THE KEY FACTORS TO THE SUCCESSFUL GENERATION OF INTELLECTUAL CAPITAL: THE BANK CORPORATE LOANS DEPARTMENT EXAMPLE

Gow-Liang Huang[1], Hui-Lin Hsu[2*] and Wei-Shen Cheng[3]
[1]*Department of Money and Banking*
[2] *Graduate Institute of Management, Doctoral Program*
National Kaohsiung First University of Science and Technology
Kaohsiung (811), Taiwan
[2]*Department of Finance*
Fortune Institute of Technology
Kaohsiung (831), Taiwan
[3]*Department of Finance*
Chian Steel Express Co.
Kaohsiung (812), Taiwan

ABSTRACT

This study attempts to find a systematic approach to determining the key success factors of intellectual capital in banking corporate loans departments in Taiwan. In the first stage this is approached through the review of the literature, and two-stage Delphi interviews of experts in the field. Through analysis of the returned data, a framework of key success factors to the successful generation of intellectual capital was derived. In the second stage, the framework established in stage one was converted for multi-level decision-making analysis using AHP, and also by SJT questionnaires to the panel of experts to determine relative weightings of the factors measured. The results of this cross-examination found that the key success factors determined by the respondents did not vary under different testing methods. The human capital value category had the greatest affect on the generation of intellectual capital at a value of 37.7%. This was followed by organizational capital value at 31.4% and then the lowest value of relations capital at 30.9%. Of the respondent categories, human capital value was most important to the bankers interviewed at 58.83%. Accountants placed highest importance on organizational capital value at 47.52% and for venture capitalists/underwriters the most significant was relations capital value at 53.77%.

Keywords: Intellectual Capital, Key Success Factor, Delphi Technique, Analytic Hierarchy Process Method, Social Judgment Theory

1. INTRODUCTION

This study based on the concept of intellectual capital systematically explores the KSF in corporate loan departments in Taiwan. Through the relevant literature, this thesis explores and applies the Delphi method to filter out intellectual capital forms by which to measure the value of KSF. It then applies Analytic Hierarchy Process Method (AHP) and Social Judgment Theory (SJT) methods to conduct cross-site interviews with three groups of respondents: bankers, accountants and venture capitalists/ underwriters. Questionnaires were also used to

collect information from these subjects to determine the critical success factors. After the interviews and questionnaires the KSF statistical results were tabulated and a strategy was determined to suit the corporate loan department.

Due to the development of the knowledge economy era, exploring the core competitiveness of enterprise is considered increasingly important. However, financial business accounting policies allow enterprises to claim intangible assets in their book value due to the increasing need for intellectual capital [7]. Due to this requirement, most company desire standardization of indicators to measure the added value brought about by intellectual capital. This could be used in complementary external statements [6]. This requirement coupled with the upsurge in mergers and acquisitions in the

---

* **Corresponding author: linda023@center.fotech.edu.tw**

international community makes intellectual capital constitute an important issue. Intellectual capital is the major corporate profit driver [22], especially in knowledge-intensive industries. The banking industry is an ideal area for intellectual capital research because banks are typical knowledge-intensive industries and the whole staffs are more homogeneous than in other economy sectors [10]. The corporate loan department is a major profit sector of banking. In the management of intellectual capital, we must understand the formation of intellectual capital in this sector and the value of its dimensions. Having understood these dimensions and key factors to measure intellectual capital, a special department to manage this asset will be required. A bank's corporate loan department which traditionally uses 5C (character, capacity, capital, collateral, conditions) and 5P (people, purpose, payment, plan and protection) metrics to decide loan approvals to business, is vulnerable to asymmetric information and the risk of non-performing loans. Through the use of intellectual capital, enterprises can not only improve the way they operate in the corporate loan department, but also reduce bank operational risks.

After 2000, in order for financial institutions to integrate operational efficiency, and strengthen supervision of cross-industry results, the Government passed the Financial Holding Company Law, in order to encourage mergers and acquisitions between all financial institutions. As a result, the entire financial industry entered a new era of competition in Taiwan with 14 financial holding companies. Of these financial holding companies, more than half are core in banks, and the banks' major source of income is from the interest generated from loans to business, since at present the financial market is very well-developed in terms of capital sources. Capital sources are diverse but most companies still source external funds from bank loans, followed by stocks and bonds. As a result, business from the corporate loan department produces a bank's core interest. It is also a key to success for financial holding company which owns a bank as a core business. What then are the critical factors in the formation of intellectual capital? If these crucial key factors can be found and implemented as a management philosophy and objective, then strategies can be developed to enhance core competitiveness. By making these banks at the core of the holding company more competitive, vulnerability to acquisition can also be avoided. Bernnan and Connell [3] mentioned that generally physical assets and financial assets can only at most provide an average return on investment. But intellectual capital is really the key to generate value and as such is essential to long term success. Edvinsson and Malone [7] also propose information technology, the internet and knowledge management approach to coping with change in planning and

environment. Thus financial companies need to successfully generate intellectual capital to create greater company value. Luehrman [26] has noted the value of a company comes from three sources: operation, opportunities and ownership claims. Intellectual capital has greatest impact on opportunities. All the value generated from opportunities is significantly affected by intellectual capital.

In order to achieve the philosophy and objective desired and be capable of survival in this competitive environment, a company must set up a variety of indicators to monitor progress toward their goal. However, these indicators become more complex in the measurement of intellectual capital. If the indicators selected differ, then the result will vary widely. In different industries the indicators chosen to measure differences within the company should be selected to highlight appropriate characteristics [15]. For performance measurement of human capital, financial services companies place more emphasis on the metric of EQ than technology companies do since financial services companies must communicate face-to-face with their customers.

The use of the intellectual capital management process model can help companies to carefully select appropriate measurements [22]. Establishment of the evaluation criteria of intellectual capital must start with the business and simultaneously management must be taken into account. When the management philosophy has been determined, the company will be able to use intellectual capital to achieve these goals and discover the company's key success factors (KSF) from the different dimensions used. The combination of the information obtained from each dimension can be described as the integration of intellectual capital in each sector, or company. In this process, key success factors play a very important role. This paper tries to establish the indicators of intellectual capital in the corporate loan department and explains the importance of each indicator.

The remainder of this paper is organized as follows. Section 2 is a review of related literature. Section 3 contains the procedures and hypothesis of this study. Section 4 provides an AHP/SJT comparison and analysis of KFS relative weighting. Section 5 summarizes the results of this study.

2. RELATED LITERATURE

2.1 Definition and Classification of Intellectual Capital

In the fields of economics and management there are different definitions of intellectual capital but it is beyond doubt that intellectual capital is an intangible asset. As such intellectual capital is not a readily auditable form of capital. So, it is difficult to

utilize the data actively in financial statements. The term "intellectual capital" was first coined as early as 1969 by Canadian economist John Kenneth Galbraith as an additional purpose of the human brain. The brain ought to be used not only for access to intelligence and knowledge but also as a means to create value in intellectual capital [22]. For Edvinsson and Malone [7], the difference between the market value of a company and its book value is made up by intellectual capital, knowledge capital, non-financial capital and invisible assets. Thus intellectual capital is defined as a combination of all the knowledge, experience, technology systems, customer relations and technical mastery which afford the company a competitive advantage. Thomas Stewart has been the continuing pioneer of intellectual capital and intellectual capital-related issues since 1991. For Stewart [23], intellectual capital is defined as "intellectual material" used to create wealth from knowledge, information technology, experience and intellectual property. In recent years, most of the studies on the classification of intellectual capital has based on Stewart's research.

