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Administrative Placement of the Information Systems Academic Discipline: A Comparative SWOT Analysis

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ADMINISTRATIVE PLACEMENT OF THE INFORMATION SYSTEMS ACADEMIC DISCIPLINE: A COMPARATIVE SWOT ANALYSIS

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ABSTRACT

This study uses SWOT analysis to explore perceptions of differential administrative placement of the Information Systems academic discipline within four universities across two countries, Australia and Korea. The analysis provides a useful basis for decision makers to exploit opportunities and minimize external threats. The study also offers useful insights for Information Systems academics contemplating administrative relocation of their group. The paper serves the dual-purpose of (1) informing the positioning of IS in the four case institutions, while (2) evolving an approach and related tools for usefully extending the SWOT analysis to other institutions and states, and across time. The extension of the analysis to other states and to IS groups in differing circumstances will broaden the relevance of study findings, while improving our understanding of differential placement of IS and perceptions of the relative advantages of the alternatives.

Keywords: Information Systems, Information Systems administrative location, SWOT analysis

I. INTRODUCTION

This is a time of more-than-usual uncertainty within the Information Systems (IS) community about the acceptance of Information Systems as a distinct, legitimate academic discipline. Within this atmosphere of insecurity and self-doubt about the IS identity, the administrative placement of Information Systems academic staff within universities has been a matter of debate. This paper reports a SWOT analysis of the strengths, weaknesses, opportunities and threats of the differential administrative placement of the Information Systems academic discipline within four

universities: Queensland University of Technology and University of Queensland in Australia; and Korea University and Kookmin University in Korea.

Most commonly in the past in Australia and Korea and even more so in America, Information Systems groups have been located within a business faculty. Within Australia there are now many instances of Information Systems groups located outside the business faculty. In the state of Queensland, for example, three of the eight universities now have their main IS academic group outside the business faculty. This lack of a consistent administrative location for IS academics is in accord with the situation reported in the USA, where about 40 percent of IS academics were located [Sherer 2002] in departments of Information Systems, while the remaining 60 percent were located in any of six other departments (whether inside or outside a business faculty is not disclosed). Over the past decade in America there have been reported pressures to move Information Systems groups out of business, to join with computer science and information science groups. This has caused concern and apprehension among some American Information Systems academics [Watson et al. 1999].

The fact that groups of Information Systems academics are located in a diversity of administrative locations in universities may be seen as indicative of the immaturity of Information Systems as an academic discipline [Mingers and Stowell 1997].

The aims of the study and questions of interest are multi-faceted: (1) To analyze, evaluate and better understand the relative merits of the current placement of the IS academic discipline at an Australian university viz. Queensland University of Technology (QUT) where IS is a separate school married to computer science in a faculty of Information Technology; (2) to similarly analyze placement of IS at Korea University (KU), Seoul, where IS is one of the sections within a school of business administration (note *school* at KU is the equivalent of *faculty* at QUT); (3) to analyze placement of IS at University of Queensland, where IS is within a "cluster" in the business school; (4) to analyze placement of IS at Kookmin University, where the IS group is located within a separate school but within a college of economics and business. Hence, the four cases cover subtle differences in levels of IS autonomy, both inside and outside a business hierarchy. Relevant questions of interest include:

- Is IS well positioned at the case study universities?
- What are the strengths, weaknesses of this placement?
- How well does this placement accommodate known opportunities and threats?

In addition to exploring SWOT issues, we explore utility of the SWOT approach in the study context. Thus, as a pilot SWOT analysis, within a potentially larger study of universities elsewhere in the Pacific-Asia region, questions of interest include:

- How useful is SWOT for analyzing the relative merits of IS placement?
- What general mechanisms are useful for such analyses?

THE STUDY CONTEXT

This comparative SWOT analysis is a sub-study of a larger project investigating the state of the IS academic discipline in Pacific Asia (IS-in-PA). Before describing the intent of the SWOT, it is useful to further position this study within the larger effort.

The IS-in-PA study includes six main sub-studies (see Figure 1), the principal of which is a multiple-case study across the states of the Pacific Asia Region.

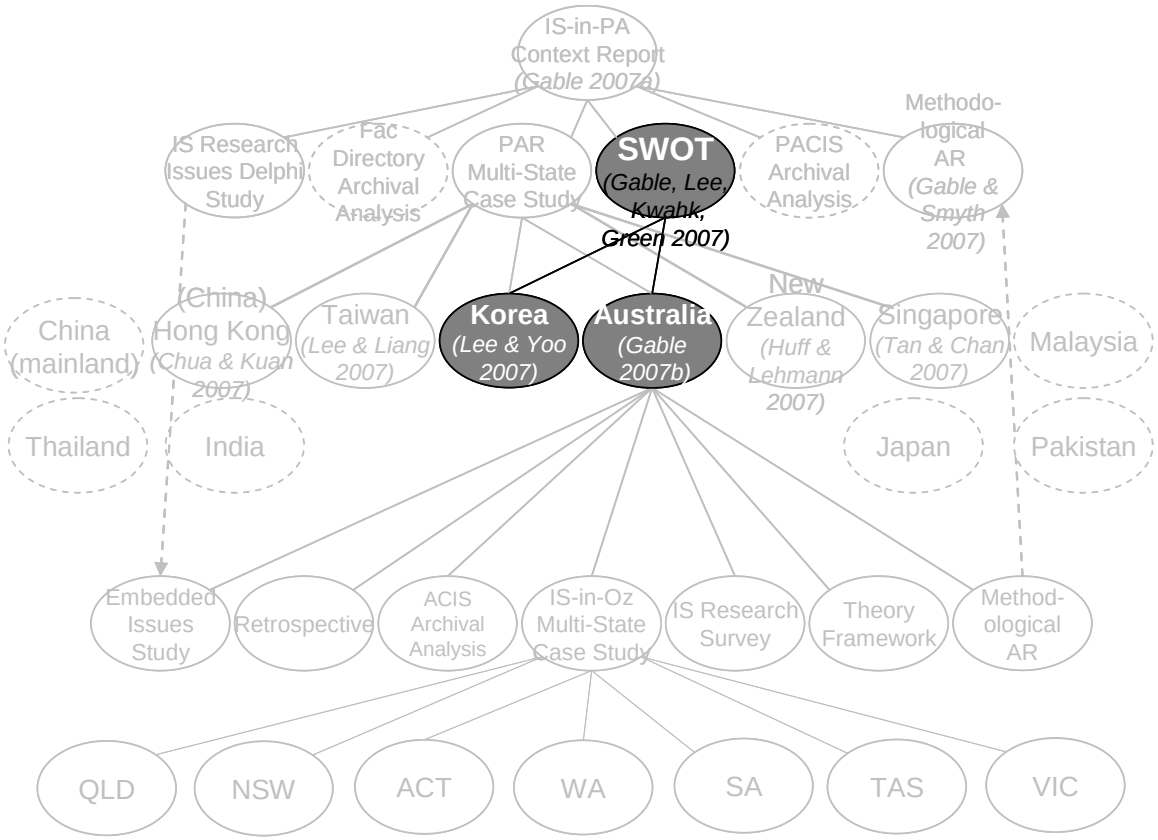

Figure 1. Position of the Comparative SWOT Analysis within the Study Hierarchy

The paper serves the dual-purpose of (1) informing the positioning of IS in the four case institutions, while (2) evolving an approach and related tools for usefully extending the SWOT analysis to other institutions and countries in the region, and across time. The extension of the analysis to other countries and to IS groups in differing circumstances will further broaden the relevance of study findings, while improving our understanding of differential placement of IS and differential perceptions of related significance.

STUDY SCOPE

The QUT study was treated as a pilot in the plan to conduct SWOT analyses across the Pacific Asia region. Recognizing that a case study of a single university in Australia, at which IS resides in a faculty of IT, might not be considered representative to those IS groups that reside within a business faculty, and further recognizing the limitations of studying a university of only one country in the region, the SWOT analysis was extended to sequentially study: first QUT, then Korea University, Seoul, then Kookmin University and then University of Queensland.

The rationale for selecting the three further SWOT studies, after the QUT pilot, relates to the concept recommended by Yin [2003] of testing initial findings, and making them more generalizable, through replication. Kookmin University, where IS is outside business offers what Yin terms a "literal replication", whereas Korea University and University of Queensland, in both of which IS is inside business, represent "theoretical replications." This rationale is summarized in Table 1.

