CHAPTER 3

METHODOLOGY

The MBA courses are increasingly sold in hope of leading to better job prospects and economic well being of the MBA graduates. The contribution made by education to the economic well being of individuals and society has attracted topic for research. Amongst all the educational courses MBA is sold in terms of how it would improve job and economic prospects of the graduates. This research tests Bourdieu's (1984; 1997) ideas that investment in education can comprise cultural capital, an individual's knowledge about the products of artistic or intellectual traditions which help to distinguish the holder of that knowledge from others, and social capital made up of connections in terms of useful networks.

This research explores the perceptions of benefits gained from MBA by MBA students from four universities in Thailand. In addition to outcomes in the form of monetary gain, Bourdieu (1984; 1997) suggested that investment in education can comprise cultural capital (an individual's knowledge about the products of artistic or intellectual traditions which help to distinguish the holder of that knowledge from others) and social capital (made up of connections).

The concept of cultural capital has attracted increasing interest in recent times because of its influence on social inequality (e.g. Silva, 2005; Robbins, 2005; & Savage & Bennett, 2005). Cultural capital is divided into

embodied capital, which captures long lasting "dispositions of the body and mind" through, for example, the acquisition of skills and aptitudes, and institutionalized capital, in which cultural capital is objectified (institutionalized) in the qualification. In this latter respect, the qualification is seen as a "certificate of cultural competence" which confers a value on the holder and confirms or legitimizes the supposed possession of skills and knowledge. Accordingly, the question is whether, within the category of cultural capital, the MBA experience can develop capabilities in the form of embodied capital and the MBA qualification can comprise a badge of recognition in the form of institutional capital to the holder of the degree. Is this similar or different for the students from different universities? Bourdieu views such capital as "symbolic" in the sense that it confers legitimacy and prestige on the holder and allows them to command a status based upon inferences of special expertise. The MBA accordingly symbolizes a certain positioning in the managerial world. The "symbolic efficacy of cultural capital", for example, the symbol of the MBA as badge of distinction thus enables holders to distinguish themselves from the others who do not hold the MBA. Cultural capital therefore captures skills and knowledge gained from education that is "embodied", in the sense that they are inextricably tied to the body or mind of the person concerned.

Thailand is at a different stage of economic development and has its own specific political and cultural heritage emerging from Confucianism (harmony, hierarchy, social obligations),

What is the evidence about the economic and other contribution made by the MBA courses? Within the context of an MBA, Hay's (2006) UK study provides evidence that an MBA can enhance cultural competence. In essence, an MBA can be seen to confer a value upon the holder which confirms or legitimizes the supposed possession of cultural competence skills which equips an individual with the capability to function within cross-cultural environment. This kind of skill is increasingly valued in an international business environment where individuals are expected to relate effectively with people from a diverse cultural background.

The Asian growth and subsequent economic crisis had highlighted key shortages of managerial talent. More specifically the restructuring of the Thai economy and resulting efficiency gains have resulted in critical shortages of individuals with appropriate management skills to manage its hundreds of state owned enterprises, 100's of joint ventures and multinational enterprises. Perhaps in response, MBA take-up both at home and abroad has proliferated. The proliferation of Thai MBA's has not attracted much research; take for example, what motivates potential MBA students.

The methodology used for this research was primarily applying statistics to validate the relationship between independent variables like age, gender and type of MBA and relate them to motivation for applying for MBA, value system of the applicants, competencies and skills learnt and whether the MBA is proving to be useful. There are six sections in this study. The first section covers the hypotheses. The second section describes the research variables. The third section presents the research model. The fourth

section presents the constructing and testing of the survey instruments used in this study. The research population, sample and data collection methodology are included in the fifth section. The last section describes the data analysis as well as the statistics used.

Hypotheses

Hypotheses were developed to answer the following research questions:

Research Questions:

1. What is the motivation behind pursuing an MBA course?

2. What are the perceptions of the MBA course they are pursuing in terms of its usefulness?

3. What are the differences in perception of the MBA students attending private and public universities and part time and full time courses?

4. The differences in perceptions of students attending international and Thai courses

5. Differences in perception of skills and competencies learnt.

From these the researcher arrived at hypotheses as follows:

Hypotheses:

Ho 1: There is no significant relationship between the age of the respondents and push reasons for pursuing MBA.

Ho 2: There is no significant relationship between the university type of the respondents and push reasons for pursuing MBA.

Ho 3: There is no significant relationship between the study mode of

the respondents and push reasons for pursuing MBA.

