

**THE IMPACT OF ORGANIZATIONAL
COMMITMENT ON STRATEGIC INFORMATION
SYSTEM PLANNING**

**MASTER OF BUSINESS ADMINISTRATION
IN
INFORMATION TECHNOLOGY**

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SYSTEM PLANNING**

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The dissertation was submitted to the partial fulfillment of the requirement for the Degree of Master of Business Administration.

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December 2007

DECLARATION

I certify that this thesis does not incorporate without acknowledgement to the material previously submitted for a degree or diploma in any university to the best of my knowledge and I believe it does not contain any material previously submitted for a written or orally communicated by other person except where due reference was made on this.

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LIST OF ABBTIVIATIONS

IS	-	Information System
SIS	-	Strategic Information System
ISP	-	Information System Planning
SISP	-	Strategic Information System Planning
OC	-	Organizational Commitment
IT	-	Information Technology
CIO	-	Chief Information Officer
CSF	-	Critical Success Factor
BSP	-	Business System Planning
SSP	-	Strategic System Planning
IE	-	Information Engineering

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ABSTRACT

This paper presents the impact of Organizational Commitment (OC) on Strategic Information System Planning (SISP) in Sri Lankan banking sector. SISP is an important management function and has consistently been identified as one of the most critical issues facing IS executives. Organizational Commitment plays a critical role when planning information systems strategically in an organization. The paper identified that the Organizational Commitment means company support for SISP. When compared to all other sectors Information Technology usage in banking sector is at the highest level in Sri Lanka. So that it was a need to find out the relationship between OC and SISP particularly in the banking sector. The study mainly answers the questions of how Organizational Commitment contributes to the degree of success of SISP and to understand the present level of Organizational Commitment on SISP in the sector. Further the study examines the most important factors of the Organizational Commitment on existing SISP and measures the relationship between Organizational Commitment and SISP. Finally, the study aims to develop a model to improve the success of SISP in Sri Lankan banking sector.

The empirical data was drawn from 30 licensed commercial banks and licensed specialized banks to analyze the data by using correlation. The regression analysis was used to build the model to improve the success of SISP. The findings specify that there is a positive relationship between SISP success and Organizational Commitment. Correlation elaborates the relationship between the OC factors and SISP. The major implication of the study is that the Organizational Commitment is a main factor for the success of SISP.

CHAPTER 01

INTRODUCTION

1.1 Background of the Study

Information is the crucial factor for any organization. Generating the correct, relevant, and accurate information is very difficult task without having a well developed Information System (IS). Information System is a socio-technical entity, an arrangement of both technical and social elements [1]. Recent technological developments in the world have identified the value of Information System and its importance. It provides a potential competitive advantage or strategic weapon to defeat or frustrate competition [1] and sustain the smooth workflow of the organization. The principle role that information systems have performed in the past has been one of operational and management supports. But recently companies have begun using Information Systems strategically to reap significant competitive advantage [2]. These systems are called Strategic Information Systems (SIS). Strategic Information Systems are computer systems at any level of the organization that change goals, operations, products, services, or environmental relationship to help the organization gain a competitive advantage [1]. Organizations should scan the environmental changes and observe their rivals' behavior; specially, what and how they do to sustain and win the market. Well designed IS provides the required information for the organizations.

Planning an IS is not easy task and also planning appropriately is more difficult than just planning. Well planned IS leads an organization to a successful future. Information System Planning (ISP) plays a vital role when it develops an IS so that ISP can be identified as a most vital factor in continuous organizational success and its effective performance [3]. Strategic planning of an IS helps organizations to survive in the long run. Strategic Information System Planning (SISP) is a fundamental tool of strategic IS management. According to Lederer and Sethi [4], SISP is the process whereby an organization determines a portfolio of computer-based applications that help to achieve its business objectives. It includes formulating IS objectives, defining strategies and policies to achieve them, and developing detailed plans to effect the strategies and policies [5].

IS exists in almost all organizations. For the existence of IS in an organization, it is very important to get the support from the people who are benefited by the IS. In addition to that the availability of required resources for the development of the system, and the good control over the system are some of obvious features for the existence. Here, the support means the commitment of the organization. Such organizational commitments can be defined as the employees' psychological attachment to the organization. It can be constructing with other work related attitudes such as job satisfaction and organizational identification [6]. Some researchers have pointed out that the OC means company support for SISP [7]. Research conducted by Lederer, et al., [8] on SISP and OC was tested using the following criteria

- Sufficient resources were allocated to the SISP study
- Organizational support was built for the SISP study
- Management's expectations for the result of the SISP study were kept reasonably
- SISP study leaders and sponsors had high credibility
- Key people stay on the SISP study from its start to finish and maintain continuity
- Management controlled the SISP study closely enough to resolve conflict among different organizational subunits.

In addition to that, top management commitment is rated as the most important factor in IS planning [9].

Even though Sri Lanka is a developing country, it uses Information Technology (IT) in all most all the sectors at different levels and different quantities. According to Ranasinghe [10], banking sector in Sri Lanka uses IT 90% on average which is the highest when compared to the other sectors. It illustrates that the Sri Lankan banks use many information systems at their day-to-day operations. Thus researcher believes that this is the time to find out how successful SISP in banking sector and to what extent the OC support for SISP success.

1.2 Research Problem

How does OC contribute to the degree of success of SISP?

The financial system in Sri Lanka contains the major financial institutions, namely the Central Bank of Sri Lanka, licensed commercial banks, licensed specialized banks, registered finance companies, specialized leasing companies, primary dealers, pension and provident funds, insurance companies, rural banks, merchant banks, unit trusts and thrift and credit co-operative societies; the major financial markets, such as the foreign exchange market, money market, capital market and the informal financial market; and the financial infrastructure which is the legal framework related to the financial system and the payment and settlement. The banking sector in Sri Lanka, which comprises licensed commercial banks and licensed specialized banks dominates the financial system and is accounted for 57% of the total assets of the financial system as at end of the September 2006. Banks play the central role within the financial system, as they have the capacity to provide liquidity to the entire economy. Banks are also responsible for providing payment services, thereby facilitating all entities to carry out their financial transactions. On the other hand, banks can create vulnerabilities of systemic nature, partly due to a mismatch in maturity of assets and liabilities. Therefore, the soundness of banks is important, as it contributes towards maintaining confidence in the financial system and any failure may have the potential to impact on activities of all other financial and non-financial entities [11].

Having a proper way of information handling system it provides relevant, accurate, updated, information and is able to compete with competitors. It must be a well developed information systems. Sound IS development requires a quality IS plan. The existence in the market is difficult and should take innovative action over the rivals. IT and strategically planned information systems are the solution for this problem. IT and IS help organizations to enhance their value and attract more customers. Organizational commitment is necessary for the success of the information systems planning in banking sector. A research has proved that the organizational commitment is the relative strength of an individual's identification with the involvement in a particular organization. The higher demand of labour market for IT professionals in the late 1990s was a factor to high turnover and the lack of organizational

commitment [12]. The effectiveness of the system planning is required by the commitment of the organization.

There is an inadequate literature found in relating to the commitment and SISP in the banking sector in Sri Lanka. Abdulhussein[13] states “Sri Lankan organizations use Information Systems as an instrument to perform routing task with accuracy and speed at lower cost”. He also pointed out the lack of planning, lack of top management support and inability to support strategic systems as the reasons for the above situation even though there was high quality technology. One research found [8] that the OC increases, SISP success increases until it reaches maximum; as OC continuously increases, and success decreases. This is consistent with the notion that too much planning (in terms of OC) can be detrimental to SISP success. It thus suggests the existence of some optimum level of OC. Even though this research discussed the relationship between OC and SISP, it does not emphasize only the banking sector. All these factors point out that there is a gap between commitment and success of SISP. What is theoretically discussed may not practically occur. The practical situation is that the researcher does not know the degree to which OC contributes to the success of SISP in the banking sector in Sri Lanka. The researcher is trying to find out the solution for this problem.

