.0%) < Bulgaria (13.6%) < Romania (34.8%)	.000
What is the duration of the loan (in months)?	Romania (19.7) < Hungary (28.7)	.023
How many days did it take to agree the loan with the bank from the date of application?	Romania (28) < Bulgaria (43), Czech (43) < Slovakia (59)	.000

Sources of Financing – Working Capital

Slovakian firms have financed about one-quarter and Bulgarian and Hungarian firms have borrowed about one-third of their working capital needs from local private commercial banks (table 7). Czech firms have borrowed significantly more of their working capital needs (50%) from local private commercial banks than firms in the other three countries.

Hungarian and Czech firm have borrowed the largest amount from foreign banks to finance their working capital needs (80% and 62% respectively). The amount of working capital borrowed by Hungarian and Czech firms is significantly greater than the amounts borrowed from foreign banks by firms in Slovakia (21%), Romania (23%), and Bulgaria (32%).

Question	Results	P-Value
What proportion of your firm's working capital over the past 12 months has been financed by borrowing from local private commercial banks?	Slovakia (22%), Bulgaria (31%), Hungary (32%) < Czech (50%)	.005
What proportion of your firm's working capital over the past 12 months has been financed by borrowing from foreign banks?	Slovakia (21%), Romania (23%), Bulgaria (32%) < Czech (62%), Hungary (80%)	.002
What proportion of your firm's working capital over the past 12 months has been financed by Other?	Slovakia (27%) < Czech (77%)	.025

Sources of Financing – New Investment

Romanian and Bulgarian firms finance a large portion (82% and 81% respectively) of their firm's new investments with internal funds or retained earnings (Table 8). These amounts are a significantly higher proportion internally financed than by Czech firms (71%). Czech firms have borrowed the largest proportion (50%) of their new investments from local private commercial banks. Czech firms 50% is significantly higher than the 20-30% of new investments borrowed from local private commercial banks in Slovakia (22%), Bulgaria (31%), and Hungary (32%).

Slovakian, Romanian, and Bulgarian firms have borrowed significantly smaller amounts for their new investments from foreign banks (22%, 23%, and 32% respectively) than Hungarian firms (85%).

Question	Results	P-Value
What proportion of your firm's new investments over the past 12 months has been financed by internal funds/retained earnings?	Czech (71%) < Bulgaria (81%), Romania (82%)	.002
What proportion of your firm's new investments over the past 12 months has been financed by borrowing from local private commercial banks?	Slovakia (22%), Bulgaria (31%), Hungary (32%) < Czech (50%)	.005
What proportion of your firm's new investments over the past 12 months has been financed by borrowing from foreign banks?	Slovakia (22%), Romania (23%), Bulgaria (32%) < Hungary (85%)	.003
What proportion of your firm's new investments over the past 12 months has been financed by Other?	Slovakia (27%) < Czech (77%)	.025

Sources of Financing - Banking

Firms in all of the countries feel it would be fairly difficult to obtain a short-term working capital loan on commercial terms (Table 9). However, Bulgarian firms felt the task would be significantly more difficult than firms in the other four countries. Similar results were seen for long-term bank loans for new investments on commercial terms. While firms in all countries felt the long-term loan for new investments would be fairly difficult, Bulgarian firms felt obtaining the loan would be significantly more difficult than firms in the other four countries.

Question	Results	P-Value
How easy would it be for your firm to obtain a short-term working capital loan on commercial terms? (0 = Impossible, 25 = Very Difficult, 50 = Fairly Difficult, 75 = Fairly Easy, 100 = Very Easy)	Bulgaria (44) < Slovakia (54), Czech (55), Hungary (56), Romania (60)	.000
How easy would it be for your firm to obtain a long-term bank loan for new investment on commercial terms? (0 = Impossible, 25 = Very Difficult, 50 = Fairly Difficult, 75 = Fairly Easy, 100 = Very Easy)	Bulgaria (39) < Slovakia (49), Czech (49), Hungary (49), Romania (52)	.000
How important in retrospect was this initiative for the survival and/or growth of your company over that period? (0 = Not Important, 25 = Slightly Important, 50 = Fairly Important, 75 = Very Important, 100 = Extremely Important)	Slovakia (37) < Czech (55)	.036

Sources of Financing – Contingency Plans

Firms in the five countries feel that liquidating short-term financial assets to finance a temporary 10% decrease in cash flow is fairly important as a possible alternative solution (Table 10). About half of firms in Slovakia, the Czech Republic, and Romania said liquidating short-term financial assets was fairly important, while about two-thirds of Bulgarian and Hungarian firms felt liquidating short-term assets was significantly more important. Getting cash from banks to finance the temporary cash flow situation was fairly important to Bulgarian firms. Hungarian firms felt bank credit was significantly more important than Bulgarian firms, while Romanian firms felt bank credit was even more important than Hungarian firms.

Czech and Hungarian firms were significantly more likely to see delaying payments to suppliers and utilities as a means for financing a short-term cash flow problem than firms in Slovakia.

Slovakian firms feel obtaining government credit to finance short-term cash flow problems was extremely important, while Czech firms felt significantly less that credit from the government was important to finance a temporary cash flow issue.

Question	Results	P-Value
Suppose cash flow to your firm for the next quarter is 10% lower than you expected, how important is cash from liquidating short term financial assets to finance the gap? (0 = Not Important, 25 = Slightly Important, 50 = Fairly Important, 75 = Very Important, 100 = Extremely Important)	Slovakia (48), Czech (55), Romania (55) < Bulgaria (66), Hungary (70)	.000
Suppose cash flow to your firm for the next quarter is 10% lower than you expected, how important is cash from credit obtained from banks to finance the gap?	Bulgaria (55) < Hungary (66) < Romania (69)	.001
Suppose cash flow to your firm for the next quarter is 10% lower than you expected, how important is cash from delaying payment to suppliers/utilities to finance the gap?	Slovakia (52) < Hungary (61), Czech (62)	.012
Suppose cash flow to your firm for the next quarter is 10% lower than you expected, how important is cash from credit obtained from the government to finance the gap?	Czech (50) < Slovakia (100%)	.164

The Financial System - Subsidies

In Romania, Bulgaria, Slovakia, and the Czech Republic, less than five percent of firms have received a subsidy since 1998 (Table 11). The number of firms in Hungary is significantly more at 17 percent. Firms that have received a subsidy from the national government have received less than 10 percent in Romania, Hungary, Bulgaria, and the Czech Republic. Slovakian firms have received significantly larger subsidies as a percent of annual sales (40%) from their national government.