Ho 4: There is no significant relationship between the program of the respondents and push reasons for pursuing MBA.

Ho 5: There is no significant relationship between the industry of the respondents and push reasons for pursuing MBA.

Ho 6: There is no significant relationship between the age of the respondents and instrumental reasons for pursuing MBA.

Ho 7: There is no significant relationship between the university type of the respondents and instrumental reasons for pursuing MBA.

Ho 8: There is no significant relationship between the study mode of the respondents and instrumental reasons for pursuing MBA.

Ho 9: There is no significant relationship between the program of the respondents and instrumental reasons for pursuing MBA.

Ho 10: There is no significant relationship between the industry of the respondents and instrumental reasons for pursuing MBA.

Ho 11: There is no significant relationship between the age of the respondents and fulfilling reasons for pursuing MBA.

Ho 12: There is no significant relationship between the university type of the respondents and fulfilling reasons for pursuing MBA.

Ho 13: There is no significant relationship between the study mode of the respondents and fulfilling reasons for pursuing MBA.

Ho 14: There is no significant relationship between the program of the respondents and fulfilling reasons for pursuing MBA.

Ho 15: There is no significant relationship between the industry of the respondents and fulfilling reasons for pursuing MBA.

Ho 16: There is no significant relationship between the satisfaction level of the respondents and the program MBA of part time or full time.

Ho 17: There is no significant relationship between the satisfaction level of the respondents and whether the study in private or public university.

Ho 18: There is no significant relationship between the utility of the subjects studied and mode of attendance.

Ho 19: There is no significant relationship between the utility of the subjects studied and attendance at private or public university.

Ho 20: There is no significant relationship between the mode of attendance and future prospect.

Ho 21: There is no significant relationship between the type of university attended and future prospect.

Ho 22: There is no significant relationship between the mode of attendance and competencies learnt.

Ho 23: There is no significant relationship between the type of university and competencies learnt.

Ho 24: There is no significant relationship between the university attended and skill learnt.

Variables in the Study

Dependent Variables

The dependent variables in this research are values, motivation, usefulness or utility of the course, skills and competencies learnt and future prospects. Some of the dependent variables were further broken down in to components parts. Values were divided into.

Independent Variables

The independent variables for this research are the demographic information: The respondents" gender, age, mode of study and type of university attended, whether Thai or International.

Research Model

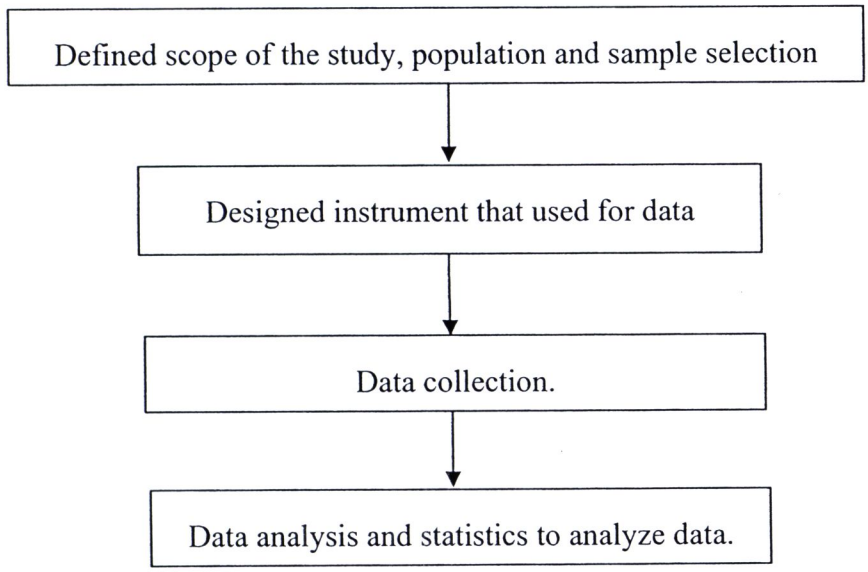

Figure 1 Structure of Chapter 3.

Note. From Developed for this research.

Research Instrumentation Test Constructing the Research Instrument

For the study, the researcher tested the correctness of the questionnaire to ensure the direction between the questionnaire and the objectives are consistent by checking with the qualified professor. Then the professor corrected the error of content validity of each question to cover the full objectives with the right questions.

The research instrument is using a questionnaire to collect the data from the samples. The questionnaire is divided into three sections as follows:

Section 1 The respondents" demography comprising gender, age, and other variables.