1.3 Research Objectives

The following objectives to be achieved after completion of this research,

1. To identify the present level of OC on IS planning in the banking sector.
2. To identify the most important factors for the OC in existing SISP in the banking sector.
3. To measure the degree of SISP success in the banking industry.
4. To measure the relationship of OC and SISP.
5. To develop a model to improve the success of SISP to Sri Lankan banking sector.

1.4 Significance of the Study

Rising tide of the competition among banks, survival depends on the innovative technological transformation. Well planned Information Systems play a vital role to be success in the long run. Findings of this research will lay benefits for the banking

sector in Sri Lanka as well as for the future researchers to identify the most appropriate SISP. According to Laudon and Loudon [1], Managers are the agents of any organization. They work for the success of the organization to achieve its goals and objectives. When the organizations are successful, it increases benefits to the managers. Researcher believes that this research will assist in identifying the practical situation of managers' attitudes towards SISP and methods they easily implement accordingly. Based on research findings the managers are able to develop better relationship between their business and IT, hence end users will benefit by having effective system with easy access.

1.5 Research Methodology

1.5.1 Population

Population consists of an entire set of objects, observations or scores that have something in common. The population in the study is all the licensed commercial banks and licensed specialized banks listed at the Central Bank web. Even though there are 34 licensed commercial banks and licensed specialized banks listed at Central Bank web, banks located in Colombo district are considered as the sample.

1.5.2 Sample

Sample is the representative part of its population. Sample consists of 31 banks where their head office located in Colombo district is considered as the sample. Questionnaire consists of four parts. Respond to Part A of the questionnaires indicates whether the bank has SIS or not. Part B questions design to identify the OC in the banking sector. Part C measures the SISP success in the banking sector and Part D consists of some demographic information.

1.5.3 Data Collection Method

Data collected by the researcher himself are original in nature. Mainly research attempts to use multiple methodologies such as collecting background information, questionnaire survey, and personal interviews.

1.5.4 Data Analysis

Data analysis will be done using statistical analysis package. Example: SPSS 15 version. Other than SPSS, spreadsheet and word processing software will be used.

1.5.5 Nature and Forms of Results

Results will be presented in the form of graphs, charts, tables with the description of each. Comparison between variables are more importantly mentioned

1.6 Scope of the Study

Population selected is only the licensed specialized and the licensed commercial banks in Colombo. There are 34 banks in the population. Sample will be selected; based on results of the banks head office are located in Colombo district. Due to these reasons sample may not sufficient for the study. Difficulties arise in literature survey, due to limited number of research has conducted relating to OC and SISP in the field of IT in banking sector. Time frame for the research including deadlines and the course length will limit the quality. Data collection will be difficult due to unavailability of information.

1.7 Structure of the Report

The structure of the research study consists of six chapters. The chapter one dedicates to the introduction of the research. It also covers the background of the research, research problem, research objectives, research methodology in brief, and the limitations of the research.

Chapter two explains the related literature available to support forming the conceptual framework for the research problem. The literature review covers the review on the SISP, OC, and other information related to the topic. Various theories and empirical studies carried out so far to investigate any relationship between those variables are reviewed in this chapter.

The conceptual framework and formulation of hypotheses are presented in chapter three. This includes the conceptual model of the research, hypotheses, definitions of the concepts and variables and the operationalization of the research model. Further this chapter describes the methodology adopted to carry out the study. It includes the study setting, design, and methods of survey, population and sample, methods of data collection, methods of measurement, and the techniques of data analysis.

The data presentation and analysis are given in chapter four. It includes the analysis of reliability and validity of the instruments used to collect data, and the Univariate and Bivariate analyses.

Chapter five includes the discussion of findings from the data analysis presented in the chapter four. It includes the discussion of the relationships between the dependent variable (SISP success) and the independent variables (Sufficient resource allocation, Organizational support, Key people stay on SISP from start to finish and maintains the continuity, Management Control, Management expectation, High credibility) in the research model.

The conclusions, recommendations, limitations and the implications of the study are presented in the final chapter.



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CHAPTER 02

LITERATURE REVIEW

2.1 Introduction

This chapter encloses previous studies and findings of OC and SISP. Literature survey emphasizes the necessity and the relevancy of the study for the field of IS and it provides theoretical foundation for the study.

2.2 Organization

Organization is an integrated bound of various functions, such as services, marketing, production and administration etc. There are departments and departmental effectiveness and successfulness. It matters the entire organizational role. Organizations are vital instruments in our society. Their accomplishments in industry, banks, education, health care, or any other activity have resulted in impressive gains in our standard of living and international power. Organizations are also creating the setting in which the majority of us spend our lives and influence on our behavior. Well-managed organizations are critical to our society. Some of our problems are due to failure or ineffectiveness of organizations. Organizations are the present feature of modern industrial society. We look to organization for food, clothing, education, employment, entertainment, health care, transportation, and protection of our basic rights. Nearly every aspect of modern life is influenced in one way or other by organizations. Organizations are social entities that enable people to work together to achieve objectives they normally could not achieve working alone.

Different definitions are given to identify the organizations. An organization is defined as a stable, formal, and social structure that takes resource from the environment and processes them to produce output. Technical definition focuses on three elements of an organization. Capital and labour are the primary production factors provided by the environment. The organization transfers these input in to products and services in a production function. The products and services are consumed by the environment in return for the supply input. An organization is more stable than informal groups in terms of longevity and routines. Organizations are formal legal entities with internal rules and procedures that must abide by law.

Organizations also are social structures because they are a collection of social elements, much as a machine has a structure- a particular management value, shifts, and other parts. Behavioral definition says that the organization is a collection of rights, privileges, obligations, and responsibilities that are directly balanced over a period of time through conflict and conflict resolution [15].

2.2.1 Common Characteristics of Organizations

We are working as an organization since childhood to achieve our personal goals as well as organizational goals. There are common characteristics of organizations [14]:

- Coordination of effort
- Common goal or purpose
- Division of labour
- Hierarchy of authority

2.2.1.1 Coordination of Effort

Individuals who join together and coordinate their mental and/or physical efforts can accomplish great and exciting things. Building the great pyramids, conquering polio, sending manned flights to the moon – all these achievements have exceeded the talents and abilities of any single individual. Coordination of effort multiplies individual contributions.

2.2.1.2 Common Goal or Purpose

Coordination of effort cannot take place unless those who have joined together agree to attempt for something of mutual interests. A common goal or purpose gives the organization focus and its members a gathering point.

2.2.1.3 Division of Labor

By systematically dividing complex tasks into specialized jobs, an organization can use its human resources efficiently. Division of labor permits each organization member to become more proficient by repeatedly doing the same specialized task. The advantages of dividing labor have been known for a long time. One of its early advocating theory or proposal was the pioneering economist Adam Smith.

2.2.1.4 Hierarchy of Authority

According to traditional organization theory, if anything is to be able through formal collective effort, someone should be given the authority to see that the intended goals are carried out effectively and efficiently. Organization theorists have defined authority as the right to direct the actions of others. Without a clear hierarchy of authority, coordination of effort is difficult, if not impossible to achieve. Accountability also is enhanced by having people served in what is often called in military language, the chain of command. This is explained by organization charts.

An organization chart is a diagram of an organization's official positions and formal lines of authority. In effect, an organization chart is a visual display of an organization's structural skeleton. With their familiar pattern of boxes and connecting lines, these charts are a useful management tool because they are an organizational blueprint for deploying human resources. Organization charts are common in both profit and nonprofit organizations. Every organization chart has two dimensions, one representing vertical hierarchy and one representing horizontal specialization. Vertical hierarchy establishes the division of labor. Following are the basics, which influence in developing the organization's structure.