Question	Results	P-Value
Since 1998, has your firm received any subsidies from the national government? (0 = No, 1 = Yes)	Romania (.04), Bulgaria (.06), Slovakia (.07), Czech (.08) < Hungary (.17)	.000

Table 11: Subsidies		
Question	Results	P-Value
If yes, on average since 1998, what was the amount of these national subsidies as a percent of average annual sales?	Romania (6.0), Hungary (7.3), Bulgaria (8.6), Czech (9.0) < Slovakia (40)	.000

The Financial System – the Payment System

Table 12 shows Czech firms believe that cheques clear through their financial institutions (5.2 days) almost 40% faster than firms in Slovakia (8.8 days) and Bulgaria (9.3 days). Bulgarian and Romanian firms believe payments from foreign currency wire clear in about six days, significantly faster than the 8.4 days perceived by Hungarian firms. Romanian firms settle 58% of their sales to customers with cash or bank transfer significantly less than the over 90% of sales settled by cash or bank transfer by firms in Slovakia, the Czech Republic, Hungary, or Bulgaria.

Romanian firms settle about half of their purchases from suppliers with cash or bank transfer significantly less than the over 90% of purchases from suppliers settled by cash or bank transfer by firms in Slovakia, the Czech Republic, Hungary, or Bulgaria.

Table 12: The Payment System		
Question	Results	P-Value
How long does it take (in days) to clear payments from cheques through your financial institution?	Czech (5.2) < Slovakia (8.8), Bulgaria (9.3)	.003
How long does it take (in days) to clear payments from foreign currency wire through your financial institution?	Bulgaria (6.1), Romania (6.1) < Hungary (8.4)	.090
What share of your sales to your customers (in percent) in 2001 was ultimately settled by cash or bank transfer (cash settlement)?	Romania (58%) < Slovakia (91%), Czech (92%), Hungary (92%), Bulgaria (93%)	.000
What share of your purchases from suppliers in 2001 was ultimately settled by cash or bank transfer (cash settlement)?	Romania (52%) < Slovakia (92%), Czech (92%), Hungary (93%), Bulgaria (93%)	.000

CONCLUSION

Adherence to International Accounting Standards, use of external audits, and generally greater transparency in accounting systems are steps that may make investment more attractive to potential domestic and foreign investors. Romania exhibited the most extensive use of International Accounting Standards, and Hungary used an external audit more extensively.

Firms in Bulgaria and Romania were more likely to have overdue tax bills than firms in the other countries. Bulgarian firms were more likely to owe money to employees than were firms in the other countries. Bulgarian and Romanian firms owed more overdue payments to suppliers than firms in the other countries. Exploring the laws and penalties in country to country differences may explain the avenues firms take when they are in a financial bind.

Collateral requirements for a bank loan or overdraft were higher in Hungary and Bulgaria than in the other countries. Land was not used frequently as collateral, which raises questions about land ownership and property rights. Also, loans were not frequently collateralized with machinery, which may speak to the age of the equipment. Buildings and your home were used to collateralize a large percentage of loans in each country. Additionally, a large percentage of collateral was derived from a category "Other" which bears further investigation. Firms in Bulgaria, Romania, and Czech Republic frequently identify "Other" as a source of funding for working capital, new equipment and for a making up a shortfall in operating expenses. Once again, these "Other" sources bear examination.

Firms in Romania were able to secure loans in a shorter period of time, paid a higher interest rate, and had loans of shorter duration than firms in the other countries. Czech firms borrow more of their working capital and funds for new investment from banks and at a lower rate of interest than do firms in other countries. Czech and Hungarian firms borrow more working capital from foreign banks than do firms in the other countries. Romanian and Bulgarian firms derive a greater portion funding for new investment from retained earnings than do the other countries which may be a result of the high interest rates.

Firms in Czech Republic perceive checks to clear their financial institutions more quickly than do firms in the other countries. Although checks also clear rather quickly in Romania, firms there only settle 58% of sales to customers and 50% of purchases from suppliers with cash or bank transfers. When the other countries do about 90% of sales and purchasing by cash or bank transfer, one wonders what in the banking system or culture accounts for the differences.

As the newest entrants to the EU, Bulgaria and Romania will have a significant need for working capital to grow their businesses and remain competitive with other EU-based businesses. Consequently the need for low-cost working capital will be great in these countries. Our research shows that Bulgarian and Romanian firms are less likely to receive national government subsidies, borrow less working capital from foreign banks, pay higher interest rates on bank loans, and have larger overdue payments for taxes and to material input suppliers than firms in the Czech Republic,

Slovak Republic, and Hungary. None of these results positively supports the increased need for working capital by Bulgarian and Romanian firms as their countries join the EU. The ability of Bulgarian and Romanian firms to be competitive in the EU and global markets will be lessened without significant changes in the availability and cost of working capital to firms in these countries.

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APPENDIX A

BEEPS 2002 Questions used in the study

Accounting Standards

Does your firm use international accounting standards?

Does your establishment have its annual financial statements reviewed by an external auditor?

Arrears

Have you ever had to resolve an overdue payment? (0 = No, 1 = Yes)

How long did it typically take (in weeks) to resolve an overdue payment?

Of these disputes over payments, what percent was resolved by court action?

Do you currently have any payments overdue (by more than 90 days) to Utilities? (0 = No, 1 = Yes)

Do you currently have any payments overdue (by more than 90 days) to Taxes?

Do you currently have any payments overdue (by more than 90 days) to Employees?

Do you currently have any payments overdue (by more than 90 days) to Material Input suppliers?

If yes, what is the amount of the overdue payment as a % of your total annual sales? Utilities

If yes, what is the amount of the overdue payment as a % of your total annual sales? Taxes

If yes, what is the amount of the overdue payment as a % of your total annual sales? Employees

If yes, what is the amount of the overdue payment as a % of your total annual sales? Material Input suppliers

Collateral Requirements

Thinking of your most recent bank loan or overdraft you obtained, did the financing require collateral?

Thinking of your most recent bank loan or overdraft you obtained, what type of collateral was required?

Interest Rates and Loan Terms

What is the loan's annual cost (interest rate)?

What is the duration of the loan in months?

If you fell behind in bank payments, how would you expect the bank to react?

What percentage of your total borrowing (loans, accounts payable) is currently denominated in a foreign currency?

Sources of Financing – Working Capital

Proportion of Working Capital from Internal Funds/Retained Earnings
 Proportion of Working Capital from Equity
 Proportion of Working Capital from Local Private Commercial Banks
 Proportion of Working Capital from State-Owned Banks, including Development Banks
 Proportion of Working Capital from Foreign Banks
 Proportion of Working Capital from Loans from Family and Friends
 Proportion of Working Capital from Money Lenders or other Informal Sources
 Proportion of Working Capital from Trade Credit from Suppliers
 Proportion of Working Capital from Trade Credit from Customers
 Proportion of Working Capital from Credit Cards
 Proportion of Working Capital from Leasing Arrangements
 Proportion of Working Capital from Government (other than state-owned banks)
 Proportion of Working Capital from Other

Sources of Financing – New Investment

Proportion of New Investment from Internal Funds/Retained Earnings
 Proportion of New Investment from Equity
 Proportion of New Investment from Local Private Commercial Banks
 Proportion of New Investment from State-Owned Banks, including Development Banks
 Proportion of New Investment from Foreign Banks
 Proportion of New Investment from Loans from Family and Friends
 Proportion of New Investment from Money Lenders or other Informal Sources
 Proportion of New Investment from Trade Credit from Suppliers
 Proportion of New Investment from Trade Credit from Customers
 Proportion of New Investment from Credit Cards
 Proportion of New Investment from Leasing Arrangements
 Proportion of New Investment from Government (other than state-owned banks)
 Proportion of New Investment from Other

Sources of Financing

Short term capital commercial terms

Long term bank loan for investment on commercial terms

Has your firm changed your main bank since 1998?