Section 2 Questions relating to personal values as follow: (See the Questionnaires in Chapter 1)

Case Studies	Group Work	Network
Leadership	Competencies	Problem Solving
How to learn	Intelligent	Independence
Self Confidence	Initiation	Reason
Argue	Help Others	Gather Information
Build Theory	Quantitative Method	Goals
Take Action	Efficient Orientation	Plan
Self-Control	Flexible	Empathy
Social Objective	Persuasive	Negotiation
Manage Groups	Develop Others	Think Systematically

Recognize Patterns

The five-point Likert scale was used for the rating of the questions at 5 levels as follows:

	+	-
Strongly disagree	1	5
Disagree	2	4
Neutral	3	3
Agree	4	2
Strongly agree	5	1

Section 3 Questions relating to motivation, utility, competencies, skills and future prospects.

Reliability and Validity

To test the reliability and validity of the research instrument, the following methods were applied to the questionnaire:

Validity

From reviewing the applicable theories and literature review, the concepts were applied to this study, with the questions for the questionnaire based on these two concepts. The questionnaire was reviewed by the dissertation chair to check the validity of the instrument with the research questions and hypotheses.

After minor amendments for the suitability and validity to the local business environment, the questionnaire was independently translated into Thai by Ramkhamhaeng University lecturers and reviewed by an expert in the Thai language from Prince of Songkhla University, Thailand. Finally some adjustments were made by experts from Ramkhamhaeng University.

Reliability

For the reliability of the research instrument a pre-test with 30 samples, who have the same characteristics with the sampling group, was made. This test is for assuring the clarity of the questions to achieve mutual understanding of the order, correctness, and corresponding between the answer and the study's objectives. Any fault will be corrected for the reliability of the study before the actual data collection.

From the collecting of the Pre-test data of 30 samples, the reliability statistics showed Cronbach's alpha coefficient at .888 for values, .942 for motivation, utility and competencies and skills a combined coefficient of 0.938. With a result of more than 0.7000, thus, these questions can be used for the study (Cronbach, 1951).

Table 1

Cronbach's Alpha Coefficient Score

	Cronbach's alpha coefficient
Values	.888
Motivation	.942
Competencies and Skills	.938

Research Population and Sample

Population

The type of this research is a survey through the use of a questionnaire, and the research population comprise MBA students from four universities, both Thai and International programs, were selected.

The population for this study in Thailand of those studying MBA is not available but there are over 140,000 post graduate students in Thailand. (Ministry of Education and Higher Education data).

Sample Size

Therefore, the amount of sampling group is set by using the Yamane's formula that permit for error at 0.05 (Yamane, 1973) and the result is 400 samples.

$$N = \frac{N}{1 + N(e)^2}$$

n = number of sampling group

N = number of population

e = error that allowed to happen in sampling group which has been set in this research at 0.05

According to the formula, the amount would be

$$n = \frac{10,227,349}{1 + 10,227,349(0.05)^2}$$

$$= 399.98$$

So, the number of sampling group equals 400.

For random sampling, researcher employs non-probability sampling by accessible sampling for selecting the sample.

Data Collection Plan

In collecting the data, the researcher applied the Probability Sampling by use of Multi-Stage Sampling. This started with a Stratified Random Sampling with the MBA students from different groups. A study of the area where data is to be collected was made in order to have an even distribution through the use of Cluster Sampling, which was followed by Non Probability Sampling. In setting the Quota Sampling it was found that they are close to the population ratio: 33.41% working in the government agencies, 62.71% in the private sector and 3.89% in state enterprises from a Report on the Distribution of Employment of Graduates throughout the country for the Year

2009 (Office of the Higher Education Commission, 2008). Then Accidental Sampling was applied.

From a deliberation of the various factors, the researcher collected the data from Master's degree students at the Ramkhamhaeng University (Hua Mark Campus), as they are great in numbers being employed in variety of organizations. The focus is on 400 employees who are working in the government agencies, private sector and state enterprises according to the samples required to be representative of the population.

From the distribution of 600 questionnaires between June and July 2010, 480 or 80% of the questionnaires were returned. Of these there were entrepreneurs and those who have not yet been employed as well as incomplete data consisting of 43 questionnaires of 8.95%, so they were excluded from the data analysis.

Hence this study is on 437 samples of the employees who are working in the government agencies, state enterprises and the private sector.