- Clear and complete organizational policies
- The activities of staff experts, when there is specialized staff the span can be wider.
- High subordinate competence.
- Nature of work. If the work is more complicated supervision is able only to a limited number of subordinates. On the other hand if the work is not complicated same supervisor can supervise a larger number of people.
- Task combination. When the tasks of subordinates required more combination
- Professionalism. When the subordinates are professionals the span of control is wider.

2.2.2 Types of Organizations

Organizations are created to pursue particular purposes; they can be classified according to their intended purposes. The classification by organizational purpose discussed here has four categories [14]:

- Business organizations
- Nonprofit service organizations
- Mutual benefit organizations
- Commonwealth organizations

Classifying organizations by their purpose helps clarify the variety of roles they play in society and the similar problems shared by organizations with similar purposes.

2.2.3 Existence of Business

Commitment is essential for the long term survival of any organization. Without support of the top managers and other parties the organizations no longer alive. To conduct the business smoothly each party in the organization should pay their attention to the organization. Previous researches evident that the existence and success of business organizations lead the better OC for planning of Information Systems strategically [8].

2.3 Commitment

Commitment means to do a duty or pledge to some thing or someone, and can refer to: Personal commitment, interaction dominated by obligations. These obligations may be mutual, or self-imposed, or explicitly stated, or may not. Distinction is often made between commitments as a member of an organization (such as a sporting team, a religion, or as an employee). A personal commitment is solemn pledge or promise to yourself for your personal growth for the purpose of achieving a personal or spiritual goal. Brand commitment refers to the strength of the relationship between consumers (or customers) and a particular brand (or service). Involuntary commitment, the practice of using legal means or forms to commit a person to a mental hospital, insane asylum or psychiatric ward against the will or over the protests of that person. Ontological commitment is the belief in ontology in philosophy. Commitment in computer science says about the several branches of Computer Science around the notion of something pledged [17]. Some researches commitment is concerned with the level of attachment and loyalty to an organization among its employees. Organizations increasingly compete to attract and retain the most able staff and those committed to the organization might be expected to have longer tenure. Demands to compete through high quality require a workforce willing to display the motivation, flexibility,

and belief in product or service that produces high performance and commitment should help to ensure this [18].

2.3.1 Organizational Commitment

OC is defined as the loyalty of an individual to the organization itself. Someone with higher OC would identify strongly with the organization and take pride in considering himself or her self a member [19]. OC is a common construct used in management, marketing, psychology, and other disciplines as an antecedent of job involvement, job satisfaction, turnover, and absenteeism [20]. Commitment is a multidialectal construct. Prevalent dimensions of this construct explored in research include continuance commitment, normative commitment, and general feelings of organizational loyalty and pride. The continuance commitment perspective views commitment from the position of loss; employees remain with an organization because they will lose existing benefits if they leave [21]. Some researchers have defined organizational commitment as the employees' psychological attachment to the organization. It can be constructed with other work related attitudes such as job satisfaction and organizational identification [6]. Interest in commitment as an attitude has been mainly concerned with commitment to an organization. It is equally plausible to consider commitment to a job, a work team, a profession, to one's family, or to a range of other foci. Indeed, the possibility of multiple and potentially competing commitments have led to a strand of research on dual commitments [18].

Organizations have to develop IS to fulfill the different requirements of the users. Planning IS requires the commitment of the organization. Further OC is a necessary factor for the success of SISP. Deficiency of organizational commitment on SISP has been shown as a major problem for the success of SISP [22]. Some researchers have pointed out that organizational commitment means company support for SISP [7]. Research conducted by Lederer, et. al., [8] on SISP and OC was tested using the following criteria

- Sufficient resources were allocated to the SISP study
- Organizational support was built for the SISP study
- Management's expectations for the result of the SISP study were kept reasonably

- SISP study leaders and sponsors had high credibility
- Key people stay on the SISP study from its start to finish to maintain continuity
- Management controlled the SISP study closely enough to resolve conflict among different organizational subunits.

Effectiveness of the organizations SISP leads the organizational commitment [23]. OC plays a vital role in planning Information Systems. Following sections describe the Information Systems and its planning.

2.4. System

System is a group of interrelated components working together toward a common goal by accepting inputs and producing outputs in an organized transformation process [24]. Each and every point has been described here in detail.

Input	captures or collects raw data from within the organization or from its external environment.
Processing	converts this raw input into a more meaningful form.
Output	transfers the processed information to the people who will use it or to the activities for which it will be used.
Control	evaluates and corrects the operations.

2.4.1 Information System

IS is defined as an arrangement of people, data, processors and IT that interacts to collect, process, and store, and provides as output information needed to support an organization. IS in organizations capture and manage data to produce useful information that support and organization and its employees, customers, suppliers, and partners. Many firms consider information systems to be essential to their ability to compete or gain competitive advantage. Most organizations have come to realize that all works need to participate in the development of information system. Organizations have different information systems to serve the different levels of the organizations [1], [25].

The ideas of IS in the organization have been identified as a strategic resource and it provides competitive advantages [26]. A system has become a vehicle for diversification and growth, propelling their developers into entirely new lines of business such as telemarketing [27]. Although the use of IS may not always lead to industry domination, it can serve as an important weapon in a firm's strategic arsenal. Up to now, companies have uncovered SIS in an ad hoc fashion, without the benefit of a planning methodology designed specifically for the purpose. But as the pace of competition accelerates in the 80's, competitive leaders must develop a more systematic approach for identifying competitive advantage [27].

2.4.2 Information Systems and Organizations

Information Systems and organizations influence one another. IS must be aligned with the organization to provide information that important groups within the organization need .at the same time, the organization must be aware of and be open to the influences of IS in order to benefit from new technology. The interaction between IT and organizations is very complex and is influenced by a great many mediating factors, including the organization's structure, standard operating procedures, policies, culture, surrounding environment, and management decisions. Management must be aware that IS can markedly alter life in the organization. They cannot successfully design new systems understanding existing systems without understanding the organizations. Managers do decide what systems will be built, what they will do, how they will be implemented, and so forth. Sometimes, however, the outcomes are the result of pure chance and of both good and bad luck [15].The evaluation of the IS function and the notation that IS serves different purposes in various organizations has been extensively discussed. Nolan found that the IS function goes through six stages of growth and these organizations use IS in different manner in each stage. Some organizations' IS activities represent an area of strategic importance [28].

2.4.3 Organization and Competitive Advantages

When talking about competitive advantages, the organizations should first understand the firm's relationship with its surrounding environment. Organizations exist in the environment and cannot survive alone. Many parties interact with the organization. From these parties the competitors are very much important. To day the business world is higher competitive. To exceed competition, technologically sound

Information Systems and IT play a strategic role [29]. Primary role of early Information Systems were operational and a management support. But recently companies use IS as strategic weapon to reap significant competitive advantages [30]. Hence the pace of competition intensifies in the 80's, the use of IS as a competitive weapon is accelerating. Further real world examples for SIS's are the computerized reservation system, American airlines, the cash management of Merrill Lynch, and the order entry system of American hospital supply [2]. Competitors are producing new products and services, and strongly marketing them. Customers are becoming more selective in their choices of those products and services. Governments are passing more and more legislations regulating organizations, while suppliers increasingly attempt in innovative ways to obtain the highest possible prices for their materials. All the while, competitors are assessing these changes in the external environment for their own strategic business planning. In order to realize the value of new systems Information System, - planners identify the changes in technology, competitors, customers, government, and vendors [31].

This competitive advantage results in recognition of opportunities through creativity and innovation, followed by rapid and effective implementation of Information Technologies to take advantage of these opportunities [30]. One of the most critical issues that the IS executives have faced was competitive advantage.

2.4.4 Strategic Information System

Strategic Information Systems are Information Systems that used to support or shape an organization's competitive strategy, its plan is for gaining and/or maintaining advantage [27]. SIS is different from other systems as they change the way the firm competes, they have an external (outward looking) focus, they are associated with higher project risk, they are innovative (and not easily copied) [32]. A research conducted for GTE- a diversified, international, telecommunications and electronics company- The information management planning staff realized the importance of the strategic perspective on Information Systems and took on the challenge of developing and implementing planning processors based on the following point of view. They notice the tasks as two-fold: introduce management to this new perspective and secure its support, create a mechanism for generating and evaluating SIS proposals. To

accomplish these ends, they designed a five phase SIS planning processors. The following Table 2.1 shows the planning processors. [27].