How important in retrospect was this initiative (the bank change) for the survival and/or growth of your company during that period?

Sources of Financing - Banking

How easy would it be for your firm to obtain a short-term working capital loan on commercial terms? (0 = Impossible, 25 = Very Difficult, 50 = Fairly Difficult, 75 = Fairly Easy, 100 = Very Easy)

How easy would it be for your firm to obtain a long-term bank loan for new investment on commercial terms?

Has your firm changed its main bank (the single bank with which your firm has the closest relationship) since 1998?

How important in retrospect was this initiative for the survival and/or growth of your company over that period? (0 = Not Important, 25 = Slightly Important, 50 = Fairly Important, 75 = Very Important, 100 = Extremely Important)

Sources of Financing - Contingency

Suppose that incoming cash flow to your firm the next quarter is 10% lower than you had expected. How important is liquidating short term financial assets for financing this delayed cash flow?

Suppose that incoming cash flow to your firm the next quarter is 10% lower than you had expected. How important is obtaining credit from banks for financing this delayed cash flow?

Suppose that incoming cash flow to your firm the next quarter is 10% lower than you had expected. How important is obtaining credit from suppliers for financing this delayed cash flow?

Suppose that incoming cash flow to your firm the next quarter is 10% lower than you had expected. How important is delaying payment to suppliers/utilities for financing this delayed cash flow?

Suppose that incoming cash flow to your firm the next quarter is 10% lower than you had expected. How important is exchanging goods for goods for financing this delayed cash flow?

Suppose that incoming cash flow to your firm the next quarter is 10% lower than you had expected. How important is delaying payments to budget (Taxes) and extra-budgetary funds for financing this delayed cash flow?

Suppose that incoming cash flow to your firm the next quarter is 10% lower than you had expected. How important is delaying payments to workers (wages) for financing this delayed cash flow?

Suppose that incoming cash flow to your firm the next quarter is 10% lower than you had expected. How important is obtaining credit from the governments for financing this delayed cash flow?

Suppose that incoming cash flow to your firm the next quarter is 10% lower than you had expected. How important is obtaining subsidy from the governments for financing this delayed cash flow?

Suppose that incoming cash flow to your firm the next quarter is 10% lower than you had expected. How important is other for financing this delayed cash flow?

Subsidies

Since 1998, has your firm received any subsidies from the national government? (0 = No, 1 = Yes)

Since 1998, has your firm received any subsidies from the regional/local government?

Since 1998, has your firm received any subsidies from Other?

If yes, on average since 1998, what was the amount of these national subsidies as a percent of average annual sales?

If yes, on average since 1998, what was the amount of these regional/local subsidies as a percent of average annual sales?

If yes, on average since 1998, what was the amount of these Other subsidies as a percent of average annual sales?

The Payment System

How long does it take (in days) to clear payments from cheques through your financial institution?

How long does it take (in days) to clear payments from domestic currency wire through your financial institution?

How long does it take (in days) to clear payments from foreign currency wire through your financial institution?

What share of your sales to your customers (in percent) in 2001 was ultimately settled by cash or bank transfer (cash settlement)?

What share of your sales to your customers (in percent) in 2001 was ultimately settled by bills of exchange (veksels)?

What share of your sales to your customers (in percent) in 2001 was ultimately settled by debt swaps or offsets?

What share of your sales to your customers (in percent) in 2001 was ultimately settled by exchange of goods for goods?

What share of your sales to your customers (in percent) in 2001 was ultimately settled by Other?

What share of your purchases from suppliers in 2001 was ultimately settled by cash or bank transfer (cash settlement)?

What share of your purchases from suppliers in 2001 was ultimately settled by bills of exchange (veksels)?

What share of your purchases from suppliers in 2001 was ultimately settled by debt swaps or offsets?

What share of your purchases from suppliers in 2001 was ultimately settled by debt swaps or offsets?

What share of your purchases from suppliers in 2001 was ultimately settled by Other?

COGNITIVE GAP BETWEEN PRODUCERS AND CONSUMERS IN THE PROCESS OF NEW PRODUCT MARKET FORMATION

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ABSTRACT

In this paper, I explored the factors influencing product market dynamics from the perspective of differing knowledge structures of producers and consumers. In the first part, I defined a product market as a socially constructed knowledge structures that are shared among market actors (Rosa et al. 1999). Then, I identified two factors that influence the formation of product markets: the competitive arena perceived by producers, and consumers' knowledge with regard to product classification.

In the second section, I reviewed previous researches to understand the elements that influence these two factors. Previous research on consumers' perceptions of category structure imply that the boundaries of product markets are related to substitutability with regard to product usage. In contrast, from the producers' perspective, a shift in the competitive arena after the appearance of "the dominant design" of products has been pointed out as a factor influencing product market boundaries (Abernathy and Utterback, 1978).

Finally, using articles in newspapers and magazines as data, I conducted a study on the Japanese soft drink market, focusing on the formation of the "bottled green tea" category. The results revealed a change in the competitive arena for producers, which could be a source of potential threats as well as opportunities.

WHAT IS A PRODUCT MARKET?

The market environment, which surrounds producers and consumers, includes a myriad of boundaries, within which lies the "product market." We can recall similar sets of products that constitute certain product markets such as "automobile," "camping equipment," or "bottled green tea" markets. These product market boundaries help market actors define the values of goods traded within the market and help to establish a fundamental order for the purpose of coordinating trade between producers and consumers. It is based on these boundaries that producers perceive their competitive setting when they formulate a strategy, and consumers form a consideration set in their purchasing situations.

In traditional marketing research, the existence of product categories has not been questioned. (Rosa et al. 1999) While research has implicitly assumed the existence of product

markets in addition to the fact that these markets have boundaries, the arbitrariness and dynamic changes in the boundaries was never a central issue of discussion. This is partly because product markets are fundamental coordinates (McCracken 1986) to interpret a chaotic and uncertain world. Once a product market is formed, the existence of market boundaries seems like a given condition for market actors—a condition that influences their perception and action. As a result, it affects the performance of firms. For instance, when manufacturers generally use the share of a market as one of the important criteria to evaluate the performance of their products, they assume certain boundaries of the product market. The recognized market environment depends on the boundaries of the “competitive arena,” that is, the product market.