Questionnaire Development

The initial item pool of questions needed to be purified in order to identify and eliminate those items which are either unreliable or that cross-load on other constructs (Churchill, 1979). For the purification of the instrument, the researcher began with an assessment of content and face validity through a panel of supervisor and colleagues. To establish face validity, the researcher simply asked the experts to indicate whether the instrument looks like it is measuring what it claims to be measuring (Gliem, 1996). Content validity

refers to a qualitative means of ensuring that indicators tap the meaning of a concept as defined by the analyst (Bollen, 1989). In this study to establish content validity, ten experts were selected because of their experience, expertise, and knowledge in the content area, and research methodology. These experts included three MBA tutors and three MBA students. These individuals were provided with detailed information regarding the purpose of the study, specific directions, and definitions to assist them in making judgments. They were asked to rate each item as well as the instrument as a whole for content, clarity, wording, format, thoroughness, ease of use, focus, and appropriateness. In addition, they were asked to identify which items fit under each of the subdimensions. Based on the feedback from the panel members, the instrument was revised. Items that were correctly identified by 75% of the experts were kept. Since this study was confirmatory in nature, the focus of establishing validity was on how well the individual subcategories within each dimension conformed to their proposed dimension as well as on the measurement of the individual categories within each dimension. The feedback from the panel of experts led to the rewording of several items to enhance clarity. Also, some items were transformed into two separate sentences to better reflect the nature of the subdimensions.

After the revisions were made, a field test was conducted by administering the revised version of the instrument to a representative group similar to the target population. This group included 10 MBA students. They were provided with detailed information regarding the purpose of the study, the specific directions and definitions to assist them in making judgments.

Scale Pretest

In this stage, a pilot test was employed to test the reliability of the instrument. The purpose of this process is to purge the scale of poor performing items which confound the relationships in the structural model. The internal consistency method was used to reduce the item pool. More specifically, Cronbach's alpha and item-to-total correlations were used as the criteria for item elimination. As Robinson, Shaver, and Wrightman (1991) suggested, items which have higher than .50 reliability coefficients were retained. Specifically, those items which exhibit low correlations with the other items in the scale are removed from the items pool.

Based upon the feedback from the panel of experts, the researcher made several changes to the subdimensions in the proposed model. One change involved the value questions.

The revised instrument was administered to a representative sample of the target population.

A Revised Model

Based upon the results of the pilot test, a final set of changes to the subdimensions occurred. This change was made to reduce the number of items on the scale.

Data Analysis Procedures

The data received from the survey was analyzed using the software Statistical Package for the Social Sciences (SPSSPC+) and Analysis of

Moment Structure (AMOS). Descriptive statistics were calculated for all items of the instrument). In addition, demographic characteristics of the sample were also determined. The researcher tested the efficacy of the proposed model by examining the model fit for the measurement and structural models. In this process, the researcher tested whether statistical analyses supported the proposed model. The focus of these analyses was on the conceptual model, the constructs, and the testing of the hypotheses to identify the meaning and the reason behind the relationships.

To test the efficacy of the proposed model, the researcher employed structural equation modeling (SEM). Structural equation analysis includes investigations of both structural and measurement models. The structural model is the path model, which relates the independent to the dependent variables. Structural model analysis is an essential tool for the identification of the causal relationship between several constructs in which separate multiple regression equations are estimated simultaneously. The measurement model allows the researcher to use several variables for a single independent or dependent variable, and assesses the contribution of each scale item as well as incorporate how well the scale measures the concept into the estimation of the relationship between the dependent and independent variables (Fassinger, 1986; Hair, Anderson, Tatham, & Black, 1998).

For the purpose of this study, the structural model and measurement model were separately analyzed. The separate examination of the structural component of the model from the measurement component of the model allows for the inspection of measurement problems (i.e. psychometric

inadequacy) separately from the inspection of structural problems (i.e., theory under investigation) (Bagozzi, 1983; Fassinger, 1987). This "two-step" approach makes possible a comprehensive confirmatory assessment of construct validity and reliability (Anderson & Gerbing, 1988; and Hair et al., 1998). In particular, this approach is recommended for the research model that does not have a strong theoretical background (Hair et al., 1998).

In this study, the data analysis procedures using SEM included five specific steps including two measurement model tests and three structural model analyses. Due to the large number of variables, the analyses of the primary dimensions and subdimensions were performed separately (Brady & Cronin, 1999; Kohli, Jaworski, & Kumar, 1993). In the first step, the relationship between the eleven subdimension variables and their observable indicators (i.e., specific items) was analyzed through a measurement model test. The same method was applied to examine the relationship between values, motivations, skills and competencies (i.e., measurement model 1). Second, the relationship between the four primary dimensions and their observable indicators (i.e., specific items selected from the eleven subdimensions) was analyzed (i.e., measurement model 2).