Table 1. Rationale for Case Selection

Country	Administrative Location: Within	Administrative Location: Outside
Australia	University of Queensland	Queensland University of Technology
Korea	Korea University	Kookmin University

These four case studies are reported here. The QUT case study yielded preliminary results and the pilot protocol, while the three following studies had access to the final QUT study findings and the protocol. The protocol can be found in the "Methodological Learnings" paper in this volume of CAIS. The QUT study findings were not revisited subsequent to completion of the other case studies.

SWOT AS AN ANALYTICAL TECHNIQUE

SWOT is a framework for analyzing strengths, weaknesses, opportunities and threats [Johnson et al. 1989]. The strengths and weaknesses are based on an "internal audit" of the organization. The opportunities and threats relate to "environmental factors" that need to be taken account of in planning strategic actions. Opportunities represent environmental factors that can be beneficially exploited, while threats need to be considered because of their potential to damage the organization.

The origin of SWOT as an analytical technique lies with the growth of strategic planning in the 1960s. SWOT was developed as an attempt to address perceived shortcomings in strategic planning outcomes [Mintzberg 1994]. Specifically, SWOT and its variants [Weihrich 1982; Houben et al. 1999] sought to provide a structured basis for planning strategic action [Bourgeois 1996; Pearce and Robinson 1997].

The Basis for Rigor in SWOT Analysis

For a SWOT analysis to have rigor, the associated data gathering needs to be thorough and the providers of the data need to have a deep understanding of the organization (to be able to identify its strengths and weaknesses) as well as a strong understanding of the current environment (to be able to discern external opportunities and threats) [Jackson et al. 2003]. More recent use of SWOT analyses in an ad hoc, informal manner across a wide range of application areas has tended to detract from its potential potency as an analytical technique [Hill and Westbrook 1997]. A SWOT worksheet, comprising a 2x2 matrix as shown in Table 2, was used for documenting the strengths, weaknesses, opportunities and threats associated with the administrative location of IS. In keeping with recommended practice [Johnson et al. 1989] to facilitate meaningful analysis, the points documented were neither too general nor too detailed (with a maximum of 10 factors per quadrant).

II. SWOT - QUEENSLAND UNIVERSITY OF TECHNOLOGY

A BRIEF HISTORY OF IS AT QUT

In this study, the contributors to the data gathering and analysis were the head of the School of Information Systems at QUT and a second staff member, both of whom had been with the school, and its earlier manifestations, for more than thirty years. Information Systems is currently located at QUT in the School of Information Systems within a faculty of Information Technology. Table 3 lists main instantiations of IS at QUT since its advent as the Data Processing Group in the department of management in 1972.

Table 2. SWOT Worksheet

Internal Strengths	Internal Weaknesses
1. 2. 3. …	1. 2. 3. …
External Opportunities	**External Threats**
1. 2. 3. …	1. 2. 3. …

Table 3. Historical Placement of IS at QUT

					Generic Levels			
Year	1st Level Down	2nd Level Down	3rd Level Down	4th Level Down	1st Level Down	2nd Level Down	3rd Level Down	4th Level Down
2005	Faculty of Information Technology	School of Information Systems			Faculty	School		
⋮								
1989	Faculty of Information Technology	School of Information Systems			Faculty	School		
1988								
1987	School of Computing Studies	Department of Information Systems			School	Department	Section	
1986								
1985								
1984								
1983	School of Computing Studies	(No Department designated)	Business Computing Section		School	Department	Section	
⋮								
1975	School of Business Studies	Department of Accountancy	Business Computing Section		School	Department	Section	
1974								
1973								
1972	School of Business Studies	Department of Management	Data Processing Group		School	Department	Group	

QUT's Information Systems group is an example of Information Systems academics moving from business to a separate Information Technology group. In 1983, the Business Computing Section from the Department of Accountancy merged with the Computer Science Section from the Department of Mathematics and Computer Science in the Faculty of Science. The new entity was a "stand-alone" School of Computing Studies comprising a business computing section and a computer science section. In 1987, the two sections in the School of Computing Studies were created as departments, with the Business Computing Section changing its name to the Department of Information Systems. At the same time, a library science group was transferred

from the business school and incorporated into the Department of Information Systems. By 1989, the School of Computing Studies was re-constituted as the Faculty of Information Technology and the School of Information Systems was established.

STRENGTHS, WEAKNESSES, OPPORTUNITIES, AND THREATS AT QEENDSLAND UNIVERSITY OF TECHNOLOGY

The discussion following reports on the perceptions of the two IS academics participating in the QUT SWOT study. The participants' seniority and extensive experience of QUT and of the wider IS environment give added substance to their views.

Strengths

Autonomy – Control over Curriculum and Research

Many of the strengths associated with having an Information Systems School within a separate Information Technology Faculty relate to the relatively high level of autonomy available to the Information Systems academics. The Information Systems academics, as a distinct entity with strong representation on faculty academic boards and other committees, can exercise a high level of control over the Information Systems curriculum. Decisions on degree offerings, course content and teaching methods can be proposed by the Information Systems academics with minimal constraints on their adoption. Similarly, the Information Systems research focus and the structuring of the Information Systems research effort can be largely determined by the Information Systems academics.

High Academic Morale

A potential benefit of having Information Systems curriculum and Information Systems research within the university determined by Information Systems academics, with minimal interference from other academics, is higher morale among the Information Systems academics by virtue of their greater control over their work. Additionally, the university and wider society stand to benefit from decisions about Information Systems curriculum and research being made by those people most informed by virtue of their roles as specialist IS academics. With quick, relatively unconstrained decision making on Information Systems curriculum and research (since these decisions are made by groups comprising IS academics rather than by hierarchies of committees involving, for instance, business academics), it is easier to review and update and maintain currency of Information Systems offerings.

Focus on IS Specialization

The structure involving a separate Information Systems school has strength in not requiring Information Systems academic staff to teach in areas other than Information Systems. This opportunity to specialize in Information Systems offers academics the possibility of developing a higher level of concentrated Information Systems knowledge than if they were expected to combine Information Systems teaching with teaching in, say, accountancy or management.

Capacity to Make Effective Allocation of Resources

Control over the budget is a further strength of this administrative model. The head of Information Systems is able to make decisions about the allocation of finances for such matters as the purchase of hardware and software, the appointment of staff, and conference and travel support for Information Systems academics. Once again, decisions can be made quickly by the individual most in touch with the needs of the Information Systems group.

Beneficial Collaboration with Other ICT Academics

The ease of collaboration with computing science and data communications academics is a strength of the placement of all Information Systems academics in a separate school within a faculty of Information Technology. In view of the increasing overlap between Information Systems and associated ICT disciplines, it is advantageous to have Information Systems academics in continuing contact with the other ICT academics in the university. Not only is collaboration easier,

but potential demarcation disputes can be addressed within the faculty, reducing wasteful duplication in subject offerings.

Informed Selection of Students
A separate Information Systems school is able to exercise greater control over the entry of Information Systems students to the university. Importantly, there can be separate entry requirements for Information Systems students, to exercise some control over the suitability of entrants. At QUT, undergraduate IS students must meet criteria established by the faculty of Information Technology, subject to broader university guidelines. Hence IS staff can influence directly both general entry cut-offs and entry prerequisites. At post-graduate level, Information Systems academics can determine the precise basis for entry by coursework IS students. A separate Information Systems school is advantaged in recruiting domestic and overseas students, both by the increased visibility of Information Systems in the university, and also by the degree of control the Information Systems academics have over the recruiting process.

Weaknesses

Exposure to Economic Downturns
While the autonomy that comes with having Information Systems as a separate administrative entity generates many benefits, also inherent in this autonomy are some weaknesses. For instance, the stand-alone Information Systems academic group is more exposed to the economic consequences of a downturn in demand for Information Systems. Where Information Systems academics embedded in a large business faculty can be cushioned by the continuing inflow of funds elsewhere in the faculty, the Information Systems school in an IT faculty has no similar hedge available; the entire IT faculty thrives when demand for IT is strong and the entire faculty suffers when demand for IT is low.