In summary, facets of strategic decision-making, such as the definition of a business, assessment of opportunities and threats, and the allocation of resources, are strongly influenced by the range of the product market. (Day, Shocker and Srivastava 1979) This gives rise to the following question: What are the determinants of the boundaries of a product market?

PRODUCT MARKET AS THE EXTERNAL ENVIRONMENT FOR MARKET ACTORS

Traditionally, “industry structure analysis,” which assumes given and external market boundaries and analyzes the market structure affecting the performance of each company, has been a prominent approach, especially in the consideration of competitive strategy. (Porter 1980, Hofer and Schendel 1978) The purpose of this analysis is to explain the gaps in performance between different industries or companies on the basis of the intensity within the market, based on the structure-conduct-performance (S C P model) in industrial economics, which argues that the “structure” of a market determines the “conduct” of each company and consequently affects the companies’ “performance.” In industry structure analysis, it is assumed that the boundaries of the industry or product market are given, external, and have an independent structure. (Porter 1980) In most cases, product market boundaries depend on the “Standard Industrial Classification,” which is used as the basis for official statistics in each country. The boundaries mainly reflect manufacturers’ perspective on the definition of the product market, based on similarities in production processes, functions, or raw materials used. (Needham 1969)

On the other hand, the approach of defining a product market based on similarities between products has been criticized in consumer studies, as such an approach is not helpful enough to assess the opportunities and threats confronted by businesses. (Levitt 1969, Day, Shocker and Srivastava 1979) In other words, in industry structure analysis, there is the assumption that the similarity in the product itself corresponds to product substitutability as perceived by consumers (Needham 1969); however, in consumer studies, it is argued that consumers may perceive a different structure as the product market. For instance, although the Standard Industrial Classification would classify “leather gloves” and “knitted gloves” into different product markets, based on the material or technology

used to make each type of product, consumers would perceive them as very close substitutes and classify them into the same category. Likewise, consumers will not perceive a barber shop located in a distant city as a substitute for a neighborhood barber shop. (Needham 1969) For consumers, substitutability of goods or services, which determines the boundaries of product markets, is not dependent on the similarity between products or the production technology used to make the products but on the usage situation or availability of goods or services. Research focusing on consumer behavior has argued the importance of understanding a product market in terms of competitive goods or services based on the consumer's perspective. (Day, Shocker and Srivastava 1979, Srivastava, Leone and Shocker 1981, Srivastava, Alpert and Shocker 1984, Ratneshwar and Shocker 1991)

PRODUCT MARKET AS A NETWORK OF CONSENSUAL KNOWLEDGE S STRUCTURES

In this article, I propose that for market actors, a product market is not an external and independent environment whose boundaries are unambiguously determined by specific factors such as the similarity between products or the usage situation of products. Instead, a product market should be understood as a network of dynamic knowledge structures socially constructed by market actors themselves.

Day, Shocker and Srivastava (1979) argued that all product market boundaries are arbitrary and that they exist because of recurring needs to comprehend the market structure and impose some order in the complex market environment. The interpretive perspective in organization research also developed a similar view, arguing that a market environment is enacted through the social construction and interaction processes of organized actors. (Smircich and Stubbart 1985, Weick 1978) Similarly, a product market can be understood as a cognitive structure that is socially constructed by the subjective perception of producers and consumers.

Therefore, this study defines product markets as a network of socially constructed knowledge structures that are shared among producers and consumers. (Rosa et al. 1999) All market actors including producers, consumers, and distributors need to categorize the various products as members of a certain product market to make sense of the market environment. These knowledge structures are reinforced by the use of a common language between both producers and consumers and are maintained as a relatively stable market order for a certain period.

In other words, a product market is a market environment that is generated by human actions and that also includes intellectual efforts on the part of market actors, to make sense of the market situation. (Smircich and Stubbart 1985) Even if a product market as a network of knowledge structures seems like a stable order that lasts for a long period, it could change dynamically when new products are introduced and market actors make interpretations. (Day et al. 1979, Rosa et al. 1999) Primarily two factors influence product markets: the competitive arena perceived by

producers, and consumers' knowledge with regard to product classification. In this article, we can define a product market as a crossover between these two factors.

CATEGORIZATION OF PRODUCTS BY CONSUMERS

How do consumers form categories of products as knowledge structures? Day, Shocker and Srivastava (1979) classified various customer-oriented methods for identifying product markets on the basis of two types of data: behavioral and judgmental. Analytical methods based on purchase or usage behavior analyze the cross-elasticity of demand, similarities in behavior, and brand switching. Judgmental data, in the form of perceptions or preferences, are used in methods such as decision sequence analysis, perceptual mapping technology, technology substitution analysis, and customer judgment of substitution.

One method of analyses, which has developed since the 1980s, focuses on the "product category knowledge structures" in consumer information processing. Literature on product category knowledge structures suggests that consumers represent and organize product knowledge in the form of category structures in their minds so as to permit classification. (Alba and Hutchinson 1987, Sujan 1985, Cohen and Basu 1987) These works shed light on how consumers categorize products in their minds and how the structures vary depending on the level of involvement or demographics of the consumer. It is possible to regard consumers' product category knowledge structures as their definition of market boundaries. (Cohen and Basu 1987, Hutchinson and Alba 1991, Peracchio et al. 1996)

An especially important finding in the research on consumers' product category knowledge structures is that consumers could classify products having no common attributes under the same product market, based on substitution in terms of use. Barsalou (1985) distinguished product categories like "birthday presents" and "camping equipment" from common taxonomic categories (e.g., "vegetables," "birds") and classified the former under a category he named the "goal-derived category." These approaches imply that consumers perceive and judge products as means to achieving the ends inherent in the products' usage contexts, and they tend to consider products as similar whenever they are perceived as substitutable, i.e., as means for the same ends or usages. (Ratneshwar and Shocker 1991)

HOW PRODUCERS DEFINE THEIR COMPETITORS

However, consumers' cognitive construct is not an exclusive determinant of product markets, because consumers' structure of product category knowledge is not independent of producers' marketing efforts. Although the determinants of product markets cannot be reduced to only the similarities between products or the technology used for the products, these similarities indirectly

influence the formation of socially constructed product markets by impacting producers' knowledge structures.

Then, how do producers define the boundaries of product markets? Two streams of literature can be found, and these concern the dynamic changes in market boundaries from the producers' perspective. First, there is literature focusing on organizational cognition and changes in it. Some empirical works revealed that product markets are recognized differently between firms and managers. For instance, Porac et al. (1995) argued that market boundaries are socially constructed around a collective cognitive model and examined how firms define a reference rival group. Further, Day and Nedungadi (1994) examined how managers differ in terms of the mental model they use to make sense of their complex and fluid competitive arena and to represent the competitive advantages of their businesses.