Lastly, the causal relationships between the demographic data, values and motivations were examined. The focus of this stage was not to examine the proposed multi-level conceptualization of service quality. Rather, the focus was on the investigation of the relationships between the variables which are translated into a series of structural equations for each dependent variable.

A measurement model "specifies a structural model connecting latent variables to one or more measures or observed variables" (Bollen, 1989). As stated earlier, the measurement model describes the relation between the measured variables or indicators (i.e., specific items) and latent variables (i.e., dimension or subdimensions). The results of the measurement model test determine how well the indicators capture their specified constructs. In this study, the researcher tested five separate sets of measurement models. More specifically, a measurement was developed and tested for each of the primary dimensions. Overall, the model fit of each measurement model, the specific indicator loadings for the 11 sub dimensions were examined. A significance test (i.e., Critical Ratio) for each indicator loadings was also examined. This multi-stage approach is necessary because a large number of variables leads to an inability to obtain a convergent solution as well as difficulty in identifying poor performing items (Brady & Cronin, 1997; Kohli et al., 1993).

A confirmatory factor analysis allows the relations between latent and observed variables and provides a fit analysis between a model and data. Therefore, testing the measurement model should provide a method of final item purification for this study. The result of this process is a reduced set of reliable and unidimensional items with which the researcher conducted structural equation analyses (Brady, 1997).

Structural Equation Models

The main focus of this stage was to test the proposed model of values and perceptions of MBA experiences.

The proposed hierarchical model was tested in three stages: (a) a test of the second-order factor to test subdimensions, (b) a test of the second-order factor to test the relationships between service quality and the four primary dimensions, and (c) a test of the causal relationship. The test of second-order models is useful when the subcomponents are distinct, but contain a significant amount of shared variance (Bagozzi & Heatherton, 1994). Therefore, consumers" perceptions of service quality can be analyzed at three levels of abstraction while still allowing for the same strict assessment of construct validity as the first-order model (Shemwell & Yavas, 1999).

The first step in testing the third-order factor model is to examine whether the four primary dimensions can be viewed as second-order factors to the 11 subdimensions. It is necessary to determine whether the 11 subdimensions can explain their primary dimensions of interest (Figure 6). More specifically, the researcher determined whether multiple latent variables fit a set of measures in order to test (a) the unidimensionality of the measures within the latent variables and (b) determine the discriminant validity of the measures across the latent variables. In this case, only two measures per latent variable are required because there are more than two latent variables in the specified model (Bagozzi, Yi, & Nassen, 1999; Kline, 1998). The reason is that a model with more parameters than observations is too complex for an empirical analysis (i.e., identification problem) (Kline, 1998). The original indicators for each subdimension were randomly combined into two composite indicators (Dabholkar, Thorpe, & Rentz, 1996).

The above three separate analyses may reveal whether the proposed hierarchical structure is supported in part or whole (Dabholkar et al., 1996). If the data is statistically significant in the first and second structural models, then the evidence indicates that the full model of service quality in participant sport is valid.

Reliability and Validity

In addition to the model test, the researcher examined the reliability and validity of the measures. The reliability was tested by calculating Cronbach's Alphas and itemto-total correlations. Reliable items are highly inter-correlated and, therefore, denote that they measure a common latent construct (Hair et al., 1998). As Nunnally (1978) suggested, the constructs" Cronbach's Alphas greater than .70, were deemed to be reliable. Also, items which have reliability coefficients greater than .50 were considered to be reliable.

In addition to the reliability test, the construct validity of the scale was measured through confirmatory factor analysis (CFA). The collected data were analyzed using a 95% confidence interval. Construct validity is inferred by providing evidence of both convergent and discriminant validity. Convergent validity assesses the degree to which a measure correlates highly with other measures designed to measure the same construct (Churchill, 1979). In contrast, discriminant validity assesses the degree to which conceptually similar concepts are distinct (Hair et al., 1998).