Reduced Collaboration with Business Academics
Collaboration with academics in Information Systems' reference disciplines [Ariav 1987; Klein et al.1991] may be more difficult when Information Systems academics are administratively separate. The informal bonds with academics in management, economics, accounting and marketing are likely to be weaker when Information Systems academics belong to a separate faculty.

Dilution of Business Content in IS Curriculum
Administrative isolation from allied disciplines can lead to progressive abandonment in Information Systems courses of content from these other disciplines in favor of increased IT content. Such a diminution in business content had occurred in the IS curriculum at QUT. In light of employers' ongoing demands for Information Systems graduates with a broad perspective on business and related applications, this by-product of stand-alone placement of the Information Systems group may be viewed as a weakness; the greater freedom of the Information Systems academics to load Information Systems curricula with IT content may be counterproductive in terms of graduate outcomes.

Reduced Internal Competitive Strength
Having a separate faculty of IT comprising just Information Systems and computer science groups results in a faculty smaller in size than most others at the university. In the QUT case, it is felt that this small faculty size may result in lesser influence within QUT and disadvantage in competing for resources.

Constraints from Other Faculties
A further weakness in this administrative placement of Information Systems relates to the role of the school of Information Systems as a service group to students outside the faculty of IT. For instance, in providing Information Systems subjects for MBA students, the Information Systems School may encounter business faculty guidelines at odds with those of the faculty of IT and essentially non-negotiable. As a provider of service subjects, the school of Information Systems

may then have to structure teaching arrangements, such as tutorial size and exclusion of advanced undergraduate students from MBA tutorials, in ways inconsistent with its own policies.

Opportunities

Opportunity to Promote IS as a Separate Discipline

It is felt at QUT that the placement of Information Systems academics within a separate school of Information Systems provides an opportunity for the promotion and advancement of Information Systems as a distinct academic discipline. A clearly identified administrative grouping for Information Systems can be seen as beneficial to the advancement of Information Systems as a distinct discipline area [Checkland and Howell 1998]. By contrast, it can be argued that having Information Systems staff embedded as a relatively small group within a business faculty perpetuates the view of Information Systems as an adjunct of other disciplines.

This separate identity has been a long-held goal of Information Systems academics and practitioners [Banville and Landry 1992]. For reasons of professional status, there are strong practical benefits that flow from the increased recognition of Information Systems as a distinct discipline. A major reason for Information Systems academics to pursue opportunities to enhance the standing of Information Systems as a separate academic discipline relate to improved prospects for research funding. When bodies such as the Australian Research Council (ARC) recognize Information Systems as a distinct discipline area, the probability increases that applications for Information Systems research funding will be assessed in terms of appropriate criteria for Information Systems research. So long as Information Systems is regarded as an extension of some other discipline area or areas, such as computer science or business, Information Systems research proposals will be assessed by individuals from these other disciplines. These assessors will, of course, evaluate the proposals according to criteria set up for their research areas, to the detriment of the funding prospects of the Information Systems proposals.

Opportunity for Increased Visibility to External Entities

There is opportunity for separate Information Systems schools, as at QUT, to recruit students more efficiently and more effectively. Because the Information Systems school has greater autonomy, its course offerings can be made more visible to prospective students than if the school, and its courses, were parts of a larger school. Again, entry requirements and entry standards can be more appropriately set when the entering students are identified by the university, and the tertiary entry bodies, specifically as Information Systems students, rather than, for instance, business students planning to pursue an Information Systems course.

A separate Information Systems school offers improved opportunities for collaboration between Information Systems academics and Industry. The presence of a separate Information Systems group makes it easier to present a higher profile to Industry. Again, discussions and negotiations between the Information Systems academics and Industry representatives are less likely to be constrained by rules and guidelines more appropriate to a “parent” discipline group.

Opportunity for Improved Access to Advisors from Industry

With a separate Information Systems school, there is opportunity to recruit from outside the university appropriate Information Systems specialists to help guide the school. This opportunity again flows from the greater decision-making autonomy in a separate Information Systems school. It is the experience at QUT that not only can the presence of appropriate advisory IT people contribute within the school to the soundness of the teaching and research in Information Systems, but the influence of the Information Systems group within the university can be enhanced. High-profile, knowledgeable Information Systems advisors from outside the university can make representation to the senior management of the university to improve the standing of the Information Systems school in the university’s decision making.

Opportunity for Enhanced International Reputations
There is enhanced opportunity for Information Systems academics who are part of a separate Information Systems school to establish an international reputation in the world Information Systems community. It is the QUT experience that the competence and achievements of a body of Information Systems academics is more easily promoted where they work within a distinct, clearly labeled Information Systems group.

Threats

Threat of Increased Damage in Times of IT Downturn
Declining international interest in IT as a career choice [Fusilier and Durlabhji 2003] has the potential to disproportionably damage separate Information Systems schools. An Information Systems group embedded within another school, such as commerce or accountancy, is better able to absorb a downturn in demand since staff can be more easily redeployed into associated subject areas. Furthermore, a decline in income from Information Systems courses can be softened where Information Systems is only a small part of a larger school. At QUT, the impact of the recent IT downturn was exacerbated by the administrative isolation and specialization of the school of Information Systems.

Threat from Hardware and Software Obsolescence
The rapid obsolescence of computer hardware and software poses a special threat to the separate Information Systems school during times of reduced demand for IT courses. Frequent turnover of hardware and software is essential for an Information Systems group to maintain currency in its courses, a prerequisite for attracting good students. Yet, as outlined earlier, the separate-school status provides no economic buffer to allow necessary replenishment of hardware and software resources during times of more limited demand for IT courses.

Table 4. Summary of the SWOT Data for QUT

Internal Strengths	**Internal Weaknesses**
Autonomy in Decision Making	Exposure to Economic Downturns
Control over IS Curriculum	Reduced Collaboration with Business
Control over Research Focus	Dilution of Business Content in IS Curriculum
Higher Personal Morale among Staff	Reduced Internal Competitive Strength
Capacity to Make Effective Allocation of Resources	Constraints from Other Faculties
Ease of Collaboration with Other ICT Academics	
Informed Selection of Students	
External Opportunities	**External Threats**
Promotion of IS as a Distinct Discipline	Increased Damage during Downturn in IT
Increased Visibility to External Entities	Obsolescence of Hardware and Software
Improved Access to Advisors from Industry	Perceived Commoditization of IT
Enhanced International Reputations	

Threat from Perceived Commoditization of IT
The perceived commoditization of IT [Carr 2003] is a threat to separate Information Systems schools. Acceptance that IT should be regarded as a business commodity, of no strategic

importance, threatens the claims of Information Systems academic groups to a separate identity. The view of IT as an operational commodity would support the idea that Information Systems is best taught by application specialists as an extension to their own discipline areas. Hence, since IS academics at universities like QUT are seen as specialists in IS, rather than as, say, business academics with strong knowledge of IS, their ongoing viability as a group is put at risk by the view that all IT is but an adjunct to business (or some other application area).

III. SWOT – KOREA UNIVERSITY

A BRIEF HISTORY OF IS AT KOREA UNIVERSITY

Table 5 shows the history of the IS discipline at Korea University, where the IS discipline has been located as a subordinate major within the business school since its advent as the Business Information Processing Group in 1970. The Korea University Business School offers diverse courses related to management, marketing, accounting, finance, and IS, all under a unitary curriculum. The business school has never considered any dramatic change to its organizational structure to accommodate IS, but has simply hired Information Systems faculty members whenever necessary. The business school believes that this is the best way, not only to minimize potential conflict between different discipline groups under the business school, but also to manage available internal and external resources more efficiently.