Edvinsson and Sullivan [8] define intellectual capital as knowledge that can be converted into value. As a result, conversion of knowledge into value is the main function of enterprises seeking the intellectual capital advantage. However, if knowledge is converted to value, then what value exactly is gained? The Swedish Insurance company Skandia divides each enterprise's value into financial capital and intellectual capital. The intellectual capital value is further divided into human capital and structural capital. Structural capital is comprised of relationship capital and organizational capital. This is an outline of the original Skandia model. However, many researchers across globe have defined specific concepts of intellectual capital in their own way. There is no consensus to the specific components of intellectual capital. Sveiby [24] first proposed a classification for intellectual capital into three dimensions in human capital, structural capital and customer capital. This classification is accepted generally and is modified and extended by Bontis [1], who replaced customer capital with relationship capital.

1. Human capital

Lynn et al. [18], Knight [15] and Edvinsson and Malone [7] find that human capital is one of intellectual capital's most important factors. Human capital is a form of intrinsic personal intellectual capital found in employee's individual capabilities, know-how, technical skills and the personal experience they can draw upon to satisfy customer requirements. These are the qualities traditionally sought via human resource management, but for the company to share continued strength, these employees must be nurtured to continue improving personal skills, operational skills and new dynamic capabilities [5][17]. A Chen et al. [4] study found staff attitudes is also a major variable impacting human capital. Thurow [25] points out that staff in an organization will be critical to corporate success in the future. Nielsen et al. [21] argued that human capital helps to improve the company's performance.

2. Structural capital or organizational capital

Lynn et al. [18] and Knight [15] also agree that the structure of intellectual capital is one of the most important factors to consider. This includes formal and informal systems as the efficient basis of performance [17]. Chen et al [4] find that the organizational culture, organizational learning processes, and information systems are also important intellectual capital indicators to be assessed. The structural capital includes various documents, information technology systems, company image, patent database, conceptual organization, as well as traditional patents, trademarks, copyrights, and other intellectual property projects, which can increase profits performance and power [5]. Edvinsson and Malone believe that when employees leave, whatever structures remain in the office are the kind of intangible assets they describe as structural capital. Structural capital results in the specific performance of human capital, and human capital is the supportive infrastructure of structural capital. Structural capital is also an organizational capability used to transmit and store intellectual material such as that found in information systems and databases. Therefore human capital builds structural capital but the better the structure is, the better the human capital will perform and the two-way relationship between the two will be more dynamic.

3. Relationship capital

Relationship capital refers to the relationship a business has with its customers through its staff which includes customer satisfaction, and customer loyalty for two examples [23], or the business's contacts with the outside world with, customers, suppliers and partners etc. [5][17]. In the corporate loan department, customer relationships are particularly important and customer satisfaction, durability, price sensitivity and duration of relationships are all included in relationship capital.

These concepts of intellectual capital have been applied widely to financial services industry [2][10]. Of these, human capital is assumed to be the most important component for the recently study [19][20][9]. Goh [11] indicated that all bank have relatively higher human capital efficiency than structure capital efficiencies in Malaysia. This study focuses on bank corporate loan departments and discusses the formation of intellectual capital in which it comes from key success factors.

2.2 The Variables of Intellectual Capital in Bank Corporate Loan Departments

This study, citing Chen, Zhu and Xie [4] and Wu, Huang and Lai [28], and other relevant literature, describes the impact variables of intellectual capital will have on bank corporate loan departments. The important variables are defined as:

1.   The value of human capital

Human capital can be simply interpreted as individual skills needed to meet customers' needs. If this concept is applied in a financial sector then the professional abilities of employees are the granting of loans and credit, debt recovery, and credit-worthiness assessment. These are the basic skills requirements but re-education, self-improvement, practical experience, social skills and work ethic are additional basic structural elements for human capital to cause effective interaction. Therefore, the important variables for human capital as following: (1) professional level; (2) EQ performance; (3) retraining system; (4) information sharing; (5) candidate credit assessment ability.

2.   The value of organization capital

This organization capital includes that used to enable the company to meet market demands, such as patents, trademarks, IT systems, R&D efforts, improvement techniques, and innovative capabilities and other such features. The aforementioned qualities can improve a company's operational efficiency and profitability in real terms and this is the final product of knowledge management. Bank loan departments must conduct their business creatively to overcome their vulnerability to information asymmetry and change the economic environment to adjust loan terms to meet the credit needs of customers. The following seven factors determine organizational capital in corporate loan department : (1) promotion of innovative culture; (2) innovation value selection; (3); innovation promotion training (4) the commercialization of innovations ; (5) leadership skills; (6) innovation bonus; (7) integration of knowledge and IT (information technology).

3.   The value of relationship capital

Relationship capital includes connections outside the organization, such as customer loyalty, goodwill, and so on. In a loan department's operating environment, one key to success is in advance segregation of customers by quality in order to be able to dedicate most effort to a core "good customers" target group. As a result, profits in a corporate loan department are impacted by the value of customer relationships in the following ways: (1) customer service satisfaction; (2) the degree of interdependence; (3) screening of customer information; (4) customer demand forecast; (5) bank image recognition; (6) timeliness of financial innovation; (7) Proactive marketing.

Through the process of reviewing the literature, this study summarizes more than 19 critical success factors which for significant reasons may generate high intellectual capital in a corporate loans department.

2.3 Decision-making Theory

By collation and analysis of the reviewed literature, this study found 19 key success factors to intellectual capital. As experts in the field disagreed on these KSF, multiple research methods and evaluation tools were used to aggregate opinion and promote consensus and aid decision making. Tools, such as Analytic Hierarchy Process Method and Social Judgment Theory were used for evaluation purposes. However, as SJT assessment is appropriate to measure variables which number fewer than 5 items [12], the Delphi method was first used to collect and determine expert opinion to confirm the most important variables applicable to a corporate loans department. Delphi is both a qualitative and quantitative research method. In the course of the study, complexity of the issues was overcome the through anonymous written submissions by experts. This was done in order to encourage the experts to provide their professional knowledge, experience and views, and consistently build consensus.

The Analytic Hierarchy Process Method founded by Wind, Yoram and Saaty [27] developed a method to measure phenomena by the direct approach. Its characteristics lie in the establishment of criteria in a hierarchy of levels of various factors to be used in pairwise comparison. A nominal scale is used to assess and establish a pairwise comparison matrix, and obtain the eigenvector and eigenvalue. The results of pairwise comparison are then compared in a consistency test to decide whether or not to adopt the methods of assessment. If the results are consistent, the level of the combined results will match, and the factors that influence the relative weight to the factors in their hierarchy can be found.