No single method provides a definitive test of construct validity (Kline, 1998). Therefore, several methods were employed to establish construct validity of the SSQPS. Convergent validity can be evaluated by examining the parameter estimates and their corresponding t-values (Anderson & Gerbing, 1988; Shemwell & Yavas, 1999). As an AMOS output presents Critical Ratios (C.R.) rather than the *t*-values, C.R. will be used for the evaluation of convergent validity. Normally, validity is expressed as a correlation coefficient, or r-value, between two sets of data. To be statistically significant, factor loadings should be greater than .35 with a sample size of 250 when using the .05 significance level. However, as factor loadings have substantially larger standard errors than typical correlations, they should be evaluated with conservative guidelines (Hair et al., 1998). Therefore, a score of 0.70 or higher is considered valid for convergent validity (Litwin, 1995). In addition, further evidence of convergent validity is established by examining C.R. A critical ratio (C.R.) is obtained by dividing the covariance estimate by its standard error. Using a significance level of .05, any critical ratio greater than 1.96 in magnitude for a two-tail test would be statistically significant (Arbuckle & Wothke, 1999).

Analysis Goodness of Fit and Validity

The relative strength of the effect was tested through several fit indices. The fit of the measurement and structural model analyses was assessed through the fit indices obtained from the output of the AMOS analysis. The

purpose of the criterion is to determine the degree to which the hypothesized relationships are identical to the observed data (Kline, 1998; Maruyama, 1998). The method of maximum likelihood was specified for estimating the structural equation model. There are three different types of indexes (i.e., absolute indexes, relative indexes, and adjusted indexes). Specific indexes used for this study include: (a) absolute index e.g., Chi-square/*df*, Root Mean Residual (RMR), Goodness of Fit Index (GFI), and Root Mean Square Error of Approximation (RMSEA), (b) Relative or Incremental Index e.g., Tucker-Lewis Index (TLI), Comparative Fit Index (CFI). and Adjusted Goodness-of-Fit Index (AGFI), and (c) adjusted index e.g., Parsimonious Fit Index (PGFI) and Parsimonious Normed Fit Index (PNFI) (Hair et al., 1998; Kline, 1998; Maruyama, 1998).

According to Tanaka (1993, p. 16) "relative fit indices are defined with respect to a specific model that serves as an anchor for subsequent model comparisons; absolute fit indices do not employ such a comparison anchor". In other words, an absolute fit index directly assesses how well a priori model reproduces the sample data, whereas relative or incremental indices measure the proportionate improvement in fit by comparing a target model with a null model (Bentler & Bonnett, 1980). Normed versus nonnormed indices is another dimension of the fit indices. Fit indices that are normed are constructed to lie between the approximate range of 0 and 1. In contrast, nonnormed fit indices do not necessarily lie in this range (Tanaka, 1993).

The results of the analyses supported that the overall fit of the measurement models was found to be adequate. Specifically, throughout all measurement model tests, the chi-square value was not significant compared to the degree of freedom (i.e., subdimensions of program quality, $x^2/df = 2.21$; subdimensions of interaction vaalues, $x^2/df = 2.76$; subdimensions of type of university, $x^2/df = 2.80$; subdimensions of competencies, x ($/df = 3.10$; skills. $x^2/df = 4.89$; four primary dimensions. $x^2/df = 2.11$). The Chi-square/cif ratios were lower than or close to the suggested threshold (i.e., less than 3.0) (Carmines & McIver, 1981; Kline, 1998). This indicates that the results did not reject the null hypothesis and suggest that the data represents the proposed models.

Table 2

Measurement

Measurement Model (n = 241)	CM1N	*DF*	CMIN/DF	RMR	RMSEA	GFI	TLI	CFI
Range of Program	106.05	48	2.21	.093	.071	.93	.95	.95
Instrumental Values	118.63	43	2.76	.063	.086	.92	.96	.97
Fulfilling Values	170.68	61	2.80	.126	.087	.91	.95	.96
Skills	187.81	60	3.10	.107	.094	.90	.95	.96
Competencies	119.99	57	2.11	.119	.068	.93	.95	.97
Motivation	73.48	15	4.89	.154	.127	.93	.94	.97