Table 5. Historical Placement of IS at Korea U

					Generic Levels			
					1st Level Down	2nd Level Down	3rd Level Down	4th Level Down
Year	1st Level Down	2nd Level Down	3rd Level Down	4th Level Down				
2005								
2004	School of Business Adminstration	Department of Business Adminstration	Management Information System section		School	Department	Section	
2003								
2002								
2001								
2000	School of Business Adminstration	Department of Business Adminstration	Management Science/Information System section		School	Department	Section	
⋮								
1973	School of Business Adminstration	Department of Business Adminstration	Production and Operations Management section	Management Information System Group	School	Department	Section	Group
1972								
1971								
1970	School of Business Adminstration	Department of Business Adminstration	Production and Operations Management section	Business Information Processing Group	School	Department	Section	Group
1969								
1968	Graduate School of Business Adminstration	MBA concentrated on EDPS						

Historically, the first Information Systems related program was initially provided for MBA students of the Graduate School of Business Administration in 1968. The Information Systems program was called an MBA, concentrated on EDPS (Electronic Data Processing Systems). In 1970, the Business Information Processing Group in the Production and Operations Management Section of the Department of Business Administration was first established for undergraduate students. The Business Information Processing Group was renamed as the Management Information Systems Group in 1973, still under the Production and Operations Management Section. After 27 years, i.e., in 2000, the Management Information Systems Group was upgraded to a section, called the Management Science and Information Systems Section. As indicated by its title, the new section was not a stand-alone Information Systems section; it was created by merging the Management Science Group and the Management Information Systems Group in the Department of Business Administration into a unified section. In 2004, the Management Information Systems Section was separated from Management Science, and Information Systems became an independent section in the Business School of Korea University.

STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS AT KOREA UNIVERSITY

Strengths

Higher Possibility of Collaboration with Business

An important benefit of having the Information Systems discipline as a subordinate major in a business school is a higher possibility of collaboration with academics in other business disciplines, such as management, marketing, finance, accounting, and international business. This collaboration is in teaching, research, and administrative work. Consequently, the formal and informal relationships with academics in these allied disciplines are likely to be stronger than when the Information Systems discipline exists as a distinct entity outside of Business.

Synergy from Multi-disciplinary Activities

Having the Information Systems discipline as one of the subordinate majors in a business school results in a great deal of cooperative interaction with academics in different disciplines, thereby leading to synergy that would otherwise not be possible. When faculty members across different majors in a business school work together frequently and intensively, it is believed that the combined effect among these diverse disciplines is much greater than the sum of their individual efforts. This synergy can yield competitive advantage relative to rivals having separate Information Systems schools.

Consistent Recognition of IS Value in Business

Other disciplines in the business school have recognized Information Systems as one of the major cores in business education. The Information Systems discipline is regarded as the discipline at the intersection of processes, people, and IT in business organizations, not just representing IT alone. This interaction of processes, people and IT is believed to have the capacity to empower businesses, yielding competitive advantage.

Less Exposure to Economic and IT Downturns

A major advantage of the structure at KU is that the Information Systems academic group is less affected by economic and IT downturns. Where the Information Systems discipline is located within a larger business school as in the case of KU, the impact of economic and IT downturns can be cushioned by funds generated from other allied disciplines in the business school. It is an important benefit for Information Systems academics to be able to focus mainly on their own research and teaching without serious consideration of the change of Information Systems demand and market situation.

More Financial Resources

Despite waning industry demand for IT and related decline in demand for Information Systems graduates, the Information Systems group at KU, as one of several subordinate majors in the business school, is less affected. The continuing inflow of funds from other disciplines in the business school provides an economic buffer for the Information Systems group. Furthermore,

the overall amount of financial income from diverse disciplines in the business school is greater, the business school, and each discipline group within it, thereby enjoying related economies of scale.

Weaknesses

Restricted Autonomy in Decision Making

Small Information Systems groups within large business schools do not have a high level of autonomy in decision making. Whereas a separate Information Systems group can exercise a higher level of control over the IS curriculum, course offerings, course content, teaching approaches, student selection, recruiting, and resource allocation, Information Systems academic groups in business schools, as one of several subordinate majors, cannot enjoy full autonomy for decisions on these matters. In addition, Information Systems research foci and the restructuring effort of the Information Systems group are mainly determined by the business faculty boards and/or other committees in the business school. Only through discussion with academics in other disciplines of the business school can Information Systems academics influence these important decisions.

Reduced Control over IS Curriculum

Limited control over Information Systems curriculum is a weakness of the placement of the Information Systems academics group as a subordinate major in a large business school. Since courses provided by the Information Systems group are strongly associated with courses offered by other majors in the business school, there is less flexibility to modify and update them in response to changes in IT market demand. Furthermore, because the content of the courses provided by the Information Systems discipline is business oriented in conjunction with those in other disciplines such as accountancy, and management, their focus is mainly on the managerial perspective. Thus, it is difficulty to introduce adequate technical content to the courses in Information Systems.

Restricted Autonomy in Research Focus

Information Systems as a subordinate major in the business school is constrained from pursuing diverse and in-depth Information Systems research foci. While collaboration with academics in other business disciplines generates many benefits, such collaboration itself can dictate IS research direction and play a role in restricting the freedom of IS research.

Constraint in the Faculty Size

Due to its relatively lesser autonomy, the size of the Information Systems group is controlled by the business school and influenced by the other business disciplines. For example, when there is quota available for new faculty members in the business school, it may be required that this quota be proportionally shared with the other business disciplines. Even in the situation where the Information Systems discipline urgently requires a new faculty member, the IS academic group must consider the situation of other allied disciplines in the business school, and follow the business school's decision.

Lack of Students' Understanding on IS

With Information Systems a subordinate major, the business school exercises full control over the entry of students. It dictates that there are no separate entry requirements for Information Systems students. Also, since the business school unified all discipline groups into one and provides a unitary curriculum, the possibility to develop and offer more diverse and intensive Information Systems courses is extremely low. Being able to offer only a small number of Information Systems courses results in relatively shallow student understanding of the Information Systems discipline.

Lack of IT Facilities

Having adequate current hardware and software is essential for the Information Systems group to attract students and to provide effective IS education. Yet, because the financial resources are controlled by the business school and shared with other academic groups in the business school,

it is not feasible for the Information Systems academic group to gain sufficient physical space for the required IT facilities.

Opportunities

Promotion of IS as One of the Most Critical Competitive Resources in Business
Where the Information Systems group is embedded in a large business faculty, the formal and informal bonds between Information Systems academics and other allied academics in the business school are very strong. Thus, although industry interest in IT has stalled, academics in other business disciplines acknowledge the importance of IT in business. This endorsement suggests that the Information Systems discipline has been accepted as a core, basic discipline at KU, tightly coupled with other disciplines in the business school (rather than a specialized discipline).

Improved Access to High-Ranked Executives in Industry
A trend in Korean business schools is to offer a wide range of regular postgraduate programs for industry workers such as MBA, advanced MBA, iMBA, EMBA, and so on. Furthermore, most universities provide special programs in cooperation with businesses. These special programs include curriculum tailored for particular companies in the private or public sector. Most students who register for these programs are high ranked senior managers and/or executives who have influence in their business area. Therefore, there is opportunity to access these influential people for the promotion and advancement of Information Systems as an important discipline in the business school.

More Opportunities over New Businesses using Emerging Technologies
New, emerging information technologies are resulting in new kinds of businesses. The Information Systems discipline can have a role in generating these new business ideas and opportunities for new ventures. CIOs and CEOs also bring issues and ideas to discussions on strategy, marketing, financing and so on, along with IT. The Information Systems discipline can interact with managers and executives about how and what kinds of new business become possible through IT.

Broader Connections with Alumni
Though Information Systems, as a subordinate major in the business school does not have undergraduate students who are specialized in Information Systems, it is possible for Information Systems academics to enjoy a broader range of connections with graduates from the business school. Though the graduates did not study Information Systems specifically, they will have taken two or more courses provided by the Information Systems group. They consider professors in the Information Systems group as their teachers and seek to maintain a close relationship with their teachers. Thus, the student network capability of Information Systems academics can be easily enhanced through diverse and broad connections with the business school's alumni.

Threats

Decreased Visibility to External Entities
As mentioned earlier, because the Information Systems discipline is one of the subordinate majors in the business school, with lower autonomy, it is less visible to external entities, such as students and private and public organizations. Because there is no specialized Information Systems program for students and no separate Information Systems school, external entities simply view Information Systems as an adjunct of other disciplines in the business school, without an independent identity. This makes it difficult to promote the existence of the Information Systems group and to improve the standing of the Information Systems discipline in the business school.

Higher Competition from other ICT disciplines
Since the Information Systems discipline in the business school does not have a unique organizational identity, other ICT disciplines in the university that have separate schools with a higher level of autonomy, such as computing science and information science, seek to increase

the overlap with the Information Systems discipline by creating and offering more Information Systems oriented courses and programs. In other words, other ICT disciplines seek opportunity to enhance their reputation and standing as separate academic disciplines by expanding their academic orientation into the IS business area. This should be considered a critical threat to the Information Systems group in the business school.