Social Judgment Theory (SJT) was developed by Kenneth R. Hammond according to Brunswik's lens model. Arising from the development of this theory are multi-level assessments of facts and values, and distinctions between the two. SJT is based on the lens model, which is based on the fundamental concept that: when a decision on unknown matters is required, reference to some known phenomena is used in cognitive decision-making. However, because the characteristics of Quasi-rational decision-makers includes limited cognitive ability, built-in psychological decision-making processes use known information, or that extrapolated from the relevant variables, to arrive at a decision or judgment. This, to a greater or lesser degree, distorts the objective facts and it is this distortion which invokes the metaphor of the "lens" [13]. The lens model is applied by decision-makers in complex assessments to explore

the gap between subjective perception and the objective environment, which gives rise to cognitive differences [14]. This study uses to social judgment theory to explore the generation of intellectual capital from the key success factors, as shown in Figure 1. For both systems, the decision-making variables can be seen as an interface, linking the subjective and objective elements in the decision making process. Due to the cognitive limitations of participants in the decision-making process, the lens determines when the objective facts have been distorted by such. The figurative lens has the properties of enlargement and reduction as would its optical namesake.

In the Analytic Hierarchy Process Method pairs are measured in the direct comparison method, and the reference factor attributes are independent in the decision-making process. Social Judgment Theory is used in complex decision-making issues with differing AHP. It takes into account all the variables affecting the decision making process and uses the group's overall assessment. In the process the reference factors attributes are dependent. The differences between the two methods of AHP and SJT, and the advantages and disadvantages are detailed in the following Table 1.
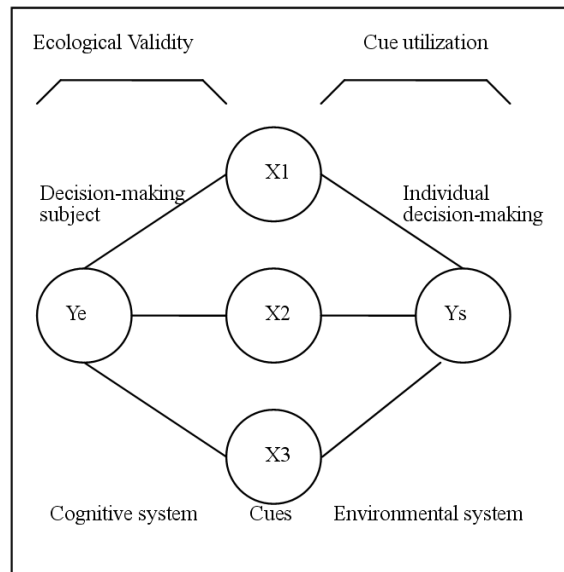

Figure 1: Schematic diagram of lens model.

Table 1: AHP & SJT differences, and advantages and disadvantages [14]

	AHP	SJT
Advantages	Breaks down complicated issues into a number of decision making levels, from which relative weights can be calculated to help decision-makers' assessment.	Focuses on cognitive conflict on the issue to find a decision-making resolution. Research framework simultaneously determines the facts and the values of the issue.
Short-comings	Undisclosed or hidden dependencies may oversimplify the decision-making process.	The potential sequence effect of the first and last information presented is not considered into measuring process.
Differences	1. Direct measurement method 2. Attribution of each reference factor is independent 3. Use of direct comparison of pairs	1. Indirect measurement method. 2. Attribution of each reference factor is dependent. 3. Use of different combinations of variable groups with indirect assessment model.

3. METHOD

In this study, the literature is first reviewed to find the KSF of intellectual capital formation in corporate loan departments. The Delphi Technique is used to filter and extract the most important key success factors. Then the Analytic Hierarchy Process Method (AHP) and social judgment (SJT) is conducted with the respondents by means of questionnaire. The information returned from the survey is discussed and compared by statistical analysis to determine differences between the two methods.

3.1 Sample and Procedure

This study conducted two rounds of Delphi questionnaire surveys employing a five-point Likert scale. Twelve experts (four bankers, four accountants and two representatives from venture capital industry and two underwriters) were included in the sample. The results of the two rounds were averaged as detailed in Table 2 below. Values lower than 4 were ignored because such factors were less important factors in corporate loan departments. Therefore, we discarded seven factors as follows: candidate credit assessment ability; degree of interdependence; selection of innovation value; screening of customer information; dissemination of ideas and learning; initiative of marketing; and leadership skills etc. After these factors were removed, 12 key factors remained. Through the application of the Delphi technique, twelve key factors were agreed by the experts. These factors were arranged into the hierarchical AHP structure shown in Figure 2 below. In Figure 3 below,

the critical success factors are arranged for SJT method and then re-using AHP and SJT across three groups of respondents who completed survey questionnaires. Thus the value of intellectual capital was determined in two empirical conclusions which were then cross-analyzed for differences.

Table 2: KSF of intellectual capital from Delphi Questionnaires

	KSF measure factor	First Round			Second Round		
		Total	Avg	S.D.	Total	Avg	S.D.
	a. Human capital values						
	1. Professional level	55	4.85	0.51	57	4.75	0.45
	2. EQ performance	49	4.08	0.66	55	4.58	0.51
	3. Retraining systems	49	4.08	0.79	54	4.50	0.52
	4. Attitude to information sharing	48	4.00	0.73	49	4.08	0.69
*	5. Candidate credit assessment ability	41	3.42	0.66	38	3.17	0.38
	b. Organizational capital values						
	1. Promote innovation culture	49	4.08	0.90	52	4.33	0.49
*	2. Innovation value selection	41	3.42	0.79	38	3.17	0.57
*	3. Innovation promotion training	40	3.33	0.77	37	3.08	0.51
	4. Innovation commercialization	49	4.08	0.66	49	4.08	0.66
*	5. Leadership skill	44	3.67	1.07	47	3.92	0.79
	6. Innovation bonus	50	4.17	0.83	50	4.17	0.38
	7. Integration of know-how and IT	51	4.25	0.86	51	4.25	0.75
	c. Customer Value						
	1. Customer service satisfaction	58	4.83	0.38	56	4.67	0.49
*	2. Degree of interdependence	44	3.67	0.88	39	3.25	0.62
*	3. Screening of customer information	42	3.50	0.90	39	3.25	0.62
	4. Customer demand forecast	49	4.08	0.79	50	4.17	0.57
	5. Bank image recognition	50	4.17	0.71	50	4.17	0.71
	6. Timeliness of financial innovations	49	4.08	0.99	52	4.33	0.65
*	7. Proactive marketing	47	3.92	0.79	41	3.42	0.79