Table 3

Measurement Model Analysis Results

Constructs (n = 241)	Items	Item-to-Total Correlation	Means	Standard Error	Indicator Loadings (MLE)	Critical Ratio
Range of	Vi[a]	.74	5.61		.79	
Program	V3	.73	5.45	.08	.83	14.03[e]
(a = .86)	V6	.74	5.47	.09	.83	13.06"
	V8	.64	5.24	.10	.71	11.27"
University Type	V4[a]	.58	4.71		.71	
	V10	.75	4.76	.11	.81	9.65[e]
(a = .81)	VI/	.64	4.90	.11	.87	9.87"
Mode	V2[a]	.60	4.69		.73	
(a = .83)	V5	.64	4.98	.10	.71	10.28°
	V7	.60	5.10	.09	.70	10.10"
	V9	.54	4.89	.09	.55	7.97"
	VI I	.74	5.24	.09	.74	11.04"
Value 1	V13[a]	.76	5.04		.81	
	V15	.81	5.18	.07	.81	14.54[e]
	V16	.78	5.21	.06	.78	13.97"
(a = .94)	V18	.81	4.93	.06	.84	15.43"
	V19	.86	5.22	.06	.89	16.83"
	V20	.83	5.03	.06	.85	15.82
	V21	.81	4.95	.06	.85	15.66"
Value 2	V14[a]	.68	5.03		.79	
Interaction	V17	.72	4.94	.08	.76	12.69°
	V22	.76	5.10	.08	.84	14.49
(a = .86)	V23	.69	5.11	.08	.74	12.34"

Note. [a] 1 is fixed at 1.0; Indicator loading-standardized regression weight, critical ratio-unstandardized regression weight. $P < .05$

Table 4

Reliabilities and Standardized Parameter Estimates

Constructs (n = 241)	Items	Item-to-Total Correlation	Means	Standard Error	Indicator Loadings (MLE)	Critical Ratio
University	24[a]	.73	5.60		.79	
Type	28	.82	5.55	.08	.86	14.95*
(a = .92)	29	.82	5.55	.08	.85	14.77"
	30	.81	5.39	.08	.84	14.53
	34	.75	5.34	.07	.80	13.58
Value 1	25[a]	.79	5.67		.81	
(a = .92)	26	.80	5.35	.07	.86	15.75*
	31	.82	5.71	.06	.87	15.99"
	32	.82	5.61	.06	.88	16.44"
Value 2	27[a]	.67	4.79		.73	
(a = .88)	33	.71	4.34	.09	.76	11.48"
	35	.80	4.26	.09	.86	12.97
	36	.82	4.51	.08	.89	13.31
Motivation	37[a]	.74	3.63		.71	
	39	.78	3.61	.07	.77	16.32"
(a = .91)	42	.68	4.46	.09	.76	11.49"
	44	.87	3.81	.09	.94	14.17"
	47	.82	4.06	.09	.90	13.54*
Competencies	38[a]	.85	3.66		.88	
(a = .93)	41	.75	4.50	.05	.77	15.49"
	43	.89	3.80	.05	.94	23.32*
	46	.81	3.78	.05	.89	19.80"
	48	.75	4.73	.05	.78	15.78*
Skills	40[a]	.50	4.54		.86	
(a = .73)	45	.65	4.42	.05	.91	19.13
	49	.67	4.70	.05	.84	16.69*

Note. From [a] 1 is fixed at 1.0; Indicator loading-standardized regression weight, critical ratio-unstandardized regression weight. $P < .05$

Discriminant validity is a measure of the degree to which conceptually similar concepts are distinct (Hair et al., 1998). To determine the discriminant validity of the SSQPS, the researcher analyzed the covariance and correlation matrix of the AMOS output for the first and second structural equation models (i.e., structural model for subdimensions and higher-order-factor). The covariance estimates of the pairs for three subdimensions of physical environment quality and two subdimensions of interaction quality were greater than 1. More specifically, the covariance estimates for the pairs of equipment and design, equipment and ambient condition, design and ambient condition, and client-employee interaction and inter-client interaction were 1.83, 1.58, 2.02, and 1.22 respectively. All other covariance values ranged from 0.44 to 0.98. They are less than the recommended value of 1.00 (Dabholkar et al., 1996). Not surprisingly, similar results were found in the standardized correlation matrix. For example, the correlation estimates for the pairs of equipment and design, equipment and ambient condition, design and ambient condition, and two subdimensions of interaction quality were 0.85, 0.88, 1.02, and 0.89 respectively. In addition, a high correlation Cr = 0.94) was found in the relationship between physical change and valence in outcome quality. All other correlation estimates ranged from 0.31 to 0.77. They are less than the recommended value (r_ <.85) (Kline, 1998). The covariance and standardized correlation matrix were found in Tables 7 and 8.

Another method to establish discriminant validity is to examine the correlation matrix for each item. Table 9 provides correlation matrix among specific items which were randomly selected. As noted earlier, to establish

discriminant validity, the various items measuring each single construct should show high correlation among themselves, and the correlations among these items were higher than their correlations with the items intended to measure other constructs (Campbell & Fiske, 1959). The correlation matrix meets the aforementioned criteria. Overall, in the subdimension level, except for several occasions, discriminant validity in the subdimensions is evidenced. In the item level, the correlation matrix provides evidence for discriminant validity.