On the other hand, literature on technological evolution proposed the transformation of the competitive arena by the appearance of a "dominant design," which is a product design whose main components and underlying core characteristics do not vary from one model to another. (Abernathy and Utterback 1978) The dominant design product has features that competitors and innovators must adhere to if they hope to command a significant market share. (Utterback 1994) According to these studies, after the appearance of the dominant design of a product, competition shifts from being dependent on product differentiation to product performance and costs. This implies that perceived competitors will also shift from many different firms including producers of goods belonging to other product markets, to firms in the emerged market.

COGNITIVE GAP BETWEEN PRODUCERS AND CONSUMERS

As existing researchers argue, if the perceived competitive arena for producers shifts after the appearance of the dominant design of a product and stabilization of a new product market, there will be a cognitive gap between producers and consumers. On one hand, consumers may define product markets by goal or usage situation regardless of product similarity, thereby resulting in producers competing with entirely different product members. On the other hand, as research on dominant designs has pointed out, producers may focus on competition within a certain range of product members within only the emerging product market. This cognitive gap could lead to some serious problems for producers in terms of their failing to gain an inadequate understanding of the market and overlooking of potential threats or opportunities.

However, this cognitive shift of producers with regard to the competitive arena has not yet been examined. Therefore, in the next section, I verify hypotheses to clarify how the competitive arena perceived by producers changes during the process of establishment of a new product market. Using articles in newspapers and magazines as data, the research is conducted on the formation of the "bottled green tea" category in the soft drink market in Japan.

RESEARCH ON THE “BOTTLED GREEN TEA” CATEGORY IN JAPAN

This research deals with the formation of the “bottled green tea” category in the Japanese soft drink market, focusing on change in the perceived competitive arena during the process of establishment of a new product market.

The Japanese soft drink market is considered as an adequate target, because in this market, new product markets are frequently formed. A distinct characteristic of this market is the brevity of product lifecycles. In the Japanese soft drink market, only 3 of the 1000 new brands introduced every year survive more than one year. This extremely short product life cycle is a product of two factors. Firstly, for producers in this market, it is relatively easy to introduce new products because of the high outsourcing rate. Even specialized producers outsource nearly 50% of their manufacturing to original equipment manufacturers. Consequently, small initial investment has induced new entries from different fields and a great number of new product introductions. Secondly, for consumers, it is easy to switch from one brand to another, because most canned or bottled soft drinks are similarly priced (moreover, they are inexpensive). While brands change too fast in this soft drink market, radically new products are sometimes introduced, resulting in the creation of a new submarket.

Within such a soft drink market, the “bottled green tea” category is a growing submarket. It has been dubbed the “last frontier” by manufacturers because of its great market size—estimated to be about 300 million yen in 2004. The pioneering event in this market was the introduction of canned green tea in 1985. (Today, this brand is known as one of the strongest brands, namely, “Ooi Ocha,” by Itoen, a specialized beverage maker for tea-related products.) Because manufacturing green tea as a cold beverage involved technological difficulties, other major manufacturers did not follow until the 1990s. After other major manufacturers entered the market, the bottled green tea market, which accounted for only 0.5% of the total Japanese soft drink beverage market in 1990, saw a rise of more than 10% in gross sales from 2003. Although the bottled green tea market is relatively young, it is one of the most important submarkets for beverage producers today and is recognized as a stable product market.

CONTENT ANALYSIS

To comprehend producers’ cognitive structure, I performed content analysis on the text in published articles. Krippendorff 1980 suggested that content analysis has at least four advantages. First, it is an investigation technique that is hardly affected by who the respondents of the survey are. Second, there is no need to structure the data source for ease of analysis. Third, taking context into consideration enables one to analyze the symbolic application of words. Finally, this method enables one to analyze large amounts of data. Due to all these features, it seemed that content analysis would

enable me to overcome time and space constraints and serve as an adequate method for my research to understand the dynamic changes in market order.

TEXT SOURCES

I used data to examine the hypotheses derived from the text of published articles referring to the bottled green tea category. These were important data sources because references in these articles served as “a window into the minds of producers” (Rosa et al. 1999). First, from the article databases, I assembled the full text of all the articles between 1990 and 2004 in which the word “bottled green tea” appeared. The databases used consisted of the following sources: the Nikkei Telecom 21 database, which includes the Nikkei newspaper, Nikkei Industrial newspaper, Nikkei Marketing Journal, Nikkei Financial newspaper, Nikkei Plus One, Nikkei Flash News, and Press Release database, and the Kikuzou DNA database, which includes Asahi Newspaper, AERA magazine, and Asahi Weekly Press. The number of articles that fulfilled our research criteria and that were used as data sources was 1,968.

A large part of the data comprised articles in business newspapers. Because articles in business newspapers are written based on press releases or information gathered from firms, I concluded that they were adequate data sources reflecting the knowledge structures of manufacturing firms.

CODING AND VALIDATION

One of the distinguishing characteristics of content analysis compared to other methods used to analyze communication content is its objectivity. (Kassarjan 1977) In order to minimize the analyst’s subjectivity, the research process must be carried out on the basis of explicitly formulated coding rules and procedures.

Coding was performed by two independent judges who followed specified coding rules. They classified each text data into 3 categories: reference to competition with products outside the market, reference to competition with products inside the market, no reference to competition. The references to outside competition include the examples such as “in beverage market, bottled green tea is gaining market share” and “expansion of bottled green tea market is robbing bottled oolong teas of the selling spaces in retail stores”. The references to inside competition include the examples such as “green tea war” and “this year, new bottled green tea brands released by major beverage manufacturers increased competition”. One judge coded all the articles, whereas the other coded 10% of the text data to confirm the validation. The Cohen’s Kappa measure of coding reliability (0.659) was found to be significant.

HYPOTHESES

The dependent variable for this analysis was the number of references made to competition divided by the total number of articles. The independent variable was the stability of the bottled green tea market, estimated by the share of bottled green tea in the Japanese soft drink market. The number of new products introduced in each period was used as a control variable.

The following two hypotheses were tested using regression with a Poisson maximum likelihood estimator, because the dependent variable, namely, the number of references made to competition, is a count of events, which is discontinuous and exhibits a Poisson distribution.

H1: References to competition with products outside the market will decline as the new product market stabilizes.

H2: References to competition with products inside the market will increase as the new product market stabilizes.

In this research, coefficient values were estimated by maximum likelihood using the JMP statistical software (SAS Institution Inc.). Data were modeled as follows, and the value of a variable to minimize loss function was estimated.

Model: (references to competition) $\beta_0 \beta_1$ (share of bottled green tea β_2 (number of new products)

Loss function: [references to competition Model Exp Model Log(Gamma number 1

The results of the test showed correlations between the stability of the bottled green tea market and the number of references to the inside/outside competition. References to competition with products outside the market declined as the market share of the emerged bottled green tea market increased (-.054). In the same period, in contrast, references to competition with products inside the market increased (.216). Consequently, both H1 and H2 were supported. Results for the Poisson regression analysis are summarized in the following tables.