Note: The factors marked * with averaged scores lower than 4 were less important and ignored
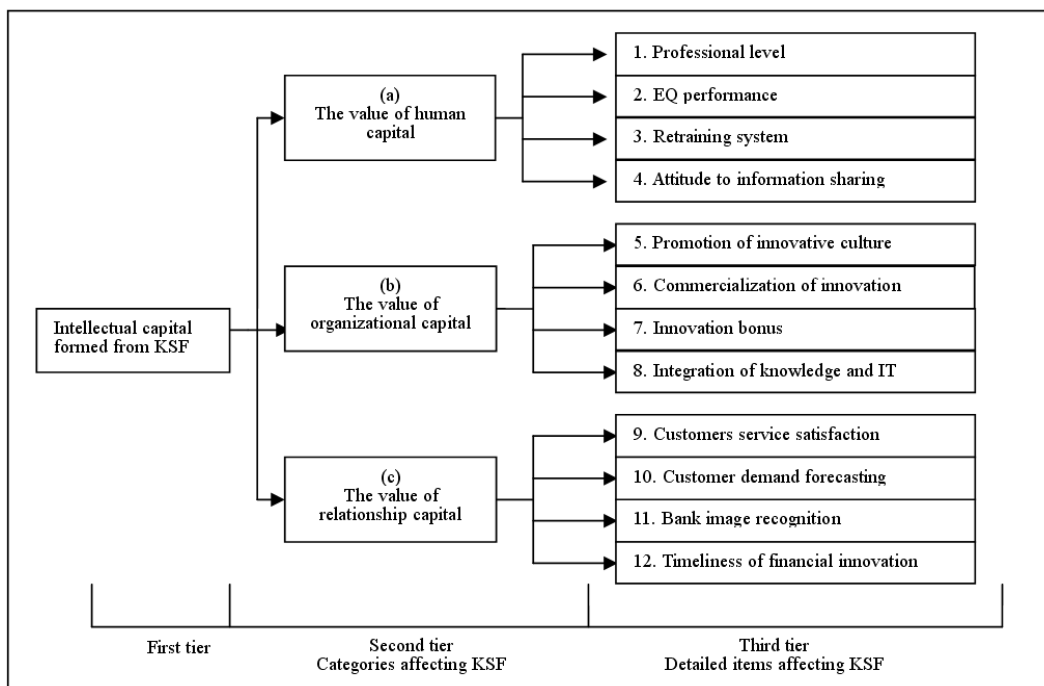
Notes: Analytic Hierarchy Process Method based on pairwise comparison is used to measure the target subject in the first tier. In tier 2, the three categories (a, b, and c) are compared to determine an importance weighting which is then reflected in the relative weighting of the KSF items detailed in tier

Figure 2: The Delphi selected KSF transformed into the hierarchy of AHP
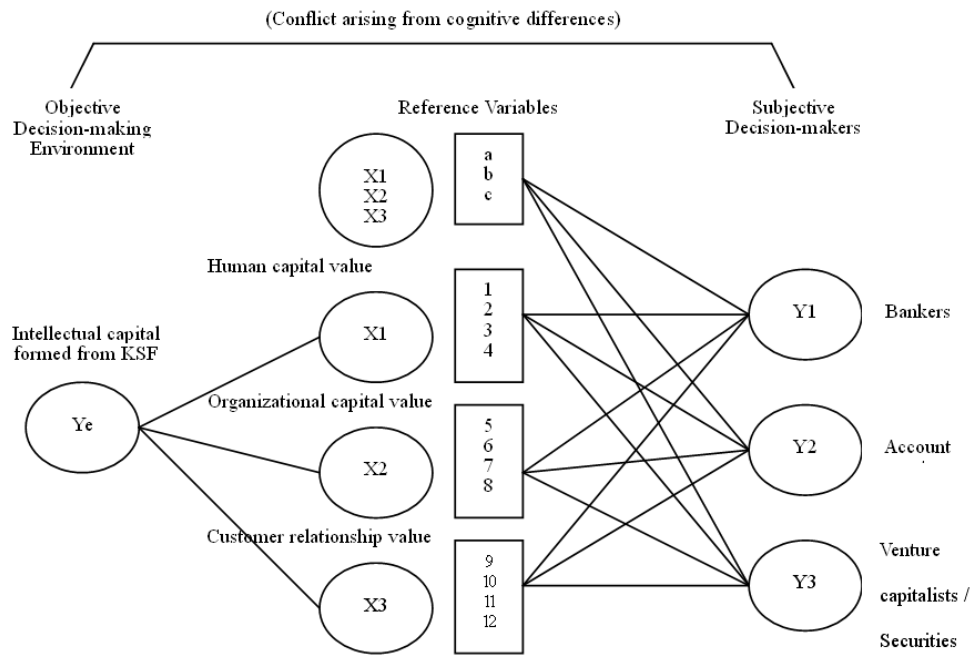
Notes: Using the data produced in Figure 2 (details 1 ~ 12 and categories a~c) above, the weighted factors are cross-analyzed with the lens model.

Figure 3: Lens model of cognitive conflict in intellectual capital KSF

3.2 Hypothesis

As we have seen the figures from the two models of AHP and SJT produced different results. Both methods have advantages and disadvantages therefore this exploratory study predicts that both models applied simultaneously in experiments to assess the relative weight of KSF to the generation of intellectual capital will be approximately the same. It was found that there was no statistically significant difference between the average relative weighting determined by the expert panel based of professional judgment and the objective weight in the generation of intellectual capital. Therefore, the main hypothesis of this study is that: as AHP questionnaire surveys assessed to obtain the "KSF of intellectual capital" would be no significant difference to the average relative weighted values of the same when derived through the use of SJT. This hypothesis considered in three main forms as follows:

Hypothesis 1: AHP and SJT methods, when applied to the three categories of factors which generate intellectual capital, produce averaged weighting results bearing no significant difference.

Hypothesis 1a: AHP and SJT methods applied to the "human factors" of intellectual capital will produce averaged weighting results bearing no significant difference.

Hypothesis 1b: AHP and SJT methods applied to the "organizational factors" of intellectual capital will produce averaged weighting results bearing no significant difference.

Hypothesis 1c: AHP and SJT methods applied to the "relationship factors" of intellectual capital will produce averaged weighting results bearing no significant difference.

The Delphi Technique is used to identify and extract 12 key factors of intellectual capital.

Through the use of AHP and SJT surveys these factors are weighted and the averaged figures from each method are compared for differences to verify the results.

Hypothesis 2: AHP and SJT methods, when applied to the four factors of "the value of human capital" which generate intellectual capital, produce averaged weighting results bearing no significant difference.

Hypothesis 2a: AHP and SJT methods applied to the "staff professional qualification" factor of intellectual capital will produce averaged weighting results bearing no significant difference.

Hypothesis 2b: AHP and SJT methods applied to the "staff EQ performance" factor of intellectual capital will produce averaged weighting results bearing no significant difference.

Hypothesis 2c: AHP and SJT methods applied to the "staff re-education system" factors

of intellectual capital will produce averaged weighting results bearing no significant difference.

Hypothesis 2d: AHP and SJT methods applied to the "staff information sharing" factor of intellectual capital will produce averaged weighting results bearing no significant difference.

Hypothesis 3: AHP and SJT methods, when applied to the four factors of "the value of organizational capital" which generate intellectual capital, produce averaged weighting results bearing no significant difference.

Hypothesis 3a: AHP and SJT methods applied to the "stimulation of innovation culture" factor of intellectual capital will produce averaged weighting results bearing no significant difference.

Hypothesis 3b: AHP and SJT methods applied to the "commercialization of innovation" factor of intellectual capital will produce averaged weighting results bearing no significant difference.

Hypothesis 3c: AHP and SJT methods applied to the "innovation bonus" factor of intellectual capital will produce averaged weighting results bearing no significant difference.