Slow and Inefficient Responses to External Stimuli
A further threat in Information Systems academic group in the business school relates to inefficient and slow reactions to external stimuli. Increasingly, rapid decisions on Information Systems related issues like the restructuring of the Information Systems courses and curriculum in response to the rapidly changing external environment are necessary. Yet, it is very difficult to quickly and appropriately react to these influences due to the constrained decision rights of the Information Systems group.

Table 6. Summary of the SWOT Analysis for the IS Discipline at Korea University

Internal Strengths	**Internal Weaknesses**
Higher Possibility of Collaboration with Business	Restricted Autonomy in Decision Making
Synergy effect from Multi-Disciplinary Activities	Reduced Control over IS Curriculum
Consistent Recognition of IS Value in Business	Restricted Autonomy in Research Focus
Less Exposure to Economic and IT Downturns	Constraint in the Faculty Size
More Financial Resource	Lack of Students' Understanding on IS
	Lack of IT Facilities
External Opportunities	**External Threats**
Promotion of IS as one of the Most Critical Competitive Resources in Business	Decreased Visibility to External Entities
Improved Access to High-ranked Executives in Industry	Higher Competition from other ICT disciplines
More Opportunities over New Businesses using Emerging Technologies	Slow and Inefficient Responses to External Stimuli
Broader Connections with Alumni	

IV. SWOT – UNIVERSITY OF QUEENSLAND

A BRIEF HISTORY OF IS AT UQ

The teaching of Information Systems as a separate discipline began at the University of Queensland within the Bachelor of Commerce degree offered by the Department of Commerce about 1972. One subject was offered in electronic data processing. Soon after that time, a postgraduate diploma in Information Processing was offered and one permanent staff member specializing in Information Systems was appointed to the staff of the Department of Commerce. Table 7 details the progression of the placement of business Information Systems within the University of Queensland over the years until the present.

Table 7. Historical Placement of Business IS at UQ

					Generic Levels			
Year	1st Level Down	2nd Level Down	3rd Level Down	4th Level Down	1st Level Down	2nd Level Down	3rd Level Down	4th Level Down
2003	Faculty of Business, Economics, & Law	UQ Business School	Business Information Systems Cluster		Faculty	School	Cluster	
⋮								
2002	Faculty of Business, Economics, & Law	School of Commerce	Information Systems Group		Faculty	School	Group	
⋮								
1993	Faculty of Commerce & Economics	Department of Commerce	Information Systems Group		Faculty	Department	Group	
⋮								
1982	Faculty of Commerce & Economics	Department of Commerce	Information Systems Group		Faculty	Department	Group	
⋮								
1972	Faculty of Commerce & Economics	Department of Commerce			Faculty	Department		

For 22 years, since 1982, Professor Ron Weber led and developed the Information Systems discipline and group within the department/school of commerce. His achievements contributed principally to the international reputation for Information Systems education enjoyed by the UQ Business School today. Now, the Business Information Systems cluster, consisting of 12 lecturing staff, teach undergraduate program majors in Information Systems and online business, postgraduate certificates, diplomas, and masters majors in Information Systems and e-commerce, and masters and PhD research students in Information Systems. In the mid-1980s, an Information Systems group was setup by Professor Shir Nijssen in the Computer Science department (now the Information Technology and Electrical Engineering school) of the University. This group focuses very strongly on certain technical aspects of the Information Systems discipline as it is defined in its broadest sense e.g., the development and verification of workflow languages and engines, the development and verification of Web services, and data capture and mining from remote sensor networks. In other words, these colleagues emphasize technology and how it works – the computer science focus. By contrast, the Business Information Systems cluster focuses on the "applied" aspects of Information Systems, particularly within the context of public and private sector businesses. That is, our focus (and that of our subjects) is on the application of the technology to a real-world context. On this basis of demarcation, we have co-existed since the mid-1980s. The remainder of this section, however, discusses the strengths, weaknesses, opportunities, and threats of the placement of an Information Systems group within a business school from the perspective of staff from within that group, and given the university context outlined above.

STRENGTHS, WEAKNESSES, OPPORTUNITIES, AND THREATS AT UNIVERSITY OF QUEENSLAND

The discussion following reports the summarized perspectives of three senior IS staff from within the Business Information Systems cluster of the UQ Business School. Between them, these staff members have 30 years experience, approximately, within UQ, and over 50 years teaching Information Systems at the tertiary institution level.

Strengths

Total Organizational Perspective

The information systems of any organization are important to its future and strategic direction. This focus is emphasized by the staff in the subjects they prepare and present. Accordingly, students do not just concentrate on how a technology works, or is created. Rather, students are immersed in a total organizational perspective of how Information Systems (and their underlying technologies) might provide a solution for various business problems. Just because a technology is new and well-hyped does not necessarily mean that it should automatically be used by all businesses. By contrast, students are given an organizational perspective as to where technology provides value to businesses by constantly immersing those students throughout their subjects in the business evaluation and decision-making methodology of cost-benefit analysis.

Graduates with a Business Degree Incorporating IS Skills – A Mix More Attractive to Employers

Students from within a business school graduate with a commerce or business degree majoring in Information Systems. Employers understand immediately that these graduates not only have technical skills but also they have a strong grounding in the "core" business areas of marketing, accounting, and financial management. These students tend to have a better appreciation of how IT systems impact other "core" areas of the business and how proposed changes to areas within a business might have implications for the relevant IT systems of the business. Accordingly, graduates with a business degree majoring in Information Systems, as opposed to an Information Technology degree, appear to be more in demand by employers these days in business [see for example, Weber 2004]. Moreover, anecdotally, we tend not to see people with an IT/IS qualification only progressing to the higher levels of company management, such as CEO, or, indeed, a director on the board.

Business Focus of Staff

IS staff working within a business school tend to have a broader background and training in that they typically have qualifications and/or significant work experience in another related discipline of the business school, e.g., accounting, marketing, or management. In this way, the application of their research and teaching to areas that are of interest to the rest of the business school is facilitated. Furthermore, it is then easier for academics in the other mainstream disciplines of the school to collaborate with business IS colleagues on research and improvements to teaching courses. Finally, IS has remained a strong discipline within business schools in Australia for the last 30 or so years. Accordingly, academics in mainstream business disciplines such as economics, accounting, marketing, management, and finance are not surprised at, and indeed to a certain extent expect, the existence of an IS discipline area in the school. So, collaborations for IS staff with other business school staff are commonly observed.

Stability of Courses

Because typically the IS staff located in a business school have training also in another related business discipline, their courses usually are grounded in strong economic theories of decision-making such as agency theory, transaction cost economics, and resource-based view of the firm. In this way, the courses tend to emphasize that technologies will not be adopted by organizations unless the benefits of the technology outweigh the costs (in an economic sense) of implementing that technology. Accordingly, IS courses within a business school tend not to be exposed to "fads" in technology advances, and hence the courses retain some stability, grounded in the economic principles of business.

Reduced Exposure to Economic Downturns

During times of downturn in demand for IS graduates, and hence, students not electing to enter IS degree programs at university, there is some "cushioning" available by being administratively situated in a multi-disciplinary, large business school. This "cushioning" is however at best only short-term, and it only occurs if one or more of the associated business disciplinary areas remains strong, or indeed increases, in its demand by students entering the business school programs. Currently, in Australia, because of the skills shortage in accounting and finance, the huge increase in business regulation that has led to a significant increase in the amount of work

required of accountants by their clients, and subsequently, the incentives offered to international students seeking permanent residency status in Australia by undertaking accounting "conversion" courses, there is significant demand for accounting and finance courses by students at both the undergraduate and postgraduate levels. In such an environment, the downturn in demand for courses in one area – IS – can be cross-subsidized to a certain extent by student numbers in other popular areas of the business school – accounting and finance. However, this cross-subsidization cannot go on indefinitely! Like any other business, all areas of a business must contribute positively to the overall performance of the business otherwise those non-performing areas have to be reviewed. Accordingly, even *within a business school* environment, it is still critical for the IS disciplinary area to "market" itself strongly to the existing student quota to encourage them to take IS majors and courses as part of their programs.