Table 2.1- SIS planning processors

Phase	Activity	Content	Purpose
A	Introduce Information management(IM) chief executive to SIS concepts	Overview of SIS concepts: cases of SIS applications in other companies	Gain approval to proceed with SIS idea generation meeting for IM group
B	Conduct SIS idea generation meeting for IM middle managers	Execute SIS idea-generation methodology; evaluate SIS ideas	Test SIS idea-generation methodology; identify significant SIS idea for executive consideration.
C	Conduct SIS idea-generation meeting for Information Management executives	Execute SIS idea-generation methodology; evaluate SIS ideas	Identify SIS ideas and evaluate these together with ideas from previous meeting.
D	Introduce top business executive to SIS concept	Overview of SIS concept and some candidate SIS idea for business	Gain approval to proceed with SIS idea generation meeting for business planners
E	Conduct SIS idea generation meeting for corporate business planners	Execute SIS idea-generation methodology; evaluate SIS ideas	Identify SIS ideas and evaluate these together with ideas from previous meetings

Source: N.Rackoff, C.Wiseman, W.A.Ullrich, Information Systems for competitive advantage: implementation of a planning process, MIS Quarterly, vol.9, no.4, 1985 December, p.289

Further some researches have defined that the Strategic Information Systems are computer systems at any level of organization that change the goals, operations, products, services, or environmental relationships to help the organization to gain competitive advantage. This system drives organizations to a new behavior pattern. Organization may need to change their internal operations to gain advantage from new technology. These changes require new managers, new work force, and much closer relationship with its customers and suppliers [1]. Strategic Information Systems use IT to develop products, services, processors and capabilities that give a business a strategic advantage over the competitive forces it faces in its industry. Porter have identified five competitive forces. The forces include firm's competitors, new entrance, substantive products, bargaining power of suppliers, and bargaining power of customers. IT can be used to overcome these forces using following strategies [33].

Cost strategies-	Becoming a lower cost producer, lowering your customers or supplier cost or increasing the cost your competitors must pay to remain in industry.
Differentiation strategies-	Developing ways to differentiate your companies products or service from your competitors' so, your customers perceive your products or services as having unique features or benefits.
Innovation strategies-	Introducing unique products or services, or making radical changes in your business processes that cause fundamental changes in the way business is conducted in your industry.

Table 2.2 shows the companies which are using IT to implement strategies for competitive advantage.

Table 2.2- Strategies for competitive advantage

Strategy	Company	Strategic Information System	Business Benefits
Cost strategies	Levitz Furniture	Centralized buying	Cut purchasing cost

	Metropolitan Life	Medical care monitoring	Cut medical cost
	Deere & Company	Machine tool control	Cut manufacturing cost
Differentiation strategies	Navistar	Portable computer-based customer need analysis	Increase in market share
	Setco Industries Consolidated Freightways	Computer aided job estimation Customer online Shipmen tracking	Increase in market share Increase in market share
Innovation strategies	Merrill Lynch	Customer cash management accounts	Market leadership
	Federal Express	Online package tracking and flight management	Market leadership
	McKesson Corp	Customer order entry and merchandising	Market leadership

Source: J.A.O'Brian, Introduction to Information systems, Irwin McGraw-Hill, 8th ed.1997, p.98

2.5 Planning

Planning involves setting objectives and policies to enable an organization or department to deploy its resources effectively and efficiently to achieve goals [34]. The act of planning requires making risk-taking decisions at the present time with the best possible knowledge of their outcomes. Clearly, without planning it is very difficult to achieve any thing. The IS department should attempt to achieve the organization's goals and must adhere to corporate policies. By ignoring the policies of the organization, it is impossible to deploy resources efficiently to support corporate objectives.

2.5.1 Strategic Planning

Most corporations today have some form of corporate plan. However, very few are successfully implemented. In theory, strategic planning is the mechanism whereby the corporation organizes its resources and actions to achieve its objectives. It is formal rather than an informal process, the usual contents of which are illustrated in Table 2.3, while the process of strategic planning is illustrated in Figure 01. Planning will be conducted at hierarchical levels within the corporation, dependent upon its

complexity. For the multi business firm, plans will be established at the corporate, business unit and departmental or market segment levels [18].

Table 2.3 -Strategic plan components

Mission	Defines the present and desired position of the corporation. Similarly, a mission will apply at the business unit level.
Objectives	Qualitative and quantitative statements of what the corporation wishes to achieve over a measurable future. These should be internally consistent and fit the mission.
Goals	Specific short- and long-term quantitative results which directly support the objectives measured as key performance indicators. They should also reflect the critical successful factors for each business within the corporation.
Strategies	These will apply at both the corporate and business unit levels.



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Source: C.L. Cooper and C.Argyris, Encyclopedia of Management, Blackwell publishers, 1998, p. 85

- Corporate level - establishes strategy for the total corporation
- Business unit - applies in three phases, as follows:

Formulating strategy

What are the critical factors for success?

What are the external opportunities and threats?

What are the relative strengths and weaknesses?

What strategic alternatives are available?

What assumptions have been made?

What sensitivities need to be tested?

Detailed strategic programs

What specific programs achieve objectives?

What resources will these require?

What are the risks/rewards of each program?

How will these programs be managed?

Strategy implementation

What organization/human resources will be adopted?

What milestones will be used to monitor progress?

Is the MIS system appropriate?

Is the reward and sanction system appropriate?

Figure 2.1- Strategic planning process

Strategic planning has long been recognized as one of the "fundamental" activities of top management. Typically, this activity is undertaken to reduce uncertainty to ordinate the, efforts of organizational members, establish dialogue and lines of communication among various organizational subgroups and proactively search for business opportunities within the competitive domain. While the logic and purpose of strategic planning are readily understood, the actual process and its appropriateness within the context of the organization is rather complex. Approaches to planning are varied, as are the results of the planning effort. Therefore, a major focus within the literature of strategic management continues to be the conceptualization: of planning process dimensions (or systems), and their association with measures of effectiveness [35]. Some organizations have considered strategic planning is the most critical issue and rank to the first in the importance [30].

Different types of strategic plans with different levels have in the organizations. The decisions taken in each level may differ from one another. The different types of strategic plans and important strategic decisions are illustrated [36] in Table 2.4

Table 2.4- Types of strategic plans

Organizational level	Types of strategic plan	Key strategic decisions
Corporate	Corporate strategic plan	Corporate vision Corporate objectives and resource allocation Corporate growth strategies Business-unite composition
Business	Business strategic plan	Market scope Competitive advantage
Marketing	Marketing and production plan	Target market approach Marketing mix approach. Specific target market. Specific marketing mix. Execution action plan.

Source: W.O.Bearden, T.N.Ingram, and R.W.Lafroge,Marketing-Principles and perspectives,McGrowHill,4th ed,2004,p.47.

2.5.2 IS Planning

Information systems (IS) planning is an organizational administration process that involves the consideration of alternative methods for employing information, computing; communications resources in furtherance of the Organization's objectives and its overall "business" strategy. IS planning takes place at a number of different levels of organizations. At the highest level of strategic IS planning, the relationship between the organization's objectives and strategy and its IS resources is articulated. At a much lowest Level, IS project planning involves the specification, activities, resources, and relationships that will be required to develop a new computer system, to install and implement new hardware and software, or perform any other complex task involving computer resources [18].