Hypothesis 3d: AHP and SJT methods applied to the "integration of knowledge and IT" factor of intellectual capital will produce averaged weighting results bearing no significant difference

Hypothesis 4: AHP and SJT methods, when applied to the four factors of "the value of relationship capital" which generate intellectual capital, produce averaged weighting results bearing no significant difference.

Hypothesis 4a: AHP and SJT methods applied to the "customer service satisfaction" factor of intellectual capital will produce averaged weighting results bearing no significant difference.

Hypothesis 4b: AHP and SJT methods applied to the "customer demand forecast" factor of intellectual capital will produce averaged weighting results bearing no significant difference.

Hypothesis 4c: AHP and SJT methods applied to the "bank image recognition" factor of intellectual capital will produce averaged weighting results bearing no significant difference.

Hypothesis 4d: AHP and SJT methods applied to the "financial innovation timeliness" actor of intellectual capital will

produce averaged weighting results bearing no significant difference.

4. ANALYSIS AND RESULT

4.1 AHP and SJT Difference Tests

In this study, respondents from banking, accounting, and venture capital/underwriting were the three study groups. Twenty respondents from each category (60 in all) were asked to complete AHP, SJT questionnaires and a survey on staff training in advance. From the distributed AHP surveys, 55 valid questionnaires were returned (16 from banking, 19 from accounting, and 20 from the venture capital / underwriting category).

The valid questionnaires from the SJT test numbered 58 in total (18 from banking, 20 from accounting, and 20 from the venture capital/underwriting group). As the AHP method test produced 55 valid questionnaires with a consistency ratio of less than 0.1. The R^2 of the SJT test, for which there were 58 valid returns, was greater than 0.7, therefore the two described methods of analysis are acceptably reliable. In this study, through the Delphi Technique the questionnaires were revised to ensure the contents were sufficient for a reasonable assessment of the value of intellectual capital. From analysis of the questionnaires in the AHP and SJT processes, the assigned relative weightings should be acceptable and valid.

In Table 3 the AHP and SJT measurements of a, b, and c are expanded into 12 detailed KSFs ranked by weighting. The measures of the categories are nominally equal to the sum of the values of the factors contained in each category and the nominal value assigned to each category is 1. The Chi-square test is used to calculate the χ^2, and then posterior comparisons are applied. If the confidence interval includes 0, the above-mentioned AHP and SJT test methods do not meet the acceptable standard of reliability [16]. In other words, on the basis of this study's design, if the posterior comparisons of SJT and AHP weighting confidence interval contain 0, then it can be inferred that there is no significant difference between the two weighting methods. Table 3 indicates that an important factor of human value in the Chi-square test was significantly greater than the threshold at 10.82. Therefore it was necessary to continue at the homogeneity posterior comparisons of percentage after the test results, comparison revealed that the four detailed human value elements had confidence intervals containing 0. As such, the inference was that there was no significant statistically difference found between the two applied methods of AHP and SJT. Thus it can be inferred from these findings are that there is no statistically significant difference for the hypotheses including Hypothesis 1a, 1b, 1c, Hypothesis 2a to 2d,

Hypothesis 3a to 3d, and Hypothesis 4a and 4d).Based on the aforesaid methodology, 15 examinations of the 4 hypotheses were conducted to verify the weightings by identical means. The subjects of the study were financial experts and scholars having more than 10 years' experience in their respective bank's corporate loans departments. These experts have in-depth understanding of their business with good track records of consistent rational judgment. In as much, the methods used to determine the weighting of key success factors should not be affected by variation in the testing tools used. This result is an important contribution to resources on the subject.

Table 3: AHP vs. SJT questionnaire and statistical test comparison of weightings

The value of intellectual capital Assessment Project	AHP Weight		SJT Weight			Post-comparison confidence interval
	$\bar{x}$	SD	$\bar{x}$	SD		
Human Capital Value	35.32	24.99	29.97	13.14	0.98	-0.224~0.132
1. Professional level	39.48	19.27	37.60	8.98		-0.157~0.202
2. EQ performance	23.04	19.12	27.71	8.09		-0.207~0.113
3. Retraining systems	19.19	10.59	22.07	5.57	10.82[a]	-0.178~0.120
4. Attitude to Information sharing	17.96	17.35	18.62	11.55		-0.224~0.132
Organizational Capital Value	32.12	22.85	30.71	7.64	0.98	
5. Promotion of innovative culture	13.91	15.88	17.69	9.42		
6. Commercialization of innovations	31.13	13.58	20.72	5.93		
7. Innovation bonus	22.39	12.19	31.10	7.33	5.83	
8. Integration of knowledge and IT	32.55	15.86	30.48	9.27		
Customer Capital Value	32.56	21.97	29.32	12.85	0.98	
9. Customer service satisfaction	31.90	18.15	34.31	4.24		
10. Customer demand forecasting	11.96	12.01	27.03	6.08		
11. Bank image recognition	29.29	11.17	21.17	4.86	4.66	
12. Timeliness of financial innovations	26.95	15.10	17.48	17.48		

Notes: 1. Data sources included 55 valid AHP questionnaires and 58 valid SJT questionnaires.

2. The Chi-square test of "a" produced a result of 10.82, which is significantly greater than threshold value $\chi^2_{0.95,(r-1)(c-1)}$ necessary for posterior comparison of homogeneity. The homogeneity test result confirmed the hypothesis.

3. For the 15 hypotheses the weighting difference was not statistically significant, and this strongly supports the hypotheses.

As shown in Table 3, of all the categories, the value of human capital is the most important. The weightings of such by AHP and SJT were 35.32 percent and 29.97 percent respectively. In the category of human value the most important factor was professional level which had the highest relative weighting. The second most important category was that of organizational value in which the most important factors were knowledge and IT integration and innovation bonus.

4.2 KSF Analysis of Relative Weighting

Through the application of AHP and SJT using the weighted data and the weighted average values, the value determined gave the relative weighted ranking, as shown in Table 4. In the assessment of the three key categories, the value of human capital, with the highest weight of 0.377, was followed by the value of organizational capital category. The value of relationship capital was weighted at 0.309 and was the lowest of the three measurements.

From Table 4 it is clear that, for corporate loans departments wanting to raise their generation of human resource value, the most important factors to rise are the degree of professionalism in credit assessment, and the EQ performance of staff. Thus the selection criteria applied bank staff is significant. Staff credit assessment skills can be strengthened through re-education and a licensing or certification program but professional experience is also important. Loan staff EQ performance also affects the quality of determined in loan applications and is an essential quality to counteract the information asymmetry of the Taiwan loan market. High EQ performance coupled with appropriate professionalism and rational judgments can determine correct assessment and verification of loans. Thus late repayment of loans and the risk associated with principal recovery can be avoided.

From the value of organization capital category, the most important of the 4 listed factors was knowledge and integration of IT. The highest AHP and SJT measurements of this factor were weighted at 0.10457 and 0.09360 respectively making it third overall out of the 12 items considered. Therefore, this factor is of considerable importance in corporate

loans departments. This is not only in the interest of making loans and affording banks a stable and secure income, but through an incentive system designed to strengthen internal knowledge management, the value of organizational capital would be enhanced. The study found the experts believed that the promotion and implementation of IT integration and an incentive system would enhance the dimensions of intellectual capital in corporate loans departments. Promotion of an innovative culture and the successful commercialization of innovations would be spontaneity through incentive system to generate much higher value of human capital. Therefore, structural capital compounds the generation of human capital allowing its optimization.