Weaknesses

Constraints on Curriculum

Even though IS courses presented through a business school are typically oriented towards business applications, many staff members believe that students need instruction in the associated technologies that support the applications. Accordingly, they are keen to provide students with a complete experience in their courses. Unfortunately, where the teaching of how these technologies work or are used to build artifacts resides in another school (e.g., computer science) in another faculty of the university, this situation can lead to constraints over what content IS staff within a business school can teach in their courses. Particularly, in times when the number of students choosing to do technologically-based IT courses is dropping, this issue can be very sensitive to the schools involved. Accordingly, IS staff within a business school may be constrained from producing courses that have a rigorous technological base. In this way, occasionally, IS courses within a business school are criticized for being not sufficiently technologically challenging.

IS not a Dominant Business Discipline

IS contained within a business school environment is no surprise, and indeed is probably expected, by most business school staff. However, just as in a normal business environment, IS is seen as a "service" discipline, albeit an essential one, within the business school. Accordingly, it may not have the same level of negotiating power as it might have if it were a school in a separate IT faculty. Particularly these days, with the malaise in demand for IS/IT courses, as noted earlier, the more powerful disciplines that are currently cross-subsidizing IS courses will not be sympathetic to further resource/funding requests from the IS discipline. In such an environment, the IS discipline is dependent heavily on the support of the dean and/or the head of school, and it is dependent on their perception that demand for IS courses will recover in the short term.

Relatively Low Funding for Resources

Business schools are notorious in universities for being the most poorly funded teaching area in a university on a per full-time-student-equivalent basis. Because business schools take in relatively large numbers of students and they are not seen as resource-intensive teaching areas, universities treat them as "cash cows." In other words, large business schools in universities typically cross-subsidize other under-performing areas or areas with highly specialized teaching needs e.g., health. Accordingly, in such a funding environment, it is very difficult for IS disciplines to argue for investment in state-of-the-art hardware, software, and technical support services to provide the resources to IS courses that IS teaching staff would like. This situation is even further exacerbated in a climate where the IS area has reduced negotiating power within the business school because of reduced student demand.

Difficulties with Journal Publications and Research Funding

There is a vast array of refereed journals available in which to publish in the computer science/IT area. In a similar way, there is a vast array of refereed journals available in the mainstream disciplines of business, in particular, management, marketing, accounting, and finance. By comparison, there are relatively few journals available as avenues for publication to academics

that specialize in research areas at the intersection of business and information-communication technologies (ICT). The famous academic catch-cry of "publish or perish" is never more alive than today in universities. So, for IS researchers in business schools, occasionally their options for vehicles for publication of their research results are limited. In a similar fashion, business school IS researchers are limited usually in their competitive grant success (at least in this country) because of the evaluation structures that are in place. When an IS researcher from a business school prepares and presents a grant application, the researcher has to decide whether he/she wants the application evaluated by a technical computer-science-oriented committee (that has little empathy for business issues or research methodologies), or whether he/she wants the application evaluated by a business committee (that has little empathy for the technical issues and/or research methods). Accordingly, it is usually difficult to obtain significant competitive funding from national sources for research conducted by IS researchers on business-applied problems.

Opportunities

Opportunities Due to Relatively Strong Business Linkages

Because of the relatively strong alumni connections through business schools, IS academics in business schools have significant opportunities to work with business/industry leaders. By contrast, IS/IT academics in IT faculties usually collaborate with hardware/software/communications vendors. In this way, business school IS academics have a relatively greater opportunity to establish research/consulting projects with relevant areas of business. Furthermore, they have greater opportunity to set up company-based projects for the students in their courses. In a similar manner, through collaborations with other colleagues within the business school, IS academics can gain wider access to relevant businesses and leverage this access for the benefit of their own, and their students' projects.

Opportunities for Greater Industry-Based Research Funding

Even though obtaining nationally competitive funds from Australian national funding bodies is difficult for IS academics in business schools, these academics can leverage their alumni connections and industry connections through collaborations with other business school academics to obtain industry-based funding for their research activities. The opportunities for this type of activity are greater for IS academics based in a strong business school than for IS colleagues based in an IT faculty. Furthermore, through those personal connections particularly with the alumni, the IS academic from a business school has credibility as a business professional – one who understands the costs and benefits from a business's perspective in the use of a certain technology, and not just a person expert in the technology alone.

Opportunities to Enhance the Relevance of IS Research in Other Business Communities

Through collaborations with other business school academics, IS researchers have opportunities to demonstrate the rigor and relevance of IS research to other business academic communities through their key conferences e.g., Academy of Management (AOM) conference, and Accounting and Finance Academics in Australia and New Zealand (AFAANZ) conference. By utilizing this opportunity, IS academics can enhance the reputation and relevance of IS research to the broader business academic community. In this way, the recognition of IS as a mainstream business discipline can be enhanced in the minds of senior University academic administrators. This opportunity has only been exploited in a limited fashion to date by such internationally-recognized Australian IS academics as Ron Weber and Peter Weill.

Opportunities with the Commoditization of IT

In business today, IT is seen as an "enabler" for the business to move into new markets, products, and services. Technology is viewed as a commodity. It is *how* business uses the technology that gives it the competitive edge. Accordingly, because IS academics in business schools are first and foremost concerned with the *applications* of technology, they have opportunities to work with businesses on how the technologies can be used for innovative applications as opposed to simply the construction of the tools themselves.

Threats

Threat of a Persistent Downturn in Demand

A persistent downturn in demand for IS courses by students will have a significant impact on IS disciplines irrespective of where they are administratively situated. In a business school environment, the management of the school will review course offerings in the IS area. The management will determine whether to continue supporting the IS area if it believes that the situation has bottomed, and it is turning around, leading to an expected increase in demand in the short term. By contrast, it may determine that resources would be better spent in areas other than IS irrespective of the arguments posed earlier about IS being an "expected" discipline within a business school environment. We have seen instances already of how in the U.S., IS groups have been merged into stronger business areas such as accounting, finance, and operations research. Already, while IS areas within business schools are not at the stage of employing voluntary or mandatory staff retrenchments, vacancies through natural attrition are not being filled. A threat resulting from the persistent downturn, therefore, is that when the situation does turn, and demand for IS/IT courses increases, schools (and not just business schools) will not have, nor be able to obtain in a timely manner, sufficient skilled, qualified academic staff to meet the demand.

Threat of a "Takeover" by Other Areas of the University

Computer Science/IT schools in other faculties of the university that are struggling to attract students to their programs eagerly view the students within business school IS courses. Accordingly, the managements of such schools are constantly looking at the curricula of the business school courses to determine if they might have a basis on which to argue for those courses to be more appropriately presented by the staff of their school. The threat of such a merger is that the "applied" nature of the business school IS courses would ultimately be lost as the content of the courses "regresses to the mean" for courses offered in a pure computer science/IT school.

Table 8. Summary of the SWOT Data for UQ

Internal Strengths	**Internal Weaknesses**
Total Organizational Perspective Graduates with a Business degree incorporating IS Skills – A Mix more attractive to Employers Business Focus of Staff Stability of Courses Reduced Exposure to Economic Downturns	Constraints on Curriculum IS not a Dominant Business Discipline Relatively Low Funding for Resources Difficulties with Journal Publications and Research Funding
External Opportunities	**External Threats**
Opportunities Due to Relatively Strong Business Linkages Opportunities for Greater Industry-based Research Funding Opportunities to enhance the relevance of IS research in other Business Communities Opportunities with the Commoditization of IT	Threat of a Persistent Downturn in Demand Threat of a "Takeover" by Other Areas of the University Threat of the Research Quality Framework (RQF) for the Assessment of Research Performance and Impact.

Threat of the Research Quality Framework (RQF) for Assessment of Research Performance and Impact

The university sector in Australia is due to undergo shortly its first experience of the Research Quality Framework (RQF) assessment system. This system is similar to the Research Assessment Exercise (RAE) system used for the last 20 years (and now recently discontinued) in the UK. The RQF will assess the quality and impact of research produced by research groups nominated from within Universities. On the basis of these results, the Australian government will distribute research funding to the Australian universities. Again, however, as with the assessment of research grant applications by the Australian government, the research work of these nominated groups will be assessed by a panel that is focused either on computer science/IT or business. The members of the panel may not appreciate the quality/impact of research at the intersection of the two mainstream disciplines. Accordingly, the research outputs of an IS group (particularly one in an applied business school) may not be assessed very highly. Such an assessment could pose a threat to the longevity of the IS group within the university because a university, like any other business enterprise, will look to optimize its research funding groups to those that provide it with the most return.