IS planning has been considered by IS practitioners to be among the more important IS issue. As pointed out earlier, organizations have begun to view that there is a strategic resource, with the potential to help them adapt new strategic postures by exploiting information based competitive advantage. Effective planning requires the discipline and vision to foresee problems and opportunities within a turbulent and

complex environment [37]. Among the different tasks in the organization IS planning was considered as key IS management issue [37] and it is one of the difficult task in an organization. McLeod [38] mentioned that the organizations have strategic plans. Based on its strategic plan, organizations developed functional plans which would align with the strategic plan. Each functional plan describes the utilization of resource requirements of the function. For the information requirement CIO can integrate the functional areas' to develop strategic plan for information resource. Figure 2.2 shows the integrated function for information requirement.

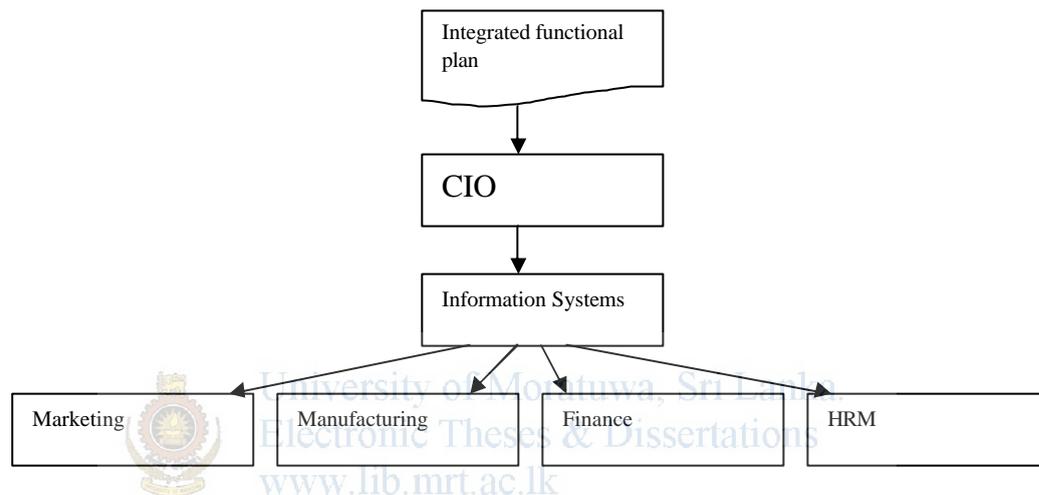


Figure 2.2- Integrated functions for information requirement

Source: Jr.R.McLeod, “A functional approach to strategic planning for information resources: The key roles of the IS and HR functions”, Texas A & M University

IS planning is not a simple task. Very many difficulties have to be faced when planning IS effectively. Lederer and Mendelow[39] identified comprehensive list of most important ISP difficulties.

1. Determining top management's objectives.
2. Determining the end users' need.
3. Responding to both the short-term and long-term impact of changing environmental factors such as: new technology, government regulations, competitors' action, the market, the user and the workforce.
4. Establishing and maintaining priorities.
5. Coordinating IS plans and priorities with corporate plans and priorities.
6. Estimating requirements for: hardware, labor, skills, training, space, and travel.

7. Matching people to each project.
8. Allocating resource to new versus maintains projects.
9. Obtaining support and commitment for resources from: the users, the IS department, and top management.
10. Implementing planning methodology.
11. Maintain flexibility in the planning process.
12. Justifying projects and their funding.
13. Planning for security and disaster.
14. Getting plans accepted.

Even though many ISP methodologies have been used for many years still the organizations fail to deal effectively. Whit of IS related problems (due to the methodologies) do not seem to realize the exact IS related problems. Most of them paid attention to the technological problems but paid too little attention to the interrelationship between IS and the organizational factors [40].

IS planning sometimes is a part of business planning at large [41] IS planning has been identified as vital to continuing organizational success and effective IS performance [42]. Some researches have identified information planning; as information strategic planning and strategic IS planning are the similar wordings for ISP.

2.5.3 IS Planning Models

According to Ramaraj[43] existing IS planning models can be broadly classified into impact and alignment models. Impact models focus on the potential impact of IS on organizational tasks and processes. Alignment models focus on aligning the IS technology plan with organizational strategy and business goals. Popular impact methodologies include value chain analysis [44], and critical success factors [45]. The alignment methodologies include IBM's business systems planning [46], Robert Holland's strategic systems planning [47], information engineering [46] and method/1 from Anderson Consulting. Each of the planning models has been discussed further in detail.

2.5.3.1 Value Chain Analysis

Value chain analysis is a form of business activity analysis. Further this model highlights specific activities in business where competitive strategies can be best applied. Every firm has collection of activities to carry out design, produce, market, deliver, and support its product. These activities are described using a value chain. Value chain analysis focuses on the key value-adding business activities and processes that could be made more effective using IT. However, this methodology is too abstract and does not address issues of systems development and implementation. Business should try to develop SIS for both the internal value chain activities and the external value activities that add the most value. A strategic analysis might for example, identify sales and marketing activities where Information Systems could provide the greater boost. The analysis might recommend the system to reduce marketing cost by targeting marketing companies more efficiently or by providing information for developing products more finely attuned to a firm's target market. A series of systems, including some links to some of the value partners, might be required to create a strategic advantage. Figure 2.3 shows the firms value chain and the industry value chain. It illustrated various examples of SIS for the primary activities of a firm and of its value partners that would add a margin of value to a firm's products or services [1].

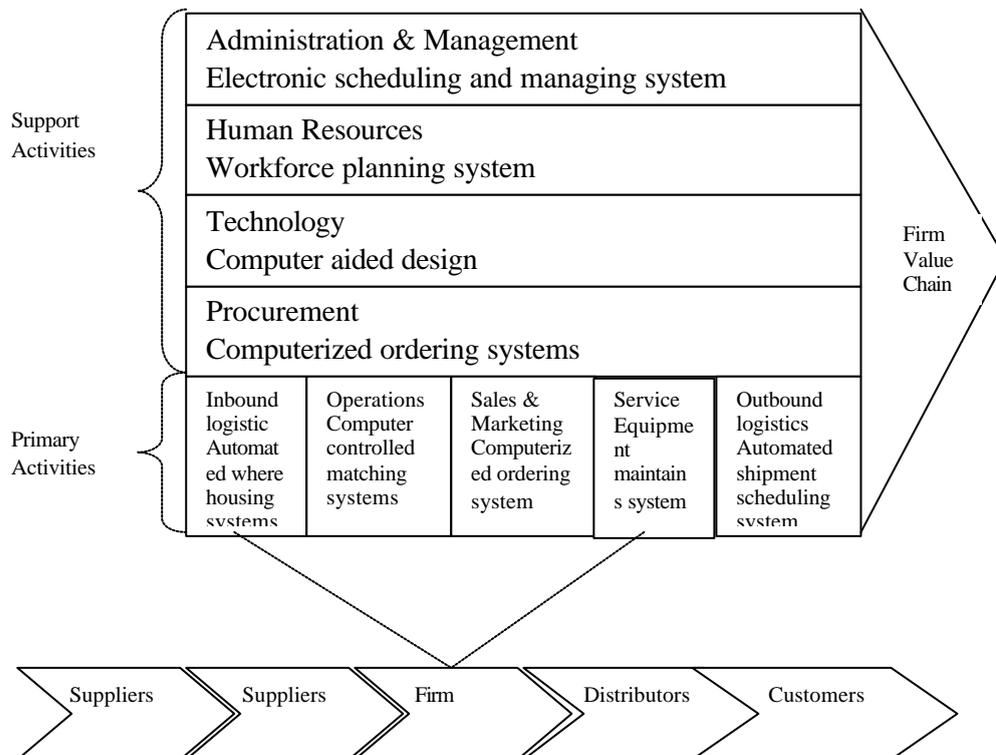


Figure 2.3- Firms value chain and the industry value chain

Source: K. C. Laudon, J. P. Laudon, *Management Information System*, 5thed. Prentice-hall of India, 1998, p. 92

2.5.3.2 Critical Success Factors (CSF)

CSF methodology is used for identifying key information requirements for the success of the organization and its managers. Mainly, the methodology focuses on key information needs of senior management and builds information systems around those key needs. The methodology focuses more internal sources for the critical information needs and ignores value adding aspects of IS. The methodology is more analytical based on organizational control model of critical decisions and not comprehensive.