Of the 4 factors in the value of relationship capital category, the most important item was customer service satisfaction. This factor's average weighting was 0.10220 making it the second most important factor of the 12 items. The bank's image recognition amongst customers is also an important KSF. Although a credit assessment department is only one of many banking departments, it is the source of highest profits. The other departments are essential to a coordinated team effort and without them excellence cannot be achieved. Although corporate loans department may have good human capital value and organizational value advantages, without the aforesaid teamwork a corporate loans department's value of intellectual capital cannot be maximized.

Table 4: Rankings of AHP and SJT relative weighting results

Assessed Category	Detailed Factors Assessed	AHP Weighting	Ranking	SJT Weighting	Ranking	Average Weighting	Ranking
Value of Human Capital 0.377	1. Professional level	0.1407	1	0.1503	1	0.1456	1
	2. EQ performance	0.0814	7	0.1108	2	0.0965	4
	3. Retraining systems	0.0678	9	0.0882	6	0.0783	8
	4. Attitude to information sharing	0.0634	10	0.0744	8	0.0691	9
Value of Organizational Capital 0.314	5. Promotion of innovative culture	0.0447	11	0.0543	11	0.0496	12
	6. Commercialization of innovations	0.1000	4	0.0636	9	0.0813	6
	7. Innovation bonus	0.0719	8	0.0955	4	0.0840	5
	8. Integration of knowledge and IT	0.1046	2	0.0936	5	0.0989	3
Value of Relationship Capital 0.309	9. Customer service satisfaction	0.1039	3	0.1006	3	0.1022	2
	10. Customer demand forecasting	0.0389	12	0.0793	7	0.0596	11
	11. Bank image recognition	0.0957	5	0.0621	10	0.0783	7
	12. Timeliness of financial innovations	0.0874	6	0.0513	12	0.0689	10

Although we can use the relative weighting to evaluate the importance of the three categories, it shows approximately equal. The difference in the component factors is highly significant to the formation of intellectual capital and it is essential bank managers assess these factors to increase their corporate loans department productivity, operating advantage, and intellectual capital generation.

4.3 Statistical Analysis of the Cognitive Differences of Respondents

The above analysis shows KSF ranked by relative weightings but this is too broad a conclusion to apply to different financial industries. Alternative critical success factors will apply to different fields, therefore to develop a more robust analysis of the effects of KSF.

4.3.1 AHP Statistics and Difference Analysis

In this study, the relative indicator, coefficient of variation, is used to carry out analysis of the cognitive differences. The more respondents' views differed the greater the coefficient of variation became and conversely, the less disagreement the lower the coefficient of variation became. From the 55 valid returned questionnaires, the various factors' standard deviation and the coefficient of variation was tabulated in Table 5.

Of all the factors, the coefficient of variation percentage was highest in promotion of innovative culture at 98.16%. The second highest ranking was EQ performance at 80.60% and the lowest overall was bank image recognition at 35.15%. Though all the factors are key success factors, there are large differences in opinion indicated in the results. The relative weightings results in Table 4 found promotion of innovative culture ranked 11th, EQ performance ranked at 7th, and bank image recognition was 5th. This seems to imply high variation in opinion on promotion of innovative culture and broad agreement on the importance of bank image recognition.

For the banking industry respondents, the coefficient of variation was highest in promotion of innovative culture at 121.14%. The innovation bonus was the lowest at 11.15% which was ranked 15th. From Table 4, relative weight ranking of promotion of innovative culture was 10th, and innovation bonus was 8th. The figure for promotion of innovative culture indicates that there was extreme disagreement on the importance of this factor for banker. Banking staff found a high degree of consensus in respect to better pay opportunities and the prospect of an incentive based salary augmentation. Thus innovation bonus was a popular factor.

Table 5: AHP analysis of respondent differences

Capital	Bankers		Accountants		Venture Capital/ Securities Underwriters		All Categories	
	SD	CV	SD	CV	SD	CV	SD	CV
Human Capital Value	21.80	37.05	13.03	77.98	26.32	85.85	27.40	77.58
1. Professional level	15.85	34.42	15.78	44.52	18.14	47.80	17.16	43.07
2. EQ performance	2.95	28.20	17.67	52.07	21.21	87.11	18.59	80.69
3. Retraining system	10.41	42.28	6.46	53.89	9.01	41.40	10.35	53.94
4. Information sharing	19.23	101.71	9.25	49.57	9.16	57.47	13.60	75.75
Organizational Capital Value	21.82	98.69	11.27	37.17	27.50	58.19	23.11	71.96
5. Promotion of innovative culture	17.00	121.14	9.56	64.02	13.40	107.44	13.65	98.16
6. Commercialization of innovations	16.00	56.09	10.48	37.46	21.71	56.91	16.91	54.31
7. Innovation bonus	2.26	11.15	10.98	42.83	6.60	31.70	8.02	35.84
8. Integration of knowledge and IT	19.18	51.71	11.24	35.75	18.90	66.18	17.01	52.24
Customer Capital Value	8.38	43.98	19.42	36.12	15.80	71.55	22.19	68.16
9. Customer service satisfaction	15.24	32.97	9.58	46.43	17.24	59.45	17.88	56.03
10. Customer demand forecasting	4.70	40.99	7.82	93.07	12.50	73.60	9.35	78.16
11. Bank image recognition	7.84	32.10	6.95	18.49	9.77	39.56	10.30	35.15
12. Timing of financial innovations	11.95	66.81	13.58	40.66	14.88	50.77	15.03	55.99

From accounting respondents, the coefficient of variation was highest at 93.07% for the factor of customer demand forecast. The lowest was bank image recognition at 18.49% .In Table 4, customer demand forecast was ranked 11th in average weighting and bank image recognition was ranked 7th. So, accountants placed high priority on figures and evidence and less emphasis is on more abstract factors. Thus, for example, customer demand forecast was considered less important. Bank image recognition however was considered important as it relates to credibility, reputation and strength.

For the venture capitalist/securities underwriter respondents, the coefficient of variation for promotion of innovative culture was rated highest at 107.44%. This indicates there were serious differences of opinion on this factor. This same factor was ranked 11th in Table4. This factor was not considered an immediate interest to the respondents of this group. The innovation bonus factor had the lowest rating of 31.70% about which there was little difference.

Overall the coefficients of variation across the three categories revealed the greatest difference over the value of human capital (77.58%). Amongst the three groups, the venture capitalist/securities underwriter respondents had greatest difference about the value of human capital (85.85%). Accountants had a higher degree of consensus (77.98%) but the bankers had the highest degree of consensus on the value of human capital overall at 77.58%. These figures convey that bankers place the highest importance on the value of human capital, and the other two groups found the value of organizational capital to be most important factors.