V. SWOT - KOOKMIN UNIVERSITY

A BRIEF HISTORY OF IS AT KOOKMIN UNIVERSITY

The School of Business Information Technology at Kookmin University, established in 1984 and named then as the Department of Management Information Systems, is one of the oldest programs of its kind in Korea. Table 9 shows positioning changes of IS at Kookmin University since its advent as the Department of Management Information Systems. In 1997, the Department of Management Information Systems merged with the Department of Business Administration. The new entity was named the School of Business Administration, comprising a Management Information Systems Major and a Business Administration Major. In 1998, the Management Information Systems Major in the School of Business Administration was reestablished as a separate School, with the two majors named the Information Management Strategy Major School, with the two majors named the Information Management Strategy Major and the Information Systems Development Major respectively. In 2003, the School of Management Information Systems changed its name to the School of Business Information Technology while maintaining the existing two majors. In 2004, the two majors in the School of Business Information Technology were merged into a single major named the Business Information Technology Major.

STRENGTHS, WEAKNESSES, OPPORTUNITIES, AND THREATS AT KOOKMIN UNIVERSITY

Strengths

Independent Control over Educational Program and Budget

Having an Information Systems group as a separate entity provides academics with a relatively high level of control and power over educational programs and budgets. Decisions on curriculum, course content, teaching methods, type of degree offerings, and requirements for graduation can be made by the Information Systems academics with minimal interference from other business academics. This autonomy results in rapid response to the changing educational needs of the university in the perspective of students as “consumers.” Independent control over the budget is also an internal strength of this administrative model. The ability to make decisions, with minimal constraints, on the allocation of budget, such as the purchase of hardware and software, research support, and the appointment of staff immediately meets the needs of the Information Systems group.

Table 9. Historical Placement of IS at Kookmin U.

					Generic Levels			
Year	1st Level Down	2nd Level Down	3rd Level Down	4th Level Down	1st Level Down	2nd Level Down	3rd Level Down	4th Level Down
2005								
2004	College of Economics and Business	School of Business Information Technology	Business Information Technology Major		College	School	Major	
2003	College of Economics and Business	School of Business Information Technology	Information Management Strategy Major		College	School	Major	
			Information Systems Development Major					
⋮								
1998	College of Economics and Business	School of Management Information Systems	Information Management Strategy Major		College	School	Major	
			Information Systems Development Major					
1997	College of Economics and Business	School of Business Administration	Management Information Systems Major		College	School	Major	
⋮								
1984	College of Economics and Business	Department of Management Information Systems			College	Department		

Establishment of Clear Identity
The organizational structure within a separate Information Systems group provides the organizational members with clearer identity, compared to IS groups mixed with multiple disciplines. Clearer identity leads academics to higher level of cohesion within the Information Systems group, fitting together well and forming a united whole. This can be associated with higher morale among the Information Systems academics.

Focus on Information Systems Specialization
A possible strength of having a separate Information Systems group is to focus on Information Systems specialization. In terms of research, academics within the separate Information Systems group can easily focus on the Information Systems domain and beneficially collaborate with colleagues interested in the same or similar topics. In addition, it is easier to structure the Information Systems research effort within the Information Systems group without interference from other disciplines. In terms of teaching, academics within the separate Information Systems group are not required to teach in areas other than Information Systems. This results in the opportunities for academics to develop a higher level of specialized knowledge in Information Systems as well as for them to integrate their research interests with their teaching materials.

Advantageous Collaboration with IT Industry
A potential benefit of focusing on Information Systems specialization is more advantageous collaboration with companies within the IT industry. The ease of collaboration with the IT industry

creates the opportunities not only to receive research funds from industry-university co-work but also to provide students internships. Additionally, a separate Information Systems group can accommodate industry's requirements for the educational program to be reflected in curriculum effectively and efficiently.

Weaknesses

Limited Collaboration with Business Academics

The organizational structure involving a separate Information Systems group can reduce collaboration with business academics in the management, economics, accounting, production, marketing, and finance disciplines. Considering that there are ongoing demands for inter-disciplinary research and teaching, this limited collaboration is viewed as an internal weakness because collaboration with business disciplines is more difficult when the Information Systems group is administratively separate.

Lack of Business-Related Subjects in Curriculum

Having the Information Systems group in a separate school can lead to reduction in business content in the Information Systems curriculum as academics within the Information Systems group are more interested in focusing on an Information Systems specialization. Considering that companies prefer Information Systems graduates with a broad understanding of business disciplines, it can limit the career paths of the Information Systems graduates.

Vulnerability to Downturns in Demand for Information Systems

The popularity of an Information Systems career can vary sensitively depending on business cycles. Accordingly, a separate Information Systems group is more vulnerable to downturns in the economy which lead to IT investment reduction, compared to the Information Systems discipline embedded in a big business school. There are no hedges available to the stand-alone Information Systems group in the case of downturns in demand for Information Systems. Varying demand for Information Systems depending on the economic situation might be viewed as an inherent weakness when having a separate Information Systems group.

Limited Resources Compared to Big Business School with Multiple Disciplines

A separate Information Systems group is smaller in size than business schools with various disciplines. This relatively small size may bring about limited access to resources because of lesser influence within the university in competing for resources.

Opportunities

Government's Policy for Encouraging IT Investment and R&D

The Korea government recognizes that Korea's IT industry is the driving engine to lead Korea's economic growth. Therefore, a policy for encouraging IT investment and R&D, called the IT839 strategy, was established in 2004 to present a new strategic vision for the IT industry with the aim of achieving USD 20,000 GDP per capita. It is expected to shape the future of the IT industry and is making great contributions to laying the foundations for new growth that will lead to ubiquitous IT. Since its establishment in 2004, the IT839 is a most significant strategy that encompasses Korea's overall IT industry policy. In light of Korea government's will to drive the IT industry, the placement of Information Systems academics within a separate school provides an opportunity not only to cultivate IT specialists to support the government's policy but also to receive research funds from both government and the IT industry.

Change of Attitude toward Job

The attitude toward jobs has been dramatically changed, from jobs-for-life to seeking a broad career, since the economic crisis of Korea in 1998. Lifetime employment, which was general before, has not been guaranteed, due to the continuous restructuring; Companies are no longer expected to provide jobs for life, while employees are concerned with their careers rather than working for only one company for life. This change of attitude toward jobs has a direct impact on job seekers in the way that they prefer specialties where they are able to pursue their careers independent of the company they belong to. It has coincided with the Korea government's policy

in favor of the IT industry, which might result in increasing demand for IT specialists. Therefore, having a separate Information Systems group within the university puts forward an opportunity to either educate or re-educate these job seekers who want to work in the IT industry as specialists in their field.

Increased Needs to Differentiate the University
With hyper-competition among universities, due to the excessive number of universities exceeding the education demand in the near future, and the trade pressure to open the university education market, many universities are considering the focused-differentiation of the university through "selection and concentration" as a survival strategy. The Korea government also encourages the universities to select a few promising academic disciplines and concentrate on them for the sustainable growth of the universities. As a consequence, having an Information Systems group within a separate school in the university provides an opportunity to promote Information Systems as a distinct academic discipline and contribute to differentiating the university as an IT specialization school. In addition, there may be potentially practical benefits derived from the increased recognition of Information Systems specialization because of the IT industry's professional needs.

Increased Perception for Branding Concept in the University
Many universities are increasingly interested in strengthening their brand recognition as the branding concept has recently been introduced into the administration of the university. High brand recognition results in increased visibility to various external entities such as potential students, practitioners, and academics. The placement of Information Systems academics within a separate school provides an opportunity to build its own brand as a distinct academic discipline. Therefore, this separately administrative placement of Information Systems with high brand recognition enables it to recruit students more efficiently and more effectively through enhanced visibility to prospective students. Likewise, with a separate brand of the Information Systems group, it is easier to recruit appropriate Information Systems specialists from IT industry to help guide the school and teach the students, compared to where the academics are part of a larger school. There is a further opportunity for Information Systems academics within a separate administrative school to establish a reputation in the Information Systems society more easily when they have clearly labelled brand as a distinct Information Systems group.