2.5.3.3 Business Systems Planning (BSP)/Enterprise Analysis

BSP is more process oriented. It combines top down analysis and planning with bottom up implementation. The information requirements are derived from business processes. The weaknesses of BSP are: detailed, time consuming, and costly; It does not include a methodology for software design, and the planning team requires a high degree of IT experience [1].



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2.5.3.4 Strategic Systems Planning (SSP)

SSP focuses on functional areas of business and the data architecture is derived from the business functional model. The data architecture is used to identify and design new application systems. This methodology combines top and bottom-up implementation though structured techniques are hyped as the answers to all systems development problems

2.5.3.5 Information Engineering (IE)

IE is more data oriented and provides techniques for building enterprise data, process models and a comprehensive knowledge base. The knowledge base provides guidelines to create and maintain Information Systems. Though IE is a comprehensive methodology, it is lengthy and the success depends on the team leader. Also, it is difficult to get support from top management.

2.5.3.6 Method/1 (from Anderson Consulting)

It is a layered approach, having methodology at the top layer, techniques in the middle layer, and tools supporting techniques at the bottom layer. The various techniques supports are Data Flow Diagrams (DFD), matrix analysis, functional decomposition, focus groups and Delphi studies. This method is comprehensive and automated tools are supported.

Table 2.5 Summarized strengths and weakness of the above planning models

Planning model	Strengths	Weaknesses for building flexibility and success
Value chain analysis	Focuses on value addition for key business activities. Helps in devising application systems to support key business processes.	Does not support changes in business strategies. No response to environmental fluctuations.
Critical success factors (CSF)	Helps to prioritize key information systems and requirements based on critical decisions being made by users	Ignores non-key applications in IS planning. More subjective in nature. Fails to cover the external systems.
Business systems planning (BSP)	Application systems and requirements are derived from firm's business processes. Information architecture is derived through functional area analysis.	Focusing only on internal information requirements and not covering external data-processing needs. More process-oriented and no value addition.



Strategic systems planning (SSP)	Information architecture is derived from the business strategies and functional areas of business.	Functional area analysis is done in an isolated manner and information requirements are not derived from cross-functional areas. Ignore the system integration issues.
Information engineering (IE)	Application systems and requirements are derived by analyzing data models of an organization.	More data (internal)-oriented and no consideration of external data and value addition. More analytical in nature.
Method/1	A three-tier approach: top-tier is planning methodology, middle-tier is techniques supporting methodology and the bottom-tier has tools supporting techniques	Ignores the aspect of integration of Cross-functional information systems.



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Source: Source: R.Palanisamy, “Strategic Information Systems Planning model for building flexibility and success”, *Industrial Management and Data Systems*, vol.105, no 1, 2005, pp.65

The above discussed SISP methodologies have some limitations so that model for IS planning is proposed [43] in Figure 2.4

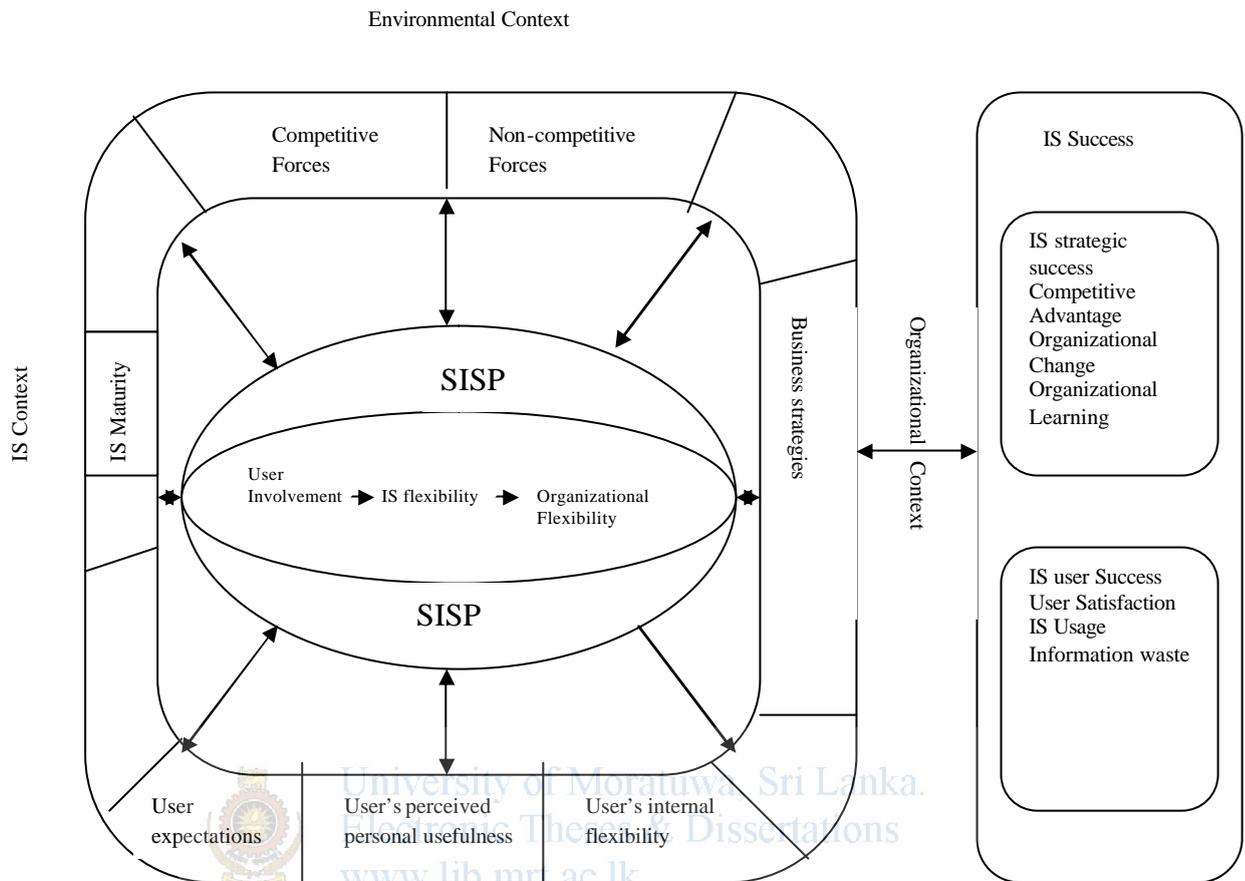


Figure 2.4- Model for IS planning

Source: R.Palanisamy, "Strategic Information Systems Planning model for building flexibility and success", *Industrial Management and Data Systems*, vol.105, no 1, 2005, pp.66.

2.6 Strategic Information System Planning

2.6.1 Evolution of IS Planning

Tracing the development of IS planning can serve to describe its various levels, since the forms of IS planning that represented its highest and most sophisticated levels in past eras are still conducted today. Higher (more strategic) levels of planning have been added to the previously existing planning activities in each era as the IS planning field has evolved. This approach also offers the opportunity of identifying the underlying concepts and techniques associated with each planning paradigm.

2.6.2 The Pre-Strategic Planning Era

In the early computer era, the most sophisticated level of IS planning involved assessing the future computing needs of the enterprise and ensuring that adequate and appropriate computing capacity was available to fulfill those needs. An associated planning task was that of evaluating and selecting the applications and systems development projects that would be founded and implemented by the enterprise. At the project level, project plans were developed to ensure the appropriate milestones were identified and that specific activities and tasks were assigned to appropriate IS professionals.

The system development life-cycle (SDLC) was the primary conceptual basis for planning in this era. The SDLC for Information Systems evolved from the basic SDLC for complex systems. The SDLC postulated that the development of all complex systems naturally evolved through a sequential series of phases that were most appropriately managed in different ways, and which demanded different mixes of resources to complete effectively and efficiently. An extremely simplified version SDLC is shown at the center of figure 05 where it is labeled "Traditional SDLC".

In this era, the multi-project levels of planning (capacity planning and project selection and evaluation) were based on concepts of forecasting and project selection, respectively. Capacity planning involved the forecasting of computing requirements and planning for the acquisition installation, and testing of new generations of hardware and software. Project evaluation and selection were conceptually based on the project selection methodologies that had largely been previously developed and used in the research and development (R&D) context.

Because "cost avoidance" was the major criterion for project evaluation in this pre-strategic era, this project selection procedure was relatively straight forward, primarily involving the estimation of the costs that could be avoided if manual systems were to be automated. This criterion usually resulted in the approval of projects that were at the operational or operational control levels. Those projects that substituted computer systems for human operatives or those that measured and controlled the performance levels of operations were accepted as being cost effective. Projects, whose rationale depended on sometimes intangible benefits that they might produce, were difficult to

justify because of the emphasis on the cost avoidance criterion and the relatively greater ease of forecasting costs versus benefits. The highest level plan that came into being in some organizations during the latter part of this pre-strategic era was the "IS master plan." This plan demonstrated the intended relationships among the various systems and subsystems that the organization operated or planned to develop. The need for a master plan was recognized by organizations that had developed independent and incompatible systems. While such systems may well have been individually effective to operate, they could not be readily integrated to provide information that might be of use to higher-level management. Illustrative of this situation were many banks that had developed expensive and operationally effective product-oriented computer systems. Their checking account systems, loan systems, and trust systems, for example, were databases and they were not readily cross-referenced to enable a marketing manager to readily determine which of the banks products and services were utilized by a given customer. The master plan was intended to ensure systems integration. The adoption of this notion was the precursor to the IS strategic planning era.

2.6.3 The Early Strategic IS Planning Era.

The simple idea of deriving the IS strategy directly from the overall organizational strategy, and thereby of developing the IS resources that best supported the organization's strategy, had profound effect on IS planning and on IS development activities. When IBM incorporated the notion into this widely known business systems planning (BSP) methodology, strategic IS planning came into widespread use.

This expanded domain for IS necessitated a change from the simple, cost-avoidance IS project selection criterion that had been in common use to more sophisticated criteria that gave greater consideration of the potential benefits that might result from an IS project. Because cost remained a necessary consideration and benefits were often intangible and difficult to quantify, the net result was a multidimensional criterion that was conceptually similar to those that had been in use in R&D project selection for some time.

For the first time in the history of many firms, IS an application, whose benefits were intangible, and/or more difficult to forecast than to be cost avoidance, came to be

given higher priority. The result was that top managers developed a greater appreciation of the IS function as a potential contributor to business value rather than viewing IS merely as a service function.

The expanded planning horizons of IS and the emphasis on assessing and evaluating systems in more sophisticated ways have been conceptualized in terms of the expanded life-cycle shown in Figure 2.5 which shows a simplified version of the "traditional SDLC" embedded in a broader life-cycle that also includes strategic planning, systems integration planning, evaluation, and divestment phases. These phases serve to extend the

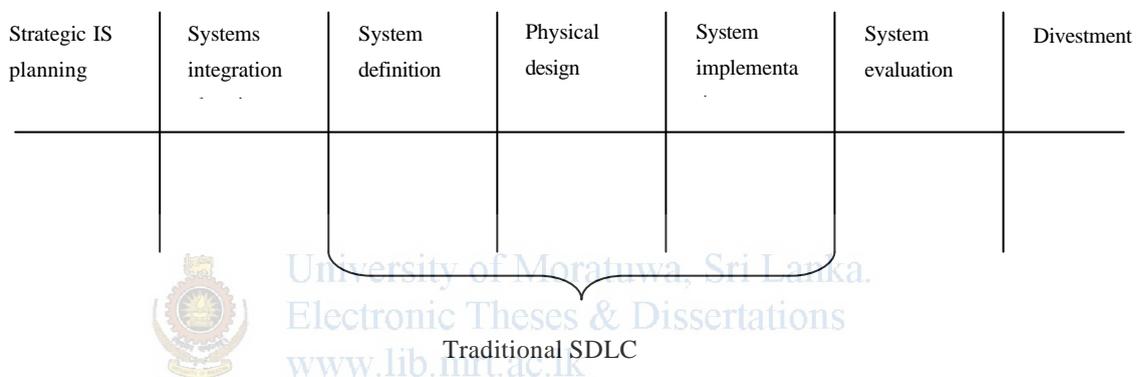


Figure 2.5 -Expanded systems development life-cycle

Source: C.L. Cooper and C.Argyris, Encyclopedia of Management, Blackwell publishers, 1998, pp.84

2.6.4 Traditional SDLC

The traditional SDLC, which applies to a single system, to a broader organizational context. The systems integration planning phase primarily involves the sort of systems integration functions that are implicit in the earlier notion of a "master plan". The strategic planning phase involves the development of an IS strategy that is derived from, and which directly supports, the business strategy.

In Figure 2.5 the two phases that are shown to begin after the traditional SDLC - evaluation and divestment - reflect the growing attention that has come to be paid to the formal evaluation of systems and the need to phase out systems. In the evaluation phase, other measures, such as user satisfaction and business value assessments, are commonly used to complement traditional cost, time, and technical performance

measures. These two phases further recognize that an IS, like any complex system, has a finite useful life. These phases reflect not only the need to evaluate systems, but also the need to plan for the shutdown, replacement, and phasing out of systems. In the earlier eras of IS planning, little attention was given to divestment, leading many firms to make the implicit assumption that systems would function forever. This assumption inevitably leads to decisions concerning systems maintenance, updating, and modification that might be significantly different from what they would be under the assumption of a finite useful lifespan for a system.

2.6.5 Current Trends in IS Planning

At least three major trends in IS planning are readily identifiable:

- (a) The integration of IS planning into overall organizational planning;
- (b) The integration of planning for various communications and information technologies
- (c) The development of planning for business process reengineering as an element of IS planning.

2.6.6 Strategic IS Planning

Strategic IS planning is the core of IS planning that directly involves the translation of organizational objectives and strategy into data, applications, technology and communications architectures that can best support the implementation of that strategy and the achievement of organization's overall objectives. It also involves assessment of the "product-market" opportunities that may be supported by existing and planned information resources (i.e. identifying whether the organizations information resources and competencies may suggest opportunities for it to carry on its activities in ways that may make it more competitive in the market).

Figure 2.6 shows these two major elements of SISP in terms of two arrows that connect an "organizational strategy set" and an "information resource strategy set.". The former represents the organizational mission, objectives and strategies that have been developed through a strategic "business" planning process. The right facing arrow shows that the information resources strategy set (composed of the information resources strategy and information infrastructure) is derived from the organizational strategy set. The left-facing arrow describes the assessment of

information resources that may be conducted to identify important changes in the organizational strategy set [18].

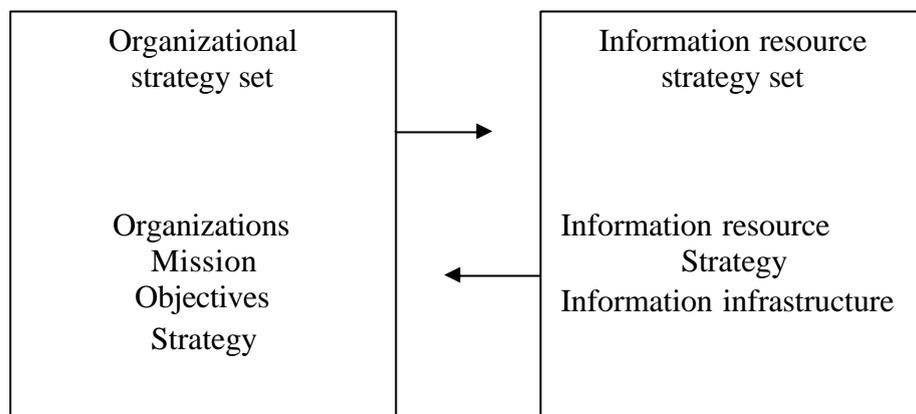


Figure 2.6- Strategic IS Planning

Source: C.L. Cooper and C.Argyris, Encyclopedia of Management, Blackwell publishers, 1998, pp.84-85

Strategic IS planning is an important and challenging management function. Chief executives, corporate general managers, and IS executives want to improve it [8]. To answer the question why SISP is so important, significant evolutionary evidence can be found. The challenging technology and recognition of its importance as a corporate resource drove this evolution. Specifically, the proliferation of internet based computing, outsourcing, personal computers, and user applications tended to push developmental activities outside the exclusive domain of professional IS groups, creating challengers that did not exist when SISP was first conceived. Also, organizations are aggressively searching for new ways to leverage information, knowledge, and IT in supporting strategic goals and competitiveness. Hence most of the firms consider SISP is both proactive search for competitive and value-adding opportunities, as well as the development of broad policies and procedures for integrating, coordinating, controlling and implementing the IT resource [48]. Researcher uses the following definition for this research. SISP is the process to determine computer-based applications, to help organizations and to achieve its business objectives. It includes formulating IS objectives, defining strategies and policies to achieve them, and developing detailed plans to effect the strategies and policies [5]. SISP is identified as an important management function. It help organizations to use IT more competitively, identify new, higher payback IT

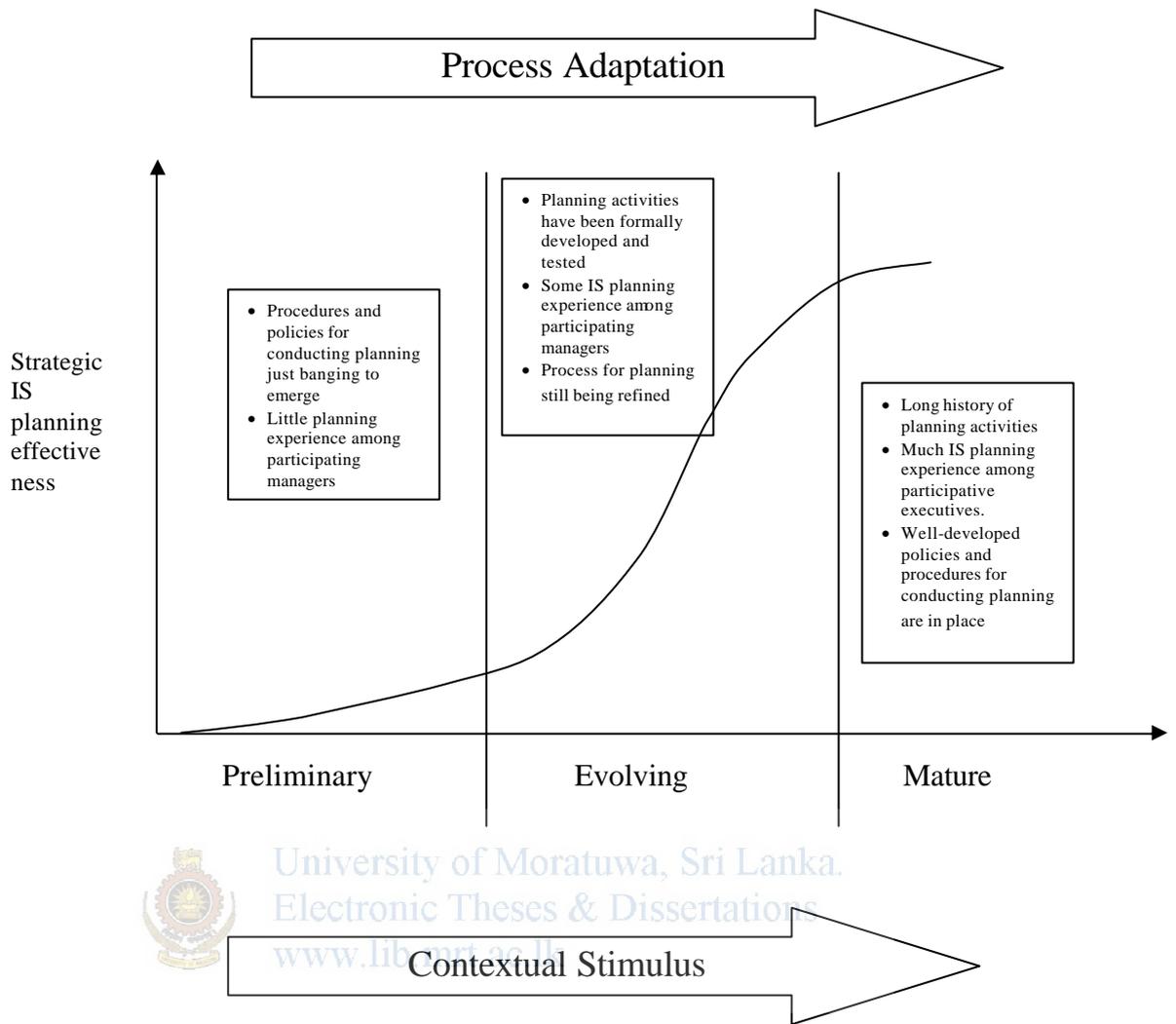
applications, and better forecast IT resource requirement[8]. SISP remains a top concern of many of many organizations [41]. Conflicts among stakeholders significantly and negatively affects the SISP process [49].Some researches have proposed a five phase framework for ISP [49] which is shown in table 2.6.

Table 2.6- Five phase framework for ISP

Stage	Stage 1-Activating Business Change		Stage 2-Pursuing Strategic Value		
	Phase	Perception phase	Evaluating phase	Selection phase	Construction phase
Purpose	Identification of IS strategic value	Identification of required business functions	Prioritization of potential IS projects	Generation of preliminary IS plans	Assessment of ISP effectiveness.
Change process	Unfreezing	Change	Change	Refreezing	Follow-up and feedback

Source: G.G.Lee and J.C.Pai, effects of organizational context and inter-group behavior on the success of SISP: an empirical study, Behavior and Information Technology, vol. 22, no.4, 2003 July, p.268.

Above five-phase framework enables organizations to constructs IS plans through the implementation of the three step change process. Hence strategic planning is an ongoing adjustment process, not a grand design process. The proposed framework enables users at all levels to participate to the process of strategy formulation and to modify strategic plans based on the view points provided by various stakeholders' [49].Further literature suggested that SISP aim is to alignment IS with business goals, exploiting IT for competitive advantage, directing efficient and effective management of IS resources, and lastly developing technology policies and architecture [41]. Grover and Segars have suggested three stagers of planning. Figure 2.7 shows the stages of SISP [48]



.....Stages of Planning.....

Figure 2.7- Three stages of planning

Source: V.Grover, and A.H.Segars,"An empirical evaluation of stages of strategic IS planning: patterns of process design and effectiveness, Information and management, vol.42, 2005, p.765

The study identified that there are stages of SISP which involve preliminary, evolving and mature. The significant numbers of firms were within each of the three stages, and the qualitative differences in, process, outcome, and context in each of the three stages. These firms have different processes in each SISP stage followed a certain (predictable) pattern with respect to the SISP process dimensions. The research found out that the firms have different outcomes in each SISP stage. Also firms in each SISP stage had a different context. These stages reflect a learning model of SISP. Most

prior models suggest learning implications as firms evolve and adapt to changes in their context. Further these stages have discussed in detail. Newkirk and Lederer have identified five IS planning phases and tasks [50] which is shown in table 2.7.

Table 2.7- Five IS planning phases

Strategic awareness (i.e., planning the IS planning process)	<ul style="list-style-type: none"> - Determining key planning issues - Defining planning objectives - Organizing the planning team