4.3.2. SJT Analysis of Statistical Differences.

For the 58 valid SJT questionnaires returned, the standard deviation and coefficient of variation of the factors were tabulated in Table 6. Overall the information sharing factor had the highest coefficient

of variation at 62.01%, and the factor with the lowest value was customer service satisfaction at 12.34%. In the relative weight rankings in Table 4, information sharing ranked 8th and customer service satisfaction was third. This indicates a reversal of evaluation on information sharing revealing considerable difference of opinion, but for customer service satisfaction there was little disagreement. From Table 6, it is clear that there is a wide divergence of opinion between the three groups of respondents in respect to the importance of information sharing. Despite inconsistency in perceived importance of these cognitive factors, expert opinion was more closely aligned on the importance of customer service satisfaction as a KSF. This factor produced the lowest coefficient of variation of the measured factors, and by comparison to other factors by any means used in this study, consensus was established for the importance of this factor.

In general, from the coefficient of variation of the SJT method results it can be seen that banking industry respondents place higher importance on human capital value. For the accountants and securities industry respondents, greater emphasis was placed upon relationship capital value. For these respondents, the results were the same using the AHP method. Therefore, as by using either SJT or AHP methods there was no significant difference in the returned values of cognitive difference measurements, this supports another previously mentioned proposition in this paper that the critical success factors can be determined by weightings irrespective of the measurement tools used.

Table 6: SJT analysis of respondent differences

Capital	Bankers		Accountants		Venture Capital/ Securities Underwriters		All Categories	
	SD	CV	SD	CV	SD	CV	SD	CV
Human Capital Value	7.02	18.23	14.43	35.88	12.09	29.33	13.14	32.87
1. Professional level	7.02	18.66	8.78	31.48	7.21	24.92	8.98	28.41
2. EQ performance	5.37	18.07	9.87	46.65	7.47	23.63	8.09	29.18
3. Retraining system	5.23	23.72	6.08	24.06	4.23	22.01	5.75	26.07
4. Information sharing	5.21	48.91	13.32	51.88	11.43	56.45	11.55	62.01
Organizational Capital Value	9.74	29.09	7.05	24.07	4.23	14.47	7.64	24.89
5. Promotion of innovative culture	7.62	49.82	9.64	51.66	10.32	53.76	9.42	53.24
6. Commercialization of innovations	4.53	23.70	5.84	27.18	6.84	31.61	5.93	28.63
7. Innovation bonus	6.80	20.70	7.09	22.89	7.65	25.96	7.33	23.56
8. Integration of knowledge and IT	6.62	20.23	10.20	35.39	10.16	34.21	9.27	30.40
Customer Capital Value	14.55	51.98	12.73	41.75	10.87	36.72	12.85	43.82
9. Customer service satisfaction	3.14	9.46	4.81	13.45	4.29	12.58	4.24	12.34
10. Customer demand forecasting	4.83	17.57	6.10	23.12	7.04	25.95	6.08	22.48
11. Bank image recognition	3.85	18.32	5.25	25.40	5.31	24.34	4.86	22.94
12. Timing of financial innovations	2.53	13.85	3.69	21.43	4.67	27.58	3.78	21.62

The KSF to the generation of intellectual capital according to the bankers, were in human capital value. Banking corporate loans departments face employee turnover and this dynamic macro-economic environment relies on its people to stay informed about economic changes, to develop response strategies and then to implement them. Thus human resources can make or break the overall operation. Both the group of accountants and venture capitalists/securities underwriters rated the value of organizational capital value most highly. The reason for this difference may be that corporate loans departments generally target business transactions for large sums of money. On the other hand, professional accountants are prone to focusing on the drawbacks of internal control problems such as: organizational systems, supervision, and management and the rationalization of processes etc. These concerns relate most closely to the value of organizational processes.

Venture capitalists and securities underwriters in the capital market engage in fund-raising, investment and other professional activities which require bank loans. Regardless of overall national economic prosperity, and the risk of recession, corporate loans departments should be flexible organizations with innovative policies to cope with the securities industry's demand for capital. It is recognized that in a healthy economic climate, banks are willing to fund a large number of loans, but in economic downturns their reticence to offer loans compounds economic difficulties. In this situation a broad variety of industries will become under-capitalized. The securities industry depends on banks being able to cope with economic situations and maintain regular funding. Therefore the securities industry respondents found the value of organizational capital value to be of highest category of importance in which innovation bonus, they agreed, was the single most important factor.

5. DISCUSSION AND CONCLUSION

This study attempts to identify the key success factors to the generation of intellectual capital in bank loan departments. First the Delphi method was used to determine three major categories, human capital value, organizational capital value, and customer capital value (each of 4 constituent factors), which contribute to the generation of intellectual capital. Then using the factors weighting determined, SJT and AHP questionnaire surveys were distributed to a sample with constituents from banking, accounting and venture capital/underwriting. The two sets of collected data were then compared and little difference was found between them. Therefore irrespective to the data analysis method used, there was no significant statistical difference between the two sets of results.

From AHP and SJT analysis of intellectual capital in corporate loans departments, the first key category of factors to intellectual capital generation was human capital value, in which the key factors were professional level, and EQ performance.

An additional finding of this study was the second category in the organizational capital value affecting generation of intellectual capital. This category's results suggest that in the short term, corporate loans departments should enhance knowledge and IT integration and implement an innovation bonus scheme. The corporate loans departments require knowledge and IT integration expertise as a first line in credit assessment to help reduce information asymmetry between themselves and their loan applicants. This measure would simultaneously reduce a bank's business risk, and its risk management costs. The third category's most important factors were customer service satisfaction and bank image recognition. In the knowledge economy and the Internet era, corporate loans

departments face increasingly heated competition. Though network transactions are ever more common, bank marketing strategies remain indispensable. Despite the impersonal nature of online transactions, the degree of customer service satisfaction and bank image recognition are still central to the creation of high quality intellectual capital.

This study also found that the professional respondents of each category generally found consensus in their peer group. However, an interesting discovery was that academic respondents from each category did not express the same views on KSF as professional constituents in the same group. Whether determined by AHP or SJT method, the category populated by bankers placed most importance on human capital value. The measurement of this factor was consistent and high across both tests. This finding coincides with the study result of Goh(2005). Moreover, the recent studies about the intellectual capital efficiencies for bank industry emphasis on human capital [9][2]. For accountants and venture capitalists/securities underwriters, organizational capital value was most important. This conclusion also supports the hypothesis in this paper that regardless of the use of the AHP or SJT method to analyze the weightings, the test results do not vary.

As intellectual capital generation in banks depends on the all three categories, executives should build consensus, and combine their capital generation efforts across all departments of their enterprise. To enhance overall competitiveness, banks should establish units dedicated to the nurturing of the KSF and implement an assessment and reward system, responsible for management of intellectual capital.

REFERENCES

1. Bontis, N., 1996, "There's a price on your head: Managing intellectual capital strategically," *Business Quaterly*, Vol. Summer, pp.40-47.

2. Bontis, N. and Serenko, A., 2009, "A causal model of human capital antecedents and consequents in the financial services industry," *Journal of Intellectual Capital,* Vol. 10, No. 1, pp.53-69.

3. Brennan, N. and Connell, B., 2000, "Intellectual capital: Current issues and policy implications," *Journal of Intellectual Capital*, Vol. 1, No. 3, pp. 206-240.