Threats

Rapidly Changing Information Technology
A separate Information Systems group might suffer from the rapidly changing IT. The rapid obsolescence of computer hardware and software might be a potential threat to the stand-alone Information Systems group when the high level of IT infrastructure is required by new and emerging IT courses. Holding and maintaining relatively expensive resources of computer hardware and software can be also a possible threat to the separate Information Systems group during times of reduced demand of IT courses due to an IT industry downturn.

Government's Drive to Restructure the Universities
The Korea government keeps requiring the universities to restructure; they are expected to modify their organizational structure in order to help strengthen their competitiveness to guard against the education supply exceeding the demand and to cope with trade pressure for opening the education market. For this purpose, the government induces the universities to carry out mergers and to abolish existing schools, to reduce the number of organizational units within the universities. This restructuring effort poses a potential threat to a separate Information Systems group, which can potentially be included in a big umbrella business school. This threat is more likely to be realized when the restructuring effort happens to coincide with times of IT downturn causing a decrease in prospective students.

Table 10. Summary of the SWOT Analysis for IS at Kookmin University

Internal Strengths	**Internal Weaknesses**
Independent Control over Educational Program and Budget Establishment of Clear Identity Focus on Information Systems Specialization Advantageous Collaboration with IT Industry	Limited Collaboration with Business Academics Lack of Business-Related Subject in Curriculum Vulnerability to Downturns in Demand for Information Systems Limited Resources Compared to Big Business School with Multiple Disciplines
External Opportunities	**External Threats**
Government's Policy for Encouraging IT Investment and R&D Change of Attitude toward Job Increased Needs to Differentiate the University Increased Perception for Branding Concept in the University	Rapidly Changing Information Technology Government's Drive to Restructure the Universities The Perspective of IT as an Operational Commodity Downturns of IT Industry

The Perspective of IT as an Operational Commodity
The perspective of IT as an operational commodity threatens the identity of the Information Systems group as a distinct discipline. When Information Systems are regarded as application areas of business disciplines in terms of IT, the Information Systems group is highly likely to lose its own autonomy. Therefore, the commoditization of IT can be a potential threat for an Information Systems group to maintain its own discipline under separate administration.

Downturns in the IT Industry
Downturns in demand for Information Systems are a potential threat to a separate Information Systems group. There is no buffer to absorb the shock from the declining demand for Information Systems careers when placing the Information Systems academics within a separate school.

VI. CONCLUSIONS

SWOT AS A STRONG ANALYTICAL TECHNIQUE

In this study, the value of SWOT Analysis as a useful analytical technique to assist strategic planning has been reinforced. By using interviewees with an intimate knowledge of the area and its contemporary context it was possible to gather and document a range of useful factors relating to the internal strengths and weaknesses and the external opportunities and threats associated with having Information Systems academics outside or inside business in a separate administrative unit. The principles applied in these pilot SWOT analyses to ensure suitable rigor are documented earlier in this paper. It is planned that these principles will again be applied in follow-up SWOT analyses around the Pacific-Asia region. Furthermore, the documenting of these principles here offers other researchers the opportunity to maximize the potential from SWOT as an analytical technique.

ASSISTANCE FOR QUT, UQ, KOOKMIN AND KU INFORMATION SYSTEMS DECISION MAKERS

For managers in QUT's School of Information Systems and at Korea University, this SWOT analysis provides a useful framework for planning further actions, based on administrative autonomy. In relation to assessing how best to exploit each identified opportunity associated with a stand-alone School of Information Systems, the managers would further examine the opportunity in relation to the identified strengths and weaknesses. For example, the QUT School of Information Systems could choose to exploit the documented opportunity to establish an international reputation for its academics by drawing on an identified strength of its autonomous status by choosing to budget resources to allow its academic staff to engage in activities that could raise the profile of the individuals and their School. For instance, finances could be provided to encourage staff to contribute to international Information Systems conferences, as well as providing for its staff to seek office on IS journal editorial committees, and in various local and international IS professional societies.

Similarly, potential threats can be mitigated by taking account of identified strengths and weaknesses. For instance, the threat associated with a perceived commoditization of Information Technology can be addressed at QUT and Kookmin by actions associated with overcoming the identified inadequacy of collaboration between the school's academics and those from the business faculty. By sharing research activities with QUT's Business academics, the Information Systems group can demonstrate the continuing capacity of Information Systems to be able to provide competitive advantage for business. Similarly, efforts can be made to build relevant, useful Information Systems subjects into business courses.

At KU and UQ, this analysis suggests, as an example, that the identified opportunities to access high level executives in industry and to keep broader connections with alumni could be exploited to address the identified weakness in acquiring adequate IT facilities for effective IS teaching. Successful alumni and significant executives from industry may be well-disposed to assist financially to ensure that the IT facilities in the Faculty are kept current.

POTENTIAL FOR REPLICATION

For Information Systems academics facing the prospect of having their group move to or from business, the SWOT snalysis presented here provides useful insights to assist in arguing the case for or against such a change. As other such switches are made worldwide, there is ample potential to replicate this analysis as a basis for evaluating how best to exploit the opportunities and to mitigate the threats.

This study also provides a list of factors (Tables 4, 6, 8 and 10) worthy of consideration by others wishing to replicate the SWOT analysis at another university. Taking account of the QUT, UQ, Kookmin and KU SWOT analyses in data gathering for a SWOT analysis exercise at other universities also maximizes the subsequent comparability of the SWOT studies.

We would recommend enhancement of this SWOT analysis as a basis for providing still greater insights into the relative merits of different administrative placements of IS academic groups. The enhancement would take the form of retrospective SWOT analyses in relation to each of the critical changes in the past in the placement of the IS group. Key decision-makers involved in the change would analyze their perceptions, at that time, of the strengths, weaknesses, opportunities, and threats associated with the change made. With the advantage of hindsight, and changed environmental factors, these participant decision-makers could then review the outcomes of each change of administrative placement.

LIMITATIONS AND POTENTIAL FOR FUTURE RESEARCH

The most obvious limitation of this study is that it draws only on views internal to the four Information Systems entities under study. Although two cases involve an IS academic group inside business (KU and UQ) and the others outside business (QUT and Kookmin), in all

instances the IS groups have fairly high autonomy. Many IS academic groups in Australia, Asia and elsewhere within business or some other faculty, have relatively little autonomy. There is the risk that this SWOT analysis is distorted by the inevitably limited perspectives of the small number of participants in the data gathering process. This potential bias is to be addressed by replicating the SWOT analysis in other universities, including those where the Information Systems academics are located within different faculties, with and without autonomy as a group. Similarly, the SWOT analysis reported here does not provide "the voice of customers" of the IS academics. There is potential to seek the views of students and employers in relation to the administrative placement of the IS academics in universities. Subsequent SWOT analyses will benefit from attention to these subtler issues of placement and relative autonomy (e.g. variants within a faculty of business). Regardless of these limitations, this study provides useful insights.

GENERALIZABLE LEARNINGS FOR OTHER INSTITUTIONS

From a review of QUT, Korea University, Kookmin and University of Queensland SWOT results, we observe several general learnings that may have value to other institutions undertaking similar SWOT analyses. Firstly, this study highlights the importance of ensuring that the participants in the data collection and analysis associated with the SWOT study have a deep understanding of the Information Systems group to be examined. Similarly, to identify and analyze external opportunities and threats, the participants in the SWOT study should have a sound appreciation of emerging trends in ICT and in higher education policy.

The specific instances of strengths, weaknesses, opportunities, and threats documented could be considered in subsequent studies of Information Systems groups in other universities. While the views of SWOT participants ought to be sought initially without prompting, it should be expected that many of the items identified in this study would be relevant, albeit in different classifications, in other studies; so, a strength associated with the location treated in one study may well be a weakness where the Information Systems group has a different location. Similarly, opportunities and threats identified here may be expected to recur in other SWOT analyses in other universities. In summary, the specific items in the four universities treated here could be usefully considered in subsequent studies, as a partial checklist, after an initial SWOT data gathering exercise.

A historical analysis of evolution of Information Systems in the institution can be revealing. A retrospective analysis, based on an after-the-fact SWOT analysis at each of the critical administrative re-locations, captured in a table similar to that shown in Table 3, may be useful in documenting key changes over time. More than this, such a retrospective analysis may provide pointers to assist in making contemporary decisions about the relative merits of different administrative locations of the Information Systems group in a university.

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