SSE	DFE	MSE	RMSE	
5.159336342	57	0.0905147	0.3008566	
Parameter	estimated value	SEM	lower confidence limit	upper confidence limit
0	-3.74825806	1.52819304	-7.9891108	-1.1920718
1	-0.054964858	0.34133682	-0.9357752	0.57092986
2	0.0074196666	0.10692891	-0.3632053	0.18073621

SSE	DFE	MSE	RMSE	
6.9131299067	57	0.121283	0.3482571	
Parameter	estimated value	SEM	lower confidence limit	upper confidence limit
0	-4.827972861	1.73528036	-9.9706724	-2.3057401
1	0.2167019321	0.22310133	-0.2455247	0.71891464
2	-0.004038767	0.06589268	-0.2091081	0.0953788

DISCUSSION—COGNITIVE TRANSFORMATION

The results of this research verify the transformation of producers' cognition. In summary, as the market share of the introduced bottled green tea increased, correlations were found between the stability of the bottled green tea market (indicated by the share of bottled green tea in the total production volume of the Japanese soft drink market) and the number of references to inside/outside competition.

As predicted by literatures on dominant design, during the process of new product market formation, the competitive arena for producers becomes narrow and reaches a point where it comprises only product members inside the emerged product market. In other words, when the stability of the bottled green tea market was low, each green tea brand seemed to compete with other product market members like coke or bottled oolong tea. However, after the bottled green tea market stabilized, producers began neglecting these outside competitors and focused on inner competition with the other bottled green tea brands. Therefore, producers began insulating themselves from the broader competitive context. These results are consistent with the theory of dominant design.

Additionally, in the same period, most firms experienced an increase in the sale of their bottled green tea brands. This implies that the increase in the number of references to inner competition is reflective of producers' cognitive transition and is not a consequence of an exhausting competitive environment within the bottled green tea market. In fact, the correlation between the number of references to inner competition and the number of new products introduced in this period was not positive (-.004).

CONCLUSION—DYNAMICS OF PRODUCT MARKET

This research revealed a cognitive gap between the transition of producers' knowledge structures tested in this research and consumers' goal-driven knowledge structures, which has been revealed by existing research in consumer studies. Consequently, this gap between producers and

consumers indicates that product market boundaries change in two directions; in other words, they can result in potential threats as well as opportunities for producers.

First, the cognitive gap implies that consumers may categorize unexpected products as substitute goods. As mentioned earlier, consumers may categorize unexpected products as substitute goods, based on their goals. In other words, a consumer's needs could be satisfied by another product or technology. Second, this research suggests that product market boundaries are neither an external nor static order but a network of socially constructed knowledge structures. This implies that it is possible for firms to redefine and extend the value of their products in an existing product market or to target new customers by introducing new features or products into the market. With regard to the two directions of change in market boundaries mentioned above, the former possibility (i.e., the consumer's wants being satisfied by another product) is considered as a potential threat for producers, while the latter possibility (i.e., new features/products being introduced) is a potential market opportunity.

Producers will encounter potential threats because a consumer's wants could be satisfied by another product or technology. For instance, even though automobiles fulfill consumers' transportation needs, other modes of transportation based on other technologies, such as trains or bicycles, also satisfy the same need. This implies that in a broader context, very different products could be competitors. Similarly, in a soft drink market, if a consumer wishes to quench his/her thirst with a calorie-free beverage rather than with bottled green tea, the bottled green tea brands will lose their customers to different products such as bottled water or Diet Coke. On the other hand, if consumers drink bottled green tea to feel refreshed, bottled green tea products will face competitions from not only any other beverage products but also any other goods or services that help ones freshen up.

However, there also exist potential opportunities for producers. Firms have chances to proactively redefine and extend the value of their products by introducing new features or products into the market. For instance, automobiles not only fulfill consumers' transportation needs but also satisfy their desire to display their social status. With regard to the bottled green tea market, if a firm attracts the attention of consumers to "catechin," an ingredient in green tea that helps burn fat, the fat-burning feature of bottled green tea will become its new benefit and will fulfill consumers' need to loose weight. The redefinition and extension of the existing product market is especially effective in situations of market maturization.

Levitt (1960) warned against the tendency of firms to overlook these potential threats and opportunities and named this tendency "marketing myopia". Marketers need to have a creative mindset and approach when considering product markets so that firms can adapt to the changes therein and avoid marketing myopia.

FURTHER RESEARCH

Finally, we need to enumerate the weaknesses of this research. First, there is a noticeable limitation arising from the restriction of the data source. This research analyzed the knowledge structures of producers and the changes in these knowledge structures, using the text of published articles, a large part of which comprised business newspapers. However, there was an insufficient analysis of the consumer's perspective. How consumers recognize an emerging product market or their knowledge structures was only argued with heavy reliance on previous research in consumer studies. This is partly why adequate textual data was not available. However, it is important to continue searching for text data reflecting consumers' concerns, in order to more precisely investigate the gap between producers and consumers.

Second, we should be careful while generalizing the findings of this research to other product markets. In addition to the bottled green tea segment of the Japanese soft drink market, which was the subject of our research, it is advisable that further research be conducted in different markets (e.g., durable goods markets) and/or in different countries.

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COOPERATION AMONG EDUCATIONAL INSTITUTIONS AND INDUSTRY: SUPPLY CHAIN PERSPECTIVE

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ABSTRACT

The purpose of this paper is to analyze the current operating system of the educational institutions in Kyrgyzstan in terms of a supply chain view. In particular, this paper hypothesizes that, because the current educational system in Kyrgyzstan lacks cooperation with the industry, it is turning out to be ineffective in meeting the needs of the labor market. Consequently, many students are unable to find jobs after graduation or end up in jobs not related to their intended professions. This study will use data gathered from a survey based on a constructed questionnaire to lend support to the above hypothesis. The paper will then propose another operating system ("pull system") as a feasible solution to the current issue: the failure of the educational institutions in Kyrgyzstan in matching the market demands for the labor force because of the insufficient level of cooperation with the industry.

INTRODUCTION

In the 21st century, the global market conditions have changed significantly. Such changes have affected the operations of not only private profit oriented organizations, but also public institutes and non-profit organizations. Most notable of these are an ever-increasing interdependence among organizations and fiercer competition in the market, which together is a paradox because they contradict each other and cannot be understood within a traditional mindset. Thus, the new millennium demands a new paradigm which signifies the importance of a tight cooperation among organizations in order to stay competitive in the market. However, there are still organizations or even the whole industries that are blindly following the rules of the old mindset, which should be considered "history". The life-span of "blind" organizations tends to be short-term, thus resulting in their almost no value-added to the economy of a country. Thus, the "myopia" of these organizations and industries has led to a slow economic growth of a country and a lower competitiveness of a nation. Unfortunately, the labor market of the Kyrgyz economy is an example of this case.

As was noted six years ago by Aisha Aslanbekova (2001), "... most of the graduates cannot find a job after graduation" Currently, most of the students in Kyrgyzstan are still finding it difficult to find an appropriate job after their graduation. Consequently, some of them are holding jobs that

are different from their professions. These jobs tend to be of low salary and lack future vision. Others are losing hope and giving up searching for jobs, thus increasing the number of the unemployed. Of course, there are myriads of reasons why graduates are facing this problem and each of them is as important as another in explaining this issue. However, the lack of cooperation between the educational institutions and industry is at the center of this issue. In particular, educational institutions in Kyrgyzstan are operating without being sufficiently aware of the current market conditions. Consequently, they have become ineffective in matching the market demands for the labor force with ample supply of graduates with the preparation and skills that are appropriate to the demands of the labor market. Currently, labor markets in Kyrgyzstan face imbalance between demand for a particular labor force and its supply because educational institutions are graduating annually more students in one profession relative to the demand, (a labor surplus in this market) and, at the same time, not enough graduates to meet the demand in another labor market (a labor shortage).

HIGHER EDUCATION AND LABOR MARKET DURING AND AFTER THE SOVIET PERIOD

During the Soviet Union all the issues concerning the educations as well as economy and politics were managed by the central government located in Moscow. Thus, the education system was under the tight central control, that is, the central government decided on how many universities to establish, enrollment procedures, academic course plans, employment after graduation, to name only a few. The existence of the tight central control can be understood from the following table:

Table 1: Main Qualitative and Institutional Indicators of Higher Education						
Category	1992	1995	1998	1999	2000	2001
Public higher educational institutions	13	25	28	28	30	36
Private higher educational institutions	-	7	13	13	15	15
Total higher educational institutions including branches	13	45	87	101	114	138
Total enrollment ('000)	53.7	64.6	129.7	159.2	188.8	207.4
Number of students per 10,000	119	143.5	288	331.6	385	410
Intake to year 1 ('000)	8.5	18.8	42.0	44.3	50.9	51.0
Graduates ('000)	9.5	10.0	12.6	15.0	17.9	22.5
Number of disciplines for full higher education	83	150	169	194	194	206

Table 1: Main Qualitative and Institutional Indicators of Higher Education

Category	1992	1995	1998	1999	2000	2001
Number of areas for Bachelor programs	0	61	64	80	85	87
Number of areas for Master's programs	0	13	25	27	36	36

Source: National Report, Ministry of Education and Culture of Kyrgyz Republic

According to the table, the numbers in each category differ significantly as one compares those for the years 2001 and 1992, one year later after Kyrgyzstan became an independent nation. For instance, the number of higher education institutes in 1992 was only 13 while it increased 138 in 2001. Over the same period, the number of students enrolled in higher education institutions increased significantly from 53700 to 207400. So, it can be said that, during the Soviet era, there was more or less some coordination between labor supply and labor demand. However, as was mentioned by Askar Djakishev (2007), unemployment or labor oversupply still existed; for instance, jobs in industrial sectors would be filled by the personnel brought in from other member countries and leftover graduate students with humanitarian science degrees would be sent to agriculture sector or other sectors that are irrelevant to the individuals' professions. Nonetheless, the link between the labor market and the industry's needs were somehow managed. Thus, during the Soviet era, a mismatch of the labor supply with the market's needs was not been felt so strongly or appeared to be less obvious.

The collapse of the Soviet Union made Kyrgyzstan take a completely new course in its development process, a process that proved to be problematic because Kyrgyzstan was not ready for it. One of the problems that Kyrgyzstan has faced post-Soviet era is the mismatch of its labor force with the market demand. As soon as the Soviet Union collapsed, many immigrant labors in Kyrgyzstan returned to their home countries. The majority of emigrants were working in the industrial sector, especially manufacturing. Thus, Kyrgyzstan started to feel the shortage of labor force in this sector. To solve the problem, several immediate actions were taken, which consequently led to an uncontrolled increase in the number of higher educational institutions, as well as enrollment of students, with the latter partly reflecting universities' loosening their enrollment restrictions, thus lowering the quality of education, in order to increase their revenues. Unfortunately, this practice by universities continues. Recently, the government attempted to address this problem by decreasing the number of university branches, but this approach fails to recognize that the problem is not only the number of universities and students, but more importantly the quality of education. The reduced enrollment restrictions have lowered the requirements or standards for students and academic staff alike. However, the main problem of all is the absence of cooperation between the industries and the educational institutions. The current situation of higher educational

institutions and industry in Kyrgyzstan is like sharing the same bed but dreaming different things. Both the industries and the educational institutions are operating on their own even though they are in the same country and have many issues on which to cooperate.

Therefore, there is a desperate need for building collaborative ties among the educational institutions and the industry in Kyrgyzstan. The first step is to understand the concept of a supply chain and its systems of demand anticipation, the "push and pull systems".

"A supply chain is a network of facilities and distribution options that performs the functions of procurement of materials, transformation of these materials into intermediate and finished products, and the distribution of these finished products to customers. Supply chains exist in both service and manufacturing organizations . . ." (Ram Ganeshan and Terry P. Harrison, 1995). So, a supply chain is a systematically structured cluster of stakeholders aimed at achieving the stated goals through coordination of all efforts to satisfying the needs of a customer. Generally, a supply chain is classified into two approaches of demand anticipation, already mentioned above, pull and push systems. Mostly, the terms "push" and "pull" can be found in the literature about production and inventory management, but they are valuable applications in educational systems operation around the world. As was described by Daniel Araujo and James Correll in the following:

Push is typically defined as the model in which the delivery of materials, the production of goods and/or the shipment of goods to customers, is done according to a predefined schedule. In fact, Push means to procure or produce some material or product without an immediate demand to use it. As the material or product shows in inventory, there will be efforts to "push" it to the next stage of the supply chain and ultimately to the consumers. Poorly-managed schedules tend to create many conditions to push materials and products without a true demand for them.

To adapt the concept to the educational system in Kyrgyzstan, a push-based educational system is an approach where the universities are graduating students based on some forecasted assumptions that will likely not satisfy the workforce demand because of the inability to provide appropriate knowledge and skills to the graduates, and to graduate the number of workforce required in each industry and profession contrast, a pull system is the reverse of a push system. In a pull system, production is based on the real instant market demand rather than on forecasted assumptions (Lutfu Sagbansua, 2006). Thus, a pull-based educational system will respond to market changes instantly or after a short long, thus satisfying the demand for workforce.

METHODOLOGY

The hypothesis of this paper states that the universities in Kyrgyzstan are failing to match with labor market requirements because of the low level of cooperation with the industry. Consequently, many students are unable to find jobs after their graduation or end up working in jobs

that are unrelated to their intended professions. The purpose of this research is to find out support for the above hypothesis and then to propose a feasible solution to the current issue.

In designing the study, an explanatory case study approach was chosen since this paper is a preliminary attempt to address the current issue. More work will be needed to increase the robustness of the results, including a more in-depth and accurate collection of data as well as use of methods of analysis.

To collect data, a carefully-structured questionnaire consisting of seven questions with multiple choices was used so that respondents could easily fill in their response. This was intended to reduce respondents' tendency, to avoid questions that take a long time to answer or that are too personal. These types of questions also often result in respondents not giving truthful or accurate answers. Nonetheless, during the data collection process, respondents were still found to be reluctant, primarily because they were holding jobs that are not what they wanted to hold, many of which were jobs of lower position or benefits.

The questionnaire was targeted to students who have graduated from universities in Bishkek City within the last two years. The reasons why only Bishkek City was chosen as a location for conducting the questionnaire are because main universities are located in Bishkek, and obviously because of transportation cost and time considerations. For the next time, the study will be conducted more broadly and will include other regions. As for the reason why the students graduated within the last two years were targeted for the study is that most graduates take up to two years since their graduation to find the right jobs, unless they give up searching within that time period. There were one hundred respondents to the questionnaire, which is shown below:

Question 1: Do you have a university degree?

Yes No

Question 2: Did you graduate in Kyrgyzstan or abroad?

Kyrgyzstan Abroad

Question 3: What is your current professional involvement?

Working Business Not working

Question 4: If you are currently working, are you holding the same job as you your reason?

Yes No

Question 5: If you are holding not the same job as your profession, what is the reason?

Like more and high salary No better choice No vacancy

Question 6: If you are currently not working, what is the reason?

No vacancy Other reasons

Question 7: Was the knowledge gained at the university useful in finding your job?

Yes No

FINDINGS

The results of the questionnaire are reported in this section according to their order in the questionnaire.

Question 1: "Do you have a university degree?" The question was given with two options of answers: "Yes" and "No". All (or 100%) the answers were positive since the questionnaire was targeted to university graduate.

Question 2: "Did you graduate in Kyrgyzstan or abroad?" Ten out of hundred respondents (or 10%) answered that they had their university degrees from abroad, while the rest (or 90%) held degrees of local universities. Graduating from abroad, mainly from the west, is considered to be advantageous in finding high-level jobs in Kyrgyzstan and the results of this questionnaire confirm this perception. Nine out of the ten students who graduated from abroad (or 90%) are either holding the jobs of their profession or involved in their own business or working not in the same jobs as their professions but are satisfied. As for the students holding the degrees of the local universities, the results will be given in the further findings.

Question 3: "What is your current professional involvement?" Responses are summarized in Table 2.

Table 2: Current professional involvement		
Working	Business	Not working
63	10	27
Source: Summarized form of the questionnaire results.		

As it is shown in the Table 2, sixty three respondents out of hundred (or 63%) answered that they are currently holding jobs, while of the remaining thirty seven respondents, ten responded are running their own businesses and twenty seven are not working. Also, out of sixty three graduates who are employed, seven (or 11%) were students who graduated from abroad and the rest graduated from local universities. Two of the ten respondents who are involved in their own businesses (or 20%) were students who graduated from abroad and eight graduated from local universities. As for the last category in the table, one student out of twenty seven (or 4%) graduated from abroad and the reason for not working is not related to knowledge or vacancy issues. At first sight, these numbers generally look quite normal for a developing country, but if one analyzes them more deeply in terms of other issues like holding a job in one's intended profession and other related issues (see Table 3), these results can be worrisome.

Question 4: "If you are currently working, are you holding the same job as your profession?" Responses are summarized in Table 3.

Table 3: If you are currently working, are you holding the same job as your profession?	
Yes	No
27	36
Source: Summarized form of the questionnaire results.	

Out of sixty three respondents, twenty seven (or 43%) answered as holding the same job as their professions, four of which graduated from abroad. The remainder of those employed (or 57%), which represent more than half of those employed, replied that they are not working in their intended professions. The reasons for why they have chosen jobs outside of or unrelated to their professions can be found in the next question.

Question 5: "If you are holding not the same job as your profession, what is the reason?" See Table 4 for a summary of their responses.

Table 4: If you are holding not the same job as your profession, what is the reason?		
Like more and high salary	No better choice	No vacancy
10	10	16
Source: Summarized form of the questionnaire results.		

According to the Table 4, only ten people out of thirty six (or 28%) have chosen jobs of other professions willingly, of which three graduated from abroad; while the rest have chosen their current jobs unwillingly. Ten of them (or 28%) have chosen their current jobs because there is no better choice and sixteen (or 44%) because of no vacancy in their professions. These numbers should be taken into consideration in evaluating the effectiveness of the universities in matching the labor market demand.

Of the 37 respondents to Question 6 ("If you are currently not working, what is the reason?", their responses are reported in Table 5.

Table 5: If you are currently not working, what is the reason?	
No vacancy	Other reasons
20	7
Source: Summarized form of the questionnaire results.	

Twenty out of twenty seven respondents who are currently not working (or 74%) answered because of no vacancy in their professions at the time. The remaining seven respondents (or 26%) replied that there are other reasons why they are not working currently. Only one student out of seven who identified the reason for their currently not working as "other reasons" graduated from abroad.

Question 7: "Was the knowledge gained at the university useful in finding your job?" See Table 6 for a summary of the responses.

Table 6: Was the knowledge you gained at the university useful in finding your job?	
Yes	No
39	44
Source: Summarized form of the questionnaire results.	

To this question, only eighty three respondents replied, of which thirty nine (or 47%) answered positively and a higher number and proportion, forty four (or 53%), answered negatively, none of whom graduated from abroad, that is, all of them graduated from universities in Kyrgyzstan. These results suggest that the universities operating in Kyrgyzstan are not effective in terms of providing the appropriate knowledge to students that they can use in finding jobs after the graduation.

CONCLUSION AND FURTHER STUDIES

The results presented above showed that forty eight out of one hundred respondents are either unwillingly holding jobs outside of or unrelated to their professions, or are not working because of no vacancy or no better choice. While there is still high demand for the work force for high-level jobs and in the high-tech fields, as evident from many international and local companies inviting expatriate managers and high-tech specialist from abroad. A more troubling result is that more than the fifty percent of the respondents found the knowledge gained at their universities not useful in finding a job. This suggests that the universities in Kyrgyzstan are not operating effectively as they fail to respond to changes in labor market demand. The reason for this is because the current educational system is based on a "push system", which lacks the cooperation between the universities and the industry.

An often suggested, feasible solution to the current issue is to shift the educational system from the current "push system" to a "pull system", which highlights the importance of cooperation among the stakeholders. With the pull system, the universities will be more responsive to market changes as they cooperate with the industry to more accurately analyze and forecast changes in the demand for the work force and then ensure that the number of graduating students are in balance

with those required in different professions and that these graduating students have the knowledge and skills sets appropriate for their professions.

It must be noted that this study is preliminary and that the results reported here are based on limited observations and are subject to sampling biases. More work needs to be done in the future toward undertaking a study of the above issue in a more comprehensive manner, both in terms of data collection as well as use of more in-depth methodology and analytical approaches. It will also be useful to expand upon the recommendation that the educational institutions in Kyrgyzstan adopt a "pull system".

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