4. Chen, J., Zhu, Z. H. and Xie, H. Y., 2004, "Measuring intellectual capital: A new model and empirical study," *Journal of Intellectual Capital*, Vol. 5, No. 1, pp. 195-212.

5. Dzinkowski, R., 2000, "The measurement and management of intellectual capital: An Introduction," *Management Accounting: Magazine for Chartered Management Accountants*, Vol. 78, No. 2, pp. 32 -36.

6. Edvinsson, L. and Kivikas, M., 2007, "Intellectual capital or Wissensbilanz process: Some German experiences," *Journal of Intellectual Capital*, Vol. 8, No. 3, pp. 376-385.

7. Edvinsson, L. and Malone, M. S., 1997, *Intellectual Capital,* Piatkus, London.

8. Edvinsson, L. and Sullivan, P., 1996, "Developing a model for managing intellectual capital," *European Management Journal*, Vol. 14, No. 4, pp. 356-364.

9. El-Bannany, M., 2008, "A study of determinants of intellectual capital performance in banks: The UK case," *Journal of Intellectual Capital*, Vol. 9, No. 3, pp. 487-498.

10. Kamath, G. B., 2007, "The intellectual capital performance of the Indian banking sector," *Journal of Intellectual Capital*, Vol. 8, No. 1, pp. 96-123.

11. Chen, G., P., 2005, "Intellectual capital performance of commercial banks in Malaysia," *Journal of Intellectual Capital*, Vol. 6, No. 3, pp. 385-396.

12. Hammond, K. R., Richard, C. and Adelman, L., 1977, "POLICY: An Aid for Decision Making and International Communication," *Columbia Journal of World Business*, Vol. 12, No. 3, pp. 79.

13. Hammond, K. R, Hamm, R. M, and Grassia, J., 1986, "Generalizing over conditions by combining the multitrait-multimethod matrix and the representative design of experiments," *Psychological Bulletin*, Vol. 100, No. 2, pp. 257.

14. Huang, G. L., 2002, "Job ethics and behavior intention of bank staff: AHP, SJT and TPB model applied," *New Century of Management Conference*, pp. 276-305.

15. Knight, D. J., 1999, "Performance measures for increasing intellectual capital," S*trategy & Leadership,* Vol. 27, pp. 22-27.

16. Lin, C. S., 1992, *Psychology and Education Statistics*, Tunghwa Press.

17. Lynn, B., 1998, "Performance evaluation in the new economy: Bringing the measurement and evaluation of intellectual capital into the management planning and control system," *International Journal of Technology Management*, Vol. 16, pp. 171.

18. Lynn, L., Lim, K. and Dallimore, P., 2004, "Intellectual capital: Management attitudes in service industries," *Journal of Intellectual Capital*, Vol. 5, No. 1, pp. 181-194.

19. Mavridis, G. D., 2004, "The intellectual capital performance of the Japanese banking sector," *Journal of Intellectual Capital*, Vol. 5, No. 1, pp. 92-115.

20. Mavridis, G. Dimitrios and Kyrmizoglou, P.,

2005, "Intellectual Capital Performance Drivers in the Greek Banking Sector," *Management Research News*, Vol. 28, No. 5, pp. 43-62.

21. Nielsen, C., Bukh, P. N., Mouritsen, J., Johansen, M. R. and Gormsen, P., 2006, "Intellectual capital statements on their way to the stock exchange: Analyzing new reporting systems," *Journal of Intellectual Capital*, Vol. 7, No. 2, pp. 221-240.

22. Roos, J., Roos, G., Dragonetti, N. C. and Edvinsson, L., 1998, *Intellectual Capital: Navigating in the New Business Landscape*, New York University Press.

23. Stewart, T. A., 1997, *Intellectual Capital: The New Wealth of Nations*, New York: Doubleday Dell Publishing Group Inc.

24. Sveiby, K. E., 1997, "The intangible assets monitor," *Journal of Human Resource Costing and Accounting*, Vol. 2, No. 1, pp. 73-97.

25. Thurow, L. C., 1999, *Building Wealth: The New Rules for Individuals, Companies, and Nations in a Knowledge-based Economy*, Happer Collins, New York.

26. Luehrman, T. A., 1997, "What's it worth? A general manager's guide to valuation," *Harvard Business Review*, Vol. 75, No. 3, pp. 132-142.

27. Wind, Y. and Saaty, T. L., 1980, "Marketing applications of the analytic hierarchy process," *Management Science*, Vol. 26, No. 7, pp. 641-659.

28. Wu, S. H., Huang, F. and Lai, Y. C., 1999, "The measure f intellectual capital in Taiwan software industry," *Chinese Society for Management of Technology Conference, Taiwan*.

ABOUT THE AUTHORS

Gow-Liang Huang, an associated professor and chairman from the Department of Money and Banking at National Kaohsiung First University of Science and Technology in Taiwan, has current research and teaching interests in behavior finance, enterprise evaluation and business ethics.

Hui-Lin Hsu is a doctorate student from the Graduate Institute of Management at National Kaohsiung First University of Science and Technology in Taiwan. She also is an instructor from the Department of Finance at Fortune Institute of Technology. Her research and teaching interests are in behavior finance, corporate finance and portfolio management.

Wei-Shen Cheng is a manager of the Department of Finance, China Steel Express Company in Taiwan.

智慧資本的關鍵成功因素：以銀行的授信部門為例

黃國良 [1]、許慧琳 [2*]、鄭偉申 [3]
[1] 國立高雄第一科技大學金融系
[2] 國立高雄第一科技大學管理研究所
高雄市楠梓區卓越路 2 號
[2] 和春技術學院財務金融系
高雄縣大寮鄉農場路 1-10 號
[3] 中國鋼鐵公司財務部
高雄市小港區中鋼路 1 號

摘要

本研究基於智慧資本之觀點，針對銀行企業授信部門之關鍵因素進行有系統之研究。第一階段為：利用文獻資料尋找可能的智慧資本關鍵成功因素，並進行創投業、承銷業、銀行業、會計師與學術界12位專家的Delphi二階段專家訪談，以建構合理評估企業金融部門的關鍵成功因素之分析架構；第二階段為：將研究架構轉換為多元決策評估方法之層級分析法（AHP）與社會判斷理論（SJT）之分析架構，並進行AHP與SJT問卷之專家訪談，訪談對象為創投業、承銷業、會計師、銀行界各15位，以得出關鍵因素的相對權重。為使研究結論更具可觀性，本研究也驗證AHP和SJT兩種決策評估方式是否有差異。研究結果發現，受訪者對關鍵成功因素之權重判斷並不會因為施測工具之不同而有差異。影響授信部門形成智慧資本的三個構面中，以人力資本價值的權重37.7%為最高，其次是組織資本31.4%，顧客關係價值的權重則為30.9%，在三個構面中最低。從受訪群體中發現，銀行業最重視人力資本價值58.83%；會計師最重視組織資本價值47.52%；創投及承銷業最重視顧客關係價值53.77%。

關鍵詞：智慧資本、關鍵成功因素、層級分析法、社會判斷理論
（＊聯絡人：linda023@center.fotech.edu.tw）

www.manaraa.com