The covariances and correlations of the four dimensions of Values and Skills and Competencies discriminant validity is found. Specifically, the covariance estimates for the 6 pairs ranged from 0.54 to 0.88. (i.e., program type and competencies = 0.88. university type and values = 0.86, program quality and competencies = 0.56

In summary, the analyses of the measurement models well represent the data and suggests that the scales used in the study adequately capture the latent variables. Specifically, the fit indices for all six measurement models adequately meet or exceed the criteria established for good model fit. There was statistical evidence for reliability and construct validity. Specifically, the standardized correlation estimates and critical ratios for all indicators are significant throughout the items. This suggests that the convergent validity for it was established. The analysis of the Cronbach's Alphas and item-to-total correlation estimates suggests that all items. The standardized correlation and covariance matrixes were examined to establish the discriminant validity of the constructs in the measurement models. Although the values of several

pairs between the subdimensions are relatively higher than the suggested criteria, the results support that there is statistical evidence for discriminant validity in the measures of the items.

The RMR estimate was relatively high in all three structural models (model 1 = .140. model 2 = .121, and model 3 = .170. However, the values of the RMSEA for structural model 1, 2, and 3 were lower than or equal to the threshold of acceptable fit (RMSEA < .08) (model 1 = .055; model 2 = .067; model 3 = .080). This indicates that all three structural models have acceptable fit (Brown & Cudeck, 1993).

Additional fit indices (i.e., GFI, TLI, and CFI) suggest that the proposed three separate models represents a good fit to the data. Specifically, the GFI estimate were greater or close to the recommended .90 threshold (GFI = .89 (structural model 1), .93 (structural model 2), and 85 (structural model 3)). The TLI, and CFI estimates in all three structural models were greater than the recommended .90 threshold. The CFI estimate for model 1, 2, and 3 were .96, .97, and .93 respectively. The TLI estimates for model 1. 2, and 3 were .95, .95, and .92 respectively. The results of the analysis can be found in Table 5

The analyses for the three separate models indicate that the proposed hierarchical structure is supported in part and whole. In particular, the statistically significant evidence in the data analysis in all three levels indicates that the full model of service quality in participant sport is valid (Dabholkar et al., 1996).

Table 5

Structural Model

Structural Model (n = 241)	CM1N	DF	CMIN/DF	RMR	RMSEA	GFI	TLI	CFI
Stage 1 Model	328.13	189	1.74	.14	.055	.89	.95	.96
Stage 2 Model	123.00	59	2.08	.12	.067	.93	.95	.97
Stage 3 Model	455.11	180	2.53	.17	.080	.85	.92	.93

The Factor Analysis is presented in Appendix…

Chapter Summary

The Chapter III looked at research questions, hypotheses development, questionnaire instrument development and pilot testing. Reliability and validity analysis was carried out and confirmatory factor analysis and Structured Equation model provided further evidence of validity. Once the criteria for acceptable model were met Chapter 4 analyzes the results.

Data Analysis

For the data analysis from the 437 questionnaires obtained, the statistical technique was applied in order to answer the research question in the following order.

To Answer Research Question 1

1. The demographic data was analyzed using Frequency, Percentage, Mean, Standard Deviation of Organizational Commitment from the 20 questions by recoding the question to be in the same direction. Job Engagement's mean was analyzed based on the 17 questions, as well as to find the difference between Organizational Commitment and Job Engagement of employees in each sector of employment, which were then classified into the respective sector according to demography through statistical means of *t* test, One-way ANOVA and Scheffe.

2. Test the difference between the overall concepts of Organizational Commitment and job engagement through the use of Descriptive Statistics and One-way ANOVA.

3. Use the Factor Analysis technique with the various dimensions and components of Organizational Commitment from the 20 questions and Job engagement from the 17 questions.

To Answer Research Question 2

1. Use the Correlations Analysis technique to study the relationship between each dimension of Organizational Commitment and component of Job Engagement

2. To study and test the difference between the dimensions of Organizational Commitment and components of Job Engagement in respect to Hypotheses 2-4 by finding the means of each dimension, which are grouped as follows:

1.00-1.80	Strongly Disagree
1.81-2.60	Disagree
2.61-3.40	Neutral
3.41-4.20	Agree
4.21-5.00	Strongly Agree

The means of each component of Job Engagement was found together with the study of the difference between the dimensions of Organizational Commitment and the component of Job Engagement through the use of Descriptive Statistics and One-way ANOVA.