

Influence of American Institutions on Information Systems (IS) Research within Asia / French et al.

Influence of American Institutions on Information Systems (IS) Research within Asia

Aaron M. French

Kyungpook National University

afrench@knu.ac.kr

J. P. Shim

Georgia State University

jpshim@gsu.edu

Abstract

As the world continues to globalize, business and academia have begun to take a different form of response to these changes. No longer are researchers restricted to localized education or publication outlets. Journals publications, methods used, and topics researched are heavily influenced by the training researchers receive during their doctoral program. Research conducted in Asia has displayed a strong influence from western culture resulting from top researchers at business schools in Asia obtaining their terminal degrees in the North America. However, Asian research appears entangled between developing theory in local context and international requirements for publication. The current research evaluates the educational background influencing top researchers throughout Asia. A discussion of the implications due to Western influence on Asia is provided along with recommendations for knowledge sharing and increasing diversity among from a multinational and global perspective.

Keywords: Multinational Diversity, Research Influence, Information Systems Research, Cross-Cultural Studies, Asian Research.

Introduction

The twenty-first century has presented people with a world that is no longer lived in isolation with an increase in multicultural identities and thinking (Fang, 2010). As the world continues to globalize, business and academia have begun to take a different form of response to these changes. The objective of this research is to discuss research efforts being conducted in Asia and their contributions towards a global effort of knowledge creation and theoretical development.

Research conducted in Asia has displayed a strong influence from western culture due to many top researchers at business schools in Asia obtaining their terminal degrees in the North America and maintaining close ties to the research communities in which they were trained (Meyer, 2006). While researchers globally can benefit from the work done in Asia by benchmarking established western paradigms in cross-cultural studies (Ramaswamy, 2007), additional benefits can also be seen through the development of new theories in Asian context (White, 2002). Asia is full of rich philosophical contexts that could prove inspirational for theoretical development that is beneficial in a global research environment (Fang, 2010). However, Asian research appears entangled between developing theory in local context and international requirements for publication (Meyer, 2006). For Asian research to progress, scholars at Asian universities must incorporate a global perspective and establish a role of knowledge creators (Ramaswamy, 2007). Established research must not only be applied within Asian contexts, but new theories should be developed from the Asian perspective and then applied in western societies. A two-way research channel should be established where both research communities can grow and learn together.

To demonstrate benefits of theories developed in Asian countries, management techniques in the Japanese automobile industry can be evaluated. Beginning around 1950, Toyota automobile manufacturer in Japan developed a new production technique la-

beled as lead production (Katayama and Bennett, 1996). This led to intensifying competition among international competitors leaving concerns about the competitiveness of US automobile producers at the time (Lieberman et al, 1990). Japanese manufacturers developed means for producing automobiles more efficiently with fewer people while maintaining lower inventory levels than American manufacturers (Womack et al, 1990). These new techniques, such as just-in-time (JIT), total quality management (TQM) and total productive maintenance (TPM) revolutionized the future of manufacturing around the world. Japanese theory for knowledge creation tapped into the insights and intuition of individual employees to capture tacit knowledge and for use throughout the organization as opposed to the information processing of quantifiable information typically adopted by western management (Nonaka, 1991). As seen here, western research could gain considerable insight and knowledge from theoretical developments based on Asian business perspectives. Creating a two way channel for research could prove beneficial for the global academic community.

The current research begins by describing the process of a theoretical contribution and knowledge creation as understood from a western perspective and Chinese philosophical perspective. Then a theoretical perspective of diversity is discussed to show the benefits of multicultural research. These sections assist in providing an understanding of how research from an Asian perspective can benefit the global academic community. The next section evaluates western influences on Asian researchers by evaluating top universities in several Asian countries to determine where researchers obtained their terminal degree. The results of the literature review and researcher information are then discussed to offer insight on how to further advance Asian research and knowledge creation in a global research environment. Local researchers in Asian countries could offer valuable insight that could prove beneficial to the global community in gaining a stronger understanding of the Asian region (Ramaswamy, 2007). Finally,

closing remarks will be included within the conclusion section of the current research.

Theoretical Contributions and Knowledge Creation

When submitting papers to academic journals, authors are asked to give a clear statement describing the contribution of their work to the existing body of knowledge (DeSanctis, 1993). In order to define what a contribution of knowledge is, one must first have an understanding of knowledge. Forms of knowledge can be distinguished in terms of the logical features and truth criteria of the propositions with which they are primarily concerned (Hirst, 1993). Knowledge can be acquired through personal experiences or sources of truth such as a book, school, or television program.

The Chinese continuum logic describes man as in nature and of nature by stating that man strives to achieve harmony and balance in reflexive self-awareness between distinctions as products and an awareness of distinguishing as process. Knowledge is basically fulfilling the desire to understand our environment and creating harmony in our minds. We must contribute and build upon our knowledge and understanding in order to build harmony (Benesch, 2002). This balance is what drives research and our pursuit to expand our own personal knowledge as well as knowledge of our discipline. The Chinese Continuum logic states that there are at least five aspects of knowledge (Benesch, 2002).

1. Knower Aspect
2. Known Aspect
3. Knowing Aspect
4. Knowledge Aspect
5. Perspective Aspect

The “Knower Aspect” refers to the person obtaining the knowledge such as the observer, interpreter, definer, or the explainer. This would be equivalent to a researcher who is gathering information and writing a paper for

publication. The “Known Aspect” relates to the information collected such as observed, interpreted, defined, or explained knowledge. This leads to the creation of knowledge and the theories that will be used in the research. The “Knowing Aspect” refers to the process of observing, interpreting, defining, or explaining processes. This consists of the methodologies used in research to confirm or falsify the theories that are being tested. The “Knowledge Aspect” is related to the observations, interpretations, definitions, or explanations of the information found. This information equates to the results used to explain or interpret the finding from the research. The “Perspective Aspect” is what was emphasized or de-emphasized, assumed, rejected, included, or excluded. This information is usually referred to in the discussion of the research paper either accepting or rejecting the hypotheses made from the introduction.

The western view of knowledge creation and the Chinese continuum logic both include a process of generating new knowledge, measuring, and testing that knowledge. Within the discipline of MIS, research is cited as making two distinct contributions to society, the creation of new knowledge and the dissemination of knowledge for application (Dennis, 2001). The creation and growth of knowledge can be described as knowledge exploration while the application of knowledge can be referred to as knowledge exploitation. Weiss (1979) developed a model for research utilization describing how research progresses from exploration to exploitation. Research progresses through a series of events beginning with the theoretical development that is formed through basic and applied research and ending with the development and application of research. Research methods used for exploratory research can be divided into two categories identified as theory creating and theory testing (Jarvinen, 2000). Hence, exploration consists of theory development, measurement, and testing. Knowledge creation over time tends to follow two patterns of development known as normal science and revolutionary science (Kuhn, 1970). Normal science is an addition to knowledge that results in

growth of a theory that was previously known, also known as theory building. Revolutionary science involves discoveries that cannot be accommodated within the concepts previously known causing a paradigm shift in the way we think. As theory is developed and built upon, it follows this pattern where there is incremental growth at times mixed in with major advances in theory development until eventually the theory is exhausted. Figure 1 depicts the life cycle of theoretical development as it progresses from development to exhaustion.

Reviewing contributions to theoretical development from Asia related research, it has been shown that most research adopts paradigms establish is Western based research (Fang, 2010). Therefore, contributions made by Asian-related cross-cultural research would likely be categorized as theoretical exploitation with application in Asian contexts rather than exploration and theoretical development. While scholars can benefit from theory application and benchmarking western paradigms with various regions of Asia (Ramaswamy, 2007) it is argued that scholars should begin shifting their efforts towards developing new theories (Fang, 2010; Meyer, 2006; White, 2002). Rich traditions and histo-

ry have shaped the cultures of many Asian countries creating a collective society that differs from the individualist perspective of many western countries.

While Asian countries have benefited from the research conducted in the west, the global community could stand to learn just as much from Asian based theoretical development. It is argued that Asian researchers should increase their self-confidence in developing theoretical contributions addressing challenges faced within their own communities (Fang, 2010; Meyer, 2006) become creators of global knowledge (Ramaswamy, 2007).

Theoretical Perspective of Diversity

Hofstede (2007) gives a view of cultural differences posing diversity as a potential problem with possible ramifications of cultural discord requiring mitigation of cultural conflict. However, there are instances where cultural diversity is advantageous leading to idea generation and knowledge creation. Diversity is often referred to as “any differences in attributes that lead to perceptions that one individual is different from another” (Jackson, 1992; Triandis et al, 1994; Williams, 1998).

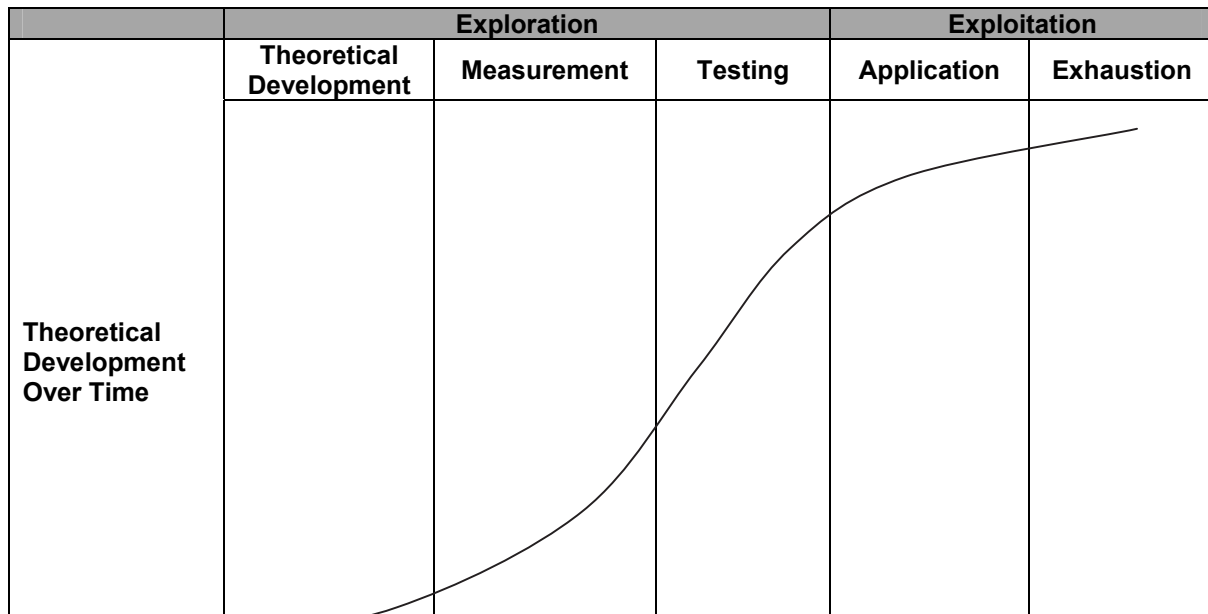


Figure 1 – Theoretical Development Life Cycle

Table 1 – Theoretical Perspectives of Diversity		
	Diversity Attributes	Effects
Similarity-Attractive Paradigm	Values, Attitudes, Beliefs, Cultural Background, Ideological Beliefs	<u>Negative</u> view of diversity
Self and Social Categorization	Race, Ethnicity, Gender, Age, Religion, Sexual Orientation, Physical Abilities, Job Title, Tenure	<u>Negative</u> view of diversity
Information Processing	Education, Functional Knowledge, Expertise, Skills, Experience, Information Abilities, Training, Networks	<u>Positive</u> view of diversity

These differences can be attributed to such factors as age, gender, race ethnicity, functional background, education, and tenure (Jackson et al, 2003; Milliken and Martins, 1996; Williams, 1998). Positive views of diversity contend that society can benefit from diversity in terms of economic development (Thomas and Darnton, 2006) and economic productivity (Ottaviano and Peri, 2004). The negative view of diversity discusses the adverse effects on performance among members within a group (Guzzo and Dickson, 1996; Milliken and Martins, 1996; Williams, 1998).

To acquire a better understanding of diversity, the three primary theoretical perspectives of diversity will be discussed: similarity-attraction paradigm, self and social categorization, and information processing (Mannix and Neale, 2005). First, Similarity-attraction states that individuals seek out others with similarities to them and that attraction is high among individuals who share similarity in attitudes (Byrne, 1971), socioeconomic background (Byrne et al, 1966), competency (Baskett, 1973), or social activities (Werner and Parmelee, 1979) and attraction was low among dissimilar individuals (Rosenbaum, 1986). This poses a negative view towards diversity excludes others that do not contain similar characteristics. Next is self and social categorization containing the theory that race, ethnicity, gender, religion, tenure, etc., play a role in the development of groups and social structures (Mannix and Neale, 2005). Within this category of diversity, individual's role or position within the group or society determines if they are perceived

positively or negatively. This poses a negative view of diversity when members of one category view themselves as superior over others who are different. The third perspective of diversity, information processing, focuses on the intellectual differences among individuals such as education, experiences, knowledge, and expertise (Jehn et al, 1999; Mannix and Neale, 2005). Information processing has typically focused on the impact that information diversity has on the social and cognitive processes of groups (Pitcher and Smith, 2000; Priem et al, 1999) in terms of the benefits gained from information, educational background, functional background, or expertise (Ancona and Caldwell, 1992; Winqvist and Larson, 1998). This offers a positive view of diversity, creating an atmosphere that will increase group performance (Jehn et al, 1999; Mannix and Neale, 2005). Table 1 lists the theoretical perspectives of diversity along with the diversity attractive and effects derived from the literature.

By applying the theoretical perspectives of diversity to the field of MIS, we can identify opportunities for advancement through information processing. To garner the benefits of information diversity, it is crucial that members of the group encompass heterogeneous knowledge, experiences, and perspectives (Gruenfeld et al, 1996) in order to stimulate thinking and advance knowledge. Diversity in knowledge stimulates and enhances creativity among members in a group leading to innovative solution and the pursuit of new information (Jehn, 1995; Levine et al, 1993). With prevalent globalization of business and aca-

demics in modern society, the next logical step is to promote cross-border research agendas (Ramaswamy, 2007). While it may be argued that diversity exists within the MIS having many authors from Asian countries publishing in the top journals, much of the work conducted is strongly influenced by Western academic agendas where these researchers studied. By incorporating the rich philosophical and institutional contexts deeply rooted within Asian societies, new ideas and inspiration can be found further advancing theory development from a global perspective (Fang, 2010). With most scholarly discourse having been conducted in English, many academic communities in non-English speaking countries experience low levels of internationalization (Xu, 2009). A two-way exchange between scholars in Asia and western countries must be encouraged to facilitate the integration of knowledge from each region (Ramaswamy, 2007). Translating theories and creating open forums for sharing context based research are the first step to creating a pool of knowledge that can benefit the global academic community.

Western Influence on Research in Asia

It has been argued that the majority of western focuses research in Asian research is attributed to scholars who have been trained at academic institutions in the west and maintained a strong focus on this type of research (Meyer, 2006). To evaluate the influence that western institutions possess on Asian researchers, the current research accumulates data from the top university in several Asian countries and aggregates the number of IS professors at each university to assess where they obtained their terminal degree. This creates a basis for assumptions that western institutions influence the research produced in Asian countries by showing the foundation of their formal training. To create a comparison between researchers in American and researchers in Asia, top universities in the United States and Canada were also evaluated to show where professors at these institutions obtained their terminal degree. The universities selected for this study were obtained from several sources including research articles

evaluating and ranking universities based on research activity (Athey and Plotnicki, 2000; Chau and Kuan, 2007; Lee and Liang, 2007; Lee and Yoo, 2007; Liu and Liu, 2005; Mudambi et al, 2008; Tan and Chan, 2007; Yonezawa et al, 2002; Venkatesh, 2011). The website of each university included in the current study was explored to accumulate the number of IS faculty at each institution and the region where they obtained their terminal degree. For validity purposes, several universities were randomly selected for a recount to ensure the data were accurate. Data collected from North American and Asian university will be evaluated separately to elucidate the influence of research being conducted based on the location of training.

North America

Research conducted in North America typically focuses on the IT artifact and human-computer interactions, (Galliers and Whitley, 2007) consisting of quantitative techniques with empirical results for evaluation (Chen and Hirschheim, 2004; Walsham, 1995). It has been shown that researchers in the U.S. most commonly publish their work in American journals (Galliers and Meadows, 2003). This inclination is prognosticated because researchers in the North America obtain their terminal degrees at North American institutions where they learn the skills required to publish in American journals. Based on this assumption, it was predicted that the majority of professors in the U.S. and Canada obtained their Ph.D. at North American institutions and continue to work in America upon completion of their terminal degree. To verify this assumption, a list of the top IS schools in North America was obtained based on research productivity (Athey and Plotnicki, 2000, Venkatesh, 2011) in order to evaluate where their faculty obtained their terminal degrees. Data about faculty members from each university was obtained by visiting the website of each university, which is current as of summer 2012. Table 2 displays the results of our findings from selected American institutions in alphabetical order displaying the location in which each professor obtained their terminal degree.

Table 2 – North American Institutions and Location of Terminal Degree				
University	# of Faculty	Terminal Degree From		
		North America	Europe	Other
Carnegie Mellon University	6	5	1	0
Georgia State University	18	16	2	0
M.I.T. (Sloan)	N/A*	--	--	--
New York University	13	13	0	0
Queens University	7	7	0	0
University of Arizona (Eller)	20	20	0	0
University of British Columbia	9	8	0	1
University of Georgia	11	11	0	0
University of Maryland	13	13	0	0
University of Minnesota	11	11	0	0
University of Texas-Austin	11	11	0	0
University of Western Ontario	7	7	0	0
Total	126	122	3	1

N/A - Unable to get faculty Ph.D. information from university website*

Lecturers and doctoral students were excluded from the study due to not having completed their terminal degree to date and still in the process of being trained. The results show that 122 out of 126 (96.8%) researchers in North America obtained their terminal degrees in America. Since professors working in American institutions both study and work in America, they are heavily influenced to publish predominantly quantitative research. While quantitative methods used to publish in American journals is the primary focus of North American institutions, some university are beginning to offer quality research course to educate students in various methods. However, there is still much progress to be made in regards to diversity in North American IS research.

Continental Asia Countries

Each country throughout Asia has some influence from universities across Europe and North America by the training their faculty received during their doctoral program. The Chinese and Japanese MIS education is not as heavily influenced by American institutions, relative to that of Hong Kong, Singapore, South Korea and Taiwan who demonstrate

being influenced strongly by North America. To evaluate the influence that American universities potentially have on researcher in Asia, several universities throughout continental Asia were evaluated to determine the location where researchers obtained their terminal degree. The universities included in this study were obtained from publications and university rankings that identified the top universities in the Asia Pacific region (Bestmasters, 2012; Chau and Kuan, 2007; Lee and Liang, 2007; Lee and Yoo, 2007; Liu and Liu, 2005; Mudambi et al, 2008; Tan and Chan, 2007; Yonezawa et al, 2002, Venkatesh, 2011). Using the list of top universities obtained for each country, the website of each university was visited to aggregate the number of IS faculty and where they obtained their terminal degree. Table 3 displays a succinct view of each country included in the study for continental Asia, displaying the summaries of all universities for each country and the percentage of professors who obtained their terminal degrees in each region. The number in parentheses next to the country name represents the number of universities included in the study for each respective country.

Country	Total	Terminal Degree From							
		Home*		North America		Europe		Other	
		#	%	#	%	#	%	#	%
China (5)	56	36	64.29	15	26.79	1	1.78	4	7.14
Hong Kong (4)**	54	6	11.11	38	70.37	4	7.41	6	11.11
India (4)	33	16	48.49	15	45.45	1	3.03	1	3.03
Japan (1)	12	12	100	0	0	0	0	0	0
Singapore (3)	82	10	12.20	55	67.07	10	12.20	7	8.53
South Korea (6)	34	4	11.76	30	88.24	0	0	0	0
Taiwan (8)	142	28	19.72	101	71.13	9	6.34	4	2.81

() denotes # of institutions
 * Home signifies that the professor obtained their Ph.D. in the country in which they are also teaching
 ** Hong Kong is a part of China, but we classified HK as a country for this western research influence.

The data shows that South Korea, Taiwan, Singapore, and Hong Kong have the largest percentage of faculty who received their training at North American institutions. South Korea has the most faculty who studied at American Institutions, with over 88 percent of its IS faculty members obtaining their terminal degree in North America. India appears to be mixed with 48 percent of faculty being trained in India and 45 percent of faculty having degrees from North American. However, Japan and China do not follow this trend, thus being less influenced by western education. More than 64 percent of IS faculty in China received their terminal degrees from Chinese institutions while the single university in Japan included in this study has 100 percent of its faculty holding degrees from Japanese universities. In the case of China, there are many Chinese who study in the United States to become professors. However, due to lower salaries in China, many western trained Chinese professors stayed in the US with very few returning to China (Xu, 2009). This has led to a divide between western and Chinese research.

The results display overwhelming influence from the western countries on the IS faculty in Asian countries. Due to this Western influence, primarily North America, many Asian countries conduct research using methods and theories developed in American contexts without applying them in contexts relevant to Asian countries (White, 2002). March (2004) argues that Chinese research can greatly

benefit the international research community by applying developed theories in the Chinese context and exposing limitations of context-free ideas that reflect political or cultural differences. This concept also holds true in regards to all the other countries throughout continental Asia.

Validation of Research Assumptions

While the influence of western countries on IS faculty in Asia is apparent, further evaluation should be done to show the influence on research productivity and publication outlet. Previous research has evaluated university publication performance as well as performance of researchers themselves. Clark and Warren (2006) conducted a study evaluating university and research performance in top IS journals over a five year period (2001-2005). They collected data on seven leading IS journals including Communications of the Association for Information Systems, Decision Support Systems, Information & Management, Information Systems Research, Journal of the Association for Information Systems, Journal of Management Information Systems, and MIS Quarterly. It should also be noted that the leading journals used in the study are from North America. Table 4 lists universities in Continental Asia and their ranking among the top 65 most productive universities in research output for the leading seven journals.

The universities appearing in the list of most productive in terms of research in North American journals is consistent with the four

Rank	University	Country	Articles
2	City University of Hong Kong	Hong Kong	38
11	Korea Advanced Institute of Science and Technology	South Korea	26
17	National University of Singapore	Singapore	22
22	Hong Kong University of Science and Technology	Hong Kong	19
26	University of Hong Kong	Hong Kong	18
29	Chinese University of Hong Kong	Hong Kong	16
51	Nanyang Technological University	Singapore	12
55	National Sun Yat-Sen University	Taiwan	11
59	Yonsei University	South Korea	11

Source: Clark and Warren (2006)

Author	University	Country	Articles
Robert Davison	City University of Hong Kong	Hong Kong	9
Kar Yan Tam	Hong Kong University of Science and Technology	Hong Kong	8
Kwok-Kee Wei	City University of Hong Kong	Hong Kong	7
Benard Tan	National University of Singapore	Singapore	6
Thompson Teo	National University of Singapore	Singapore	5
Sangjae Lee	Sejong University	South Korea	5
Jian Ma	City University of Hong Kong	Hong Kong	5
Ron Chi-Wai Kwok	City University of Hong Kong	Hong Kong	5

Source: Clark and Warren (2006)

countries in terms of educational influence from North America. This shows a strong presence of research in North American journals from countries heavily influenced by North American education. An evaluation of researchers shows similar results. Table 5 summarizes the top researchers from Continental Asia from the list of most productive researchers in the leading seven journals.

Clark et al (2011) conducted a follow-up study to the 2006 article evaluating university and researcher productivity. Consistent with their previous study, Hong Kong, Singapore, South Korea and Taiwan are well represented among leading IS journal publications. Data was collected from publications in 11 leading IS journals from 2005-2009. Table 6 summarizes the number of professors at each university and total articles published.

The list journals used for the Clark et al (2011) study contain eight North American journals and three from Europe. A more detailed analysis containing professors who published seven articles or more displays 10 professors who published a total of 88 articles. Of these

88 articles, 82 were published in North American journals and 6 were published in European journals. These results demonstrate the educational influence of North America at the individual level of analysis.

Another study evaluating universities and research productivity was conducted based solely on publications in Information & Management (Palvia and Pinjani, 2007). The top six universities appearing in Table 4 also appear in the top 24 universities published in I&M along with National Chiao Tung University and National Chung Cheng University from Taiwan. Table 7 lists the prolific authors from Continental Asia who have published in I&M along with the most employed methodologies from their research.

These results further demonstrate the education influence on research by showing the methodologies employed by the researchers. As seen here, empirical methods seem to dominate research being conducted to further validate the assumptions being made. If the assumption is that researchers who study in North America are influence by their educa-

Table 6 – Top Universities that Produce the Most IS Research in Continental Asia		
Country (University)	Professors	Articles
Hong Kong		
- City University of Hong Kong	6	35
- Chinese University of Hong Kong	3	16
- University of Hong Kong	2	16
- Hong Kong U of Science and Technology	1	8
- Hong Kong Polytechnic U.	1	7
Total	13	82
Singapore		
- National University of Singapore	4	37
- Singapore Management University	1	6
Total	5	43
South Korea		
- Korea University	1	9
- Yonsei University	1	6
Total	2	15
Taiwan		
- National Sun Yat-Sen University	2	10
- National Tsing Hua University	1	9
- National Cheng Chi University	1	5
Total	4	24

Source: Clark et al (2011)

Table 7 – Top Researchers in I&M and Their Preferred Research Methodology			
Author	University	Count	Methodology
Vincent S. Lai	Chinese University of Hong Kong	11	Survey, case study
Thompson S.H. Teo	National University of Singapore	8	Survey, secondary data
Patrick Y.K. Chau	University of Hong Kong	7	Survey, interview
Sangjai Lee	KAIST	6	Survey, math analysis
Kwok-Kee Wei	National University of Singapore	5	Lab experiment, survey
Heeseok Lee	KAIST	5	Survey, case study
Bernard C.Y. Tan	National University of Singapore	5	Field & lab experiment
Ingoo Han	KAIST	4	Survey, math analysis
Maris G. Martinsons	City University, China	4	Survey, commentary

Source: Palvia and Pinjani (2007)

tion and tend to publish in North American journals, then an evaluation of European journals should reveal a lack of research stemming from countries with a North American influence. Dwivedi and Kuljis (2008) conducted a similar study evaluating university and researcher productivity in the European Journal of Information Systems (EJIS), a six-basket journal according to the Association of Information Systems (AIS). A list composed of the top 22 universities publishing in EJIS from 1997-2007 contained only one uni-

versity from Continental Asia – National University of Singapore. Their list of the top 18 most productive authors only had three researchers from Continental Asia. The Continental Asian countries that are most heavily influenced by North American education have universities and researchers that rank among the top in productivity among North American journals. With the exception of the National University of Singapore, it has been shown that there is far less activity in European journals.

Discussion

The world as we know it is continually shifting towards a globalized environment changing the way business and academia both function. With this trend of continued globalization, it's only logical to promote the advancement of globalized research agendas (Ramaswamy, 2007). The influence of western research communities on Asian research being conducted has been well documented (Fang, 2010; Meyer, 2006; Ramaswamy, 2007; White, 2002). Much of the cross-cultural research being conducted focuses on theories developed from a western perspective or is descriptive in nature. This is largely due to many researchers from Asian countries being trained at North American institutions and continuing to maintain close ties to scholarly communities and research traditions in which they were trained (Meyer, 2006). While benchmarking established theories from a western perspective in Asian context is beneficial to the generalization of existing theories (Ramaswamy, 2007), the creation of new theories based on the rich tradition of Asian philosophical contexts could provide inspiration for new theories that would equally benefit the global academic community (Fang, 2010; White, 2002).

The current research displayed the influence of western training on many leading universities in Asia. A great number of professors at leading institutions throughout Asia (especially, South Korea, Taiwan, Hong Kong, and Singapore) obtained their terminal degree in North America. This has equipped many researchers in Asia with the tools necessary to conduct quality research that is publishable in premier American journals. However, much of the research being conducted by researchers in Asia appears to be entangled between vacillating aspirations of local relevance and international publications (Meyer, 2006). Great strides have been made in the globalization of the academic community with many professors working and conducting research in countries other than their own. Many researchers in Asian countries have published significant research in premier journals such as MIS Quarterly, Information Systems Re-

search, and so on. While this work has contributed greatly to theoretical development and the academic community, the global academic research community could gain valuable insight from research focused on theory development within the Asian region (Ramaswamy, 2007). To facilitate the continued development of the global academic community, several recommendations can be made based on the results found in this study.

While many Asian countries display a large number of MIS faculty being trained in the North America, researchers in China display a different story. While many Chinese study in the United States to become professors, only a small number return to Chinese Universities (Xu, 2009). The number of Chinese graduates returning to China and working as professors has increased over the past decade, but this number is relatively small compared to the number of Chinese that stay in the U.S. taking advantage of higher salaries. Therefore, the first recommendation made for advancing the globalization of research is to create more incentives for top researchers to return to their country and also attract foreign researchers to work internationally. While creating higher wages most likely not an easy task to accomplish, there could be other incentives to attractive top researchers, both native and non-native, to Asian universities. This would hold particularly true for Chinese universities that display small numbers of western trained academics. By increasing the number of professors who have been trained internationally, China and other Asian countries can create a stronger researcher community that is connected to other top researchers globally. South Korea is an example of how incentives and research grants can be used to attract leading researchers to local universities. For instance, Sogang University in Korea was awarded a major research grant named "World Class Universities" to stimulate academic research activities (SBS News, 2011). Programs such as this could connect leading researchers from western countries with Asian researchers to further advance research from a global perspective and facilitate collaboration.

Creating a bridge between western research communities and Asian research communities is important for the globalization of research. The next step is to build confidence in Asian research to develop frameworks and theories that address challenges faced by businesses in their own communities (Fang, 2010; Meyer, 2006). Researchers in Asian countries have the tools and skills required to conduct high quality research. It is recommended that researchers in Asia embrace their place in the global research community and focus on their role as creators of global knowledge (Ramaswamy, 2007). To garner the benefits of information diversity in researcher, it is crucial that members of the group encompass heterogeneous knowledge, experiences, and perspectives (Gruenfeld et al, 1996) in order to stimulate thinking and advance knowledge. Thus far, theories developed and applied have come from a western perspective and applied in Asian contexts. The academic research community could benefit greatly by the inclusion of theories developed from an Asian perspective and applied in a western context.

A third recommendation for the continued globalization of academic research is the development Asian journals with English publications containing a reputation of high quality comparable with American premier journals. While many theories developed in Asian countries could provide insight and stimulate innovated research in the western community, there lies a problem that this research is often inaccessible to western researchers. Many academics in non-English speaking countries tend to publish their work locally in journals using their native language. Many local journals in Asian countries are beginning to accept more papers written in English and continue to encourage authors to write papers in English. However, these journals are relatively unknown in the international community and the work produced often goes unknown internationally. By creating a few Asian journals and promoting them with a reputation of high quality and integrity, this would generate a sufficient outlet for Asian based theories that would be well recognized in the global academic community. We should look toward

the top journals to help provide support for expanding the academic community to include Asian based research that establishes theories within local context. Creating an MIS Quarterly-Asia Pacific (MISQ-AP) would give recognition to quality research being conducted in Asian countries. The Pacific Asia Journal of the Association for Information Systems (PAJAIS) is currently supported by the Association of Information Systems (AIS) and is positioned to help fuel this need for improved exposure of research in Pacific Asia. However, more efforts need to be done to give recognition to research being conducted in this region and gain more exposure. For instance, ICIS 2011 held in Shanghai was a great forum for promoting and encouraging the globalization of research in the academic community, especially in Asia. This was the first time ICIS was held in Asia and saw a strong turnout from many professors in the region. AMCIS 2013 is set to include a track for research conducted in Asia to further advance collaboration and knowledge sharing from this region.

Conclusion

Upon review of the literature and findings from the data collected, it is evident that there is a strong influence from the western academic community on research being conducted in Asia. While the academic community continues to globalize with researchers from various countries around the world contributing to the existing body of knowledge, it has been shown that the majority of research being conducted follows a western perspective. Applying theories developed in western research to the context of Asian business is beneficial to the global research community. However, as seen from Japanese automobile companies, western businesses can equally benefit from the theoretical perspective and rich traditions of Asian business and research.

To gain an understanding of knowledge creation the current research evaluated theoretical contributions from a western perspective and Chinese philosophy. The western view of a contribution to knowledge and the Chinese continuum logic both describe a process of

generating new knowledge, measuring, and testing knowledge. Knowledge creation is further expanded by the presence of diversity within the information processing paradigm. By incorporating various perspectives from diverse individuals, idea stimulation is increased and knowledge is further expanded. With the influx of Asian students entering the education system in the U.S., they are able to learn a perspective of research different than their traditional ways of thinking that could benefit organizations in their home country. However, it has been argued that these researchers should build confidence to conduct research internationally from a local perspective that could provide additional benefits to the academic community.

The current research gives several recommendations for increasing the diversity of research and creating a two way flow of information between western research and the research being conducted in Asian countries. The first step is to create incentives to attract top professors, both native and foreign, to universities in Asia to develop research from a local perspective. The second recommendation is to build the confidence of researchers in Asia to develop research that is relevant to a local perspective and publish using English in international journals. This idea triggers the third recommendation, which is to develop Asian journals in English that are recognized globally as high quality journals containing theories developed from local contexts through Asia. Creating an outlet for discovering new knowledge is equally as important as creating the knowledge itself. As the future of business continues to become more global, so must the academic community in which research is being conducted.

The current research has several limitations that should be acknowledged. First, our sample does not allow us to determine how broadly the sample findings apply. Our data included an evaluation of top research universities in each region. The education influence at smaller universities and teaching institutions could be less significant. However, less research-oriented universities could also focus more on local issues and publish primarily

in regional journals using their native language. Future research could conduct a case study of various countries to get a better understanding of research conducted throughout the region. The second limitation is the lack of information on publication counts from each professor at each university. Future research could extend the current study by evaluating the number of publications by professors at each university and publication outlets they have successfully published in. This could give further insight about the topics, methods, and influence of researchers in each country. To compensate for this limitation, previous research ranking research productivity of universities and professors was included. While the timeframe of the research might be a limitation due to evaluating professors prior to 2006, the results show consistency with the assumptions and data collected from the current research. Future research should conduct a more in-depth analysis of researchers, publications outlets and research methods employed in Asia, North America and Europe for a more complete analysis. Another limitation is the lack of information on rewards systems that also influence research conducted in each country. For instance, in South Korea, researchers get credit for publishing in journals appearing in the SSCI or SCI list. However, monetary rewards might differ for publishing in top tier journals. Future research should evaluate tenure requirements (i.e., academic research, grant-related research) and reward systems in various countries and their influence on publication outlets.

References

- Ancona, D. and D. Caldwell (1992). "Demography and Design: Predictors of New Product Team Performance," *Organization Science*, 3(3), pp.321–341.
- Athey, S. and J. Plotnicki (2000). "An Evaluation of Research Productivity in Academic IT," *Communications of the Association for Information Systems*, 3(7), pp.1-19.
- Benesch, W. and E. Wilner (2002). "Continuum Logic: A Chinese Contribution to

- Knowledge and Understanding in Philosophy and Science," *Journal of Chinese Philosophy*, 29(4), pp.471-494.
- Best-masters (2012). "The Best Masters and MBA INDIA" <http://www.best-masters.in/ranking-master-information-systems-management.html> (accessed 25th August 2012).
- Byrne, D. (1971). *The Attraction Paradigm*, New York: Academic Press.
- Byrne, D., G. Clore Jr. and P. Worchel (1966). "The Effect of Economic Similarity-Dissimilarity as Determinants of Attraction," *Journal of Personality and Social Psychology*, 4, pp.220-224.
- Chau, P. and K. Kuan (2007). "The Information Systems Academic Discipline in Hong Kong – 2006," *Communications of the Association for Information Systems*, 21(1), pp.49-60.
- Chen, W. and R. Hirschheim (2004). "A Paradigmatic and Methodological Examination of Information Systems Research From 1991 to 2001," *Information Systems Journal*, 14(3), pp.197-235.
- Clark, J., Y. Au, D. Walz and J. Warren (2011). "Assessing Researcher Publication Productivity in the Leading Information Systems Journals: A 2005–2009 Update," *Communications of the Association for Information Systems*, 29(1), pp.459-504.
- Clark, J. and J. Warren (2006). "In Search of the Primary Suppliers of IS Research: Who Are They and Where Did They Come From?," *Communications of the Association for Information Systems*, 18(1), pp.296-328.
- Dennis, A. (2001). "Relevance in Information Systems Research," *Communications of the Association for Information Systems*, 6(10), pp. 1-6.
- DeSanctis, G. (1993). "Theory and Research: Goals, Priorities, and Approaches," *MIS Quarterly*, (17)1, pp.vi–viii.
- Dwivedi, Y. and J. Kuljis (2008). "Profile of IS Research Published in the European Journal of Information Systems," *European Journal of Information Systems*, 17(6), pp.678-693.
- Fang, T. (2010). "Asian Management Research Needs More Self-Confidence: Reflection on Hofstede (2007) and Beyond," *Asia Pacific Journal of Management*, 27, pp.155-170.
- Galliers, R. and M. Meadows (2003). "A Discipline Divided: Globalization and Parochialism in Information Systems Research," *Communications of the Association for Information Systems*, 11(5), pp.108-117.
- Galliers, R. and E. Whitley (2007). "Vive Les Differences? Developing a Profile of European Information Systems Research as a Basis for International Comparisons," *European Journal of Information Systems*, 16(1), pp.20-35.
- Gruenfeld, D., E. Mannix, K. Williams and M. Neale (1996). "Group Composition and Decision Making: How Member Familiarity and Information Distribution Affect Process and Performance," *Organizational Behavior and Human Decision Processes*, 67(1), pp.1–15.
- Guzzo, R. and M. Dickson (1996). "Teams in Organizations: Recent Research on Performance and Effectiveness," *Annual Review of Psychology*, 47, pp.307–338.
- Hirst, P.H. (1993). "Education, Knowledge and Practices," In: R.Barrow & P.White (Eds) *Beyond Liberal Education*, pp. 184-199, (London, Routledge).
- Hofstede, G. (2007). "Asian Management in the 21st Century," *Asia Pacific Journal of Management*, 24, pp.411-420.
- Jackson, S. (1992). *Team Composition in Organizational Settings: Issues in Managing an Increasingly Diverse Workforce*, Newbury Park, CA: Sage.

- Jackson, S., A. Joshi and N. Erhardt (2003). "Recent Research on Team and Organizational Diversity: SWOT Analysis and Implications," *Journal of Management*, 29(6), pp.801-830.
- Järvinen, P. (2000). "Research Questions Guiding Selection of an Appropriate Research Method," in *Proceedings of the Eighth European Conference on Information*, is2.lse.ac.ukb.
- Jehn, K. (1995). "A Multimethod Examination of the Benefits and Detriments of Intragroup Conflict," *Administrative Science Quarterly*, 40, pp.256-282.
- Jehn, K., G. Northcraft and M. Neale (1999). "Why Differences Make a Difference: A Field Study of Diversity, Conflict, and Performance in Workgroups," *Administrative Science Quarterly*, 44, pp.741-763.
- Katayama, H. and D. Bennett (1996). "Lean Production in a Changing Competitive World: A Japanese Perspective," *International Journal of Operations & Production Management*, 16(2), pp.8-23.
- Kuhn, T.S. (1970). *The Structure of Scientific Revolutions*, 2nd Edition, Chicago, IL., University of Chicago Press.
- Lee, C. and T. Liang (2007). "The Information Systems Academic Discipline in Taiwan - 2006: A Focus on Top-Tier Universities," *Communications of the Association for Information Systems*, 21, pp.116-136.
- Lee, J. and S. Yoo (2007). "The Information Systems Academic Discipline in Korea -- 2006: A Focus on Leading Universities," *Communications of the Association for Information Systems*, 21, pp.61-86.
- Lieberman, M., L. Lau and M. Williams (1990). "Firm-Level Productivity and Management Influence: A Comparison of U.S. and Japanese Automobile Producers," *Management Science*, 36(10), pp.1193-1215.
- Levine, J., L. Resnick and E. Higgins (1993). "Social Foundations of Cognition," *Annual Review of Psychology*, 44, pp.585-612.
- Liu, N., and L. Liu (2005). "University Rankings in China," *Higher Education in Europe*, 30(2), pp.217-227.
- Mannix, E. and M. Neale (2005). "What Differences Make a Difference? The Promise and Reality of Diverse Teams in Organizations," *Psychological Science in the Public Interest*, 6(2), pp.31-55.
- March, J. (2004). "Parochialism in the Evolution of a Research Community: The Case of Organization Studies," *Management and Organizational Review*, 1(1), pp.5-22.
- Meyer, K. (2006). "Asian Management Research Needs More Self-Confidence," *Asia Pacific Journal of Management*, 23, pp.119-137.
- Milliken, F. and L. Martins (1996). "Searching for Common Threads: Understanding the Multiple Effects of Diversity in Organizational Groups," *Academy of Management Review*, 21, pp.402-433.
- Mudambi, R., M. Peng and D. Weng (2008). "Research Rankings of Asia Pacific Business Schools: Global Versus Local Knowledge Strategies," *Asia Pacific Journal of Management*, 25, pp. 171-188.
- Nonaka, I. (1991). "The Knowledge-Creating Company," *Harvard Business Review*, November-December, pp.96-104.
- Ottaviano, G. and G. Peri (2004). "The Economic Value of Cultural Diversity: Evidence From U.S. Cities," in *Fondazione Eni Ennio Mattei Note di Lavoro Series*, Milano, Italy: Economic Growth and Innovation in Multicultural Environments (ENGIME) Workshop.
- Palvia, P. and P. Pinjani (2007). "A Profile of Information Systems Research Published in *Information & Management*,"

- Information & Management, 44(1), pp.1-11.
- Pitcher, P. and A. Smith (2000). "Top Management Team Heterogeneity: Personality, Power and Proxies," *Organization Science*, 12, pp.1-18.
- Priem, R., D. Lyon and G. Dess (1999). "Inherent Limitations of Demographic Proxies in Top Management Team Heterogeneity Research," *Journal of Management*, 25, pp.935-953.
- Ramaswamy, K. (2007). "Asian Management Research Needs Broader Initiatives and Focused Incentives," *Asia Pacific Journal of Management*, 24, pp.519-525.
- Rosenbaum, M. (1986). "The Repulsion Hypothesis: On the Nondevelopment of Relationships," *Journal of Personality and Social Psychology*, 510, pp.1156-1166.
- SBS News, (2011). "SBS Professors Win US\$10 Mil. Gov't Research Grant (WCU)," [WWW document] http://biz.sogang.ac.kr/english/introduction6_21.html (accessed 29th August, 2012).
- Tan, B. and T. Chan (2007). "The Information Systems Academic Discipline in Singapore 2006," *Communications of the Association for Information Systems*, 21, pp.104-115.
- Thomas, J. and J. Darnton (2006). "Social Diversity and Economic Development in the Metropolis," *Journal of Planning Literature*, 21(2), pp.153-168.
- Triandis, H., L. Kurowski and M. Gelfand (1994). *Workplace Diversity*, Palo Alto, CA: Consulting Psychologists Press.
- Venkatesh, V. (2011). "Top-100 Rankings of Schools (1990-2010)" [WWW document] <http://vvenkatesh.com/ISRanking/RankingsAIS8byUni.asp> (accessed 14th February 2011).
- Walsham, G. (1995). "The Emergence of Interpretivism in IS Research," *Information Systems Research*, 6(4), pp.376-394.
- Weiss, C. (1979). "The Many Meaning of Research Utilization," *Public Administration Review*, 39(5), pp.426-431.
- Werner, C. and P. Parmelee (1979). "Similarity of Activity Preferences Among Friends: Those Who Play Together Stay Together," *Social Psychology Quarterly*, 42, pp.62-66.
- White, S. (2002). "Rigor and Relevance in Asian Management Research: Where Are We and Where Can We Go?" *Asia Pacific Journal of Management*, 19, pp. 287-352.
- Williams, K. and C. O'Reilly III (1998). *Demography and Diversity in Organizations: A Review of 40 Years of Research*, Greenwich, CT: JAI Press.
- Winquist, J. and J. Larson (1998). "Information Pooling: When it Impacts Group Decision Making," *Journal of Personality and Social Psychology*, 74, pp.371-377.
- Womack, J.P., D.T. Jones and D. Roos (1990). *The Machine that Changed the World*, Rawson Associates, New York, NY.
- Xu, D. (2009). "Opportunities and Challenges for Academic Returnees in China," *Asia Pacific Journal of Management*, 26, pp. 27-35.
- Yonezawa, A., I. Nakatsui and T. Kobayashi (2002). "University Rankings in Japan," *Higher Education in Europe*, 27(4), pp.373-382.

About the Authors

Aaron M. French is an Assistant Professor of Management Information Systems in the College of Business at Kyungpook National University in Daegu, South Korea. He received his Ph.D. in Business Information Systems at Mississippi State University. He has received outstanding teacher of the year awards at Mississippi State University and Kyungpook National University. His research has been published in the *Journal of Information Technology*, *Journal of Internet Banking and Commerce*, and *The Journal of Internet Electronic Commerce Research*. His research interests include social networking, eCommerce, cross-cultural studies and technology acceptance.

J. P. Shim is Professor of Computer Information Systems and Executive Director of Korean-American Business Center at Robinson College of Business at Georgia State

University. Before joining at GSU in 2011, he was Professor of BIS, Larry and Tonya Favreau Notable Scholar at Mississippi State University. During the past twenty-seven years at MSU, he was a seventeen-time recipient of outstanding faculty awards, including John Grisham Faculty. He has published five books and seventy journal articles. His coauthored paper has been cited as top in SSCI citations, Elsevier citations, and downloads in DSS. He serves on Wireless Telecommunication Symposium (IEEE) as Program Chair and on 2013 AMCIS as Program Co-chair. He has received numerous awards, grants, and distinctions, including National Science Foundation, Microsoft, U.S. Small Business Administration, and Japan Foundation. He is a frequent speaker at universities and companies in thirty countries. He has been interviewed by the media (CBS TV, Associated Press) and worked as consultant for Booz Allen, U.S. EPA, KIA Motors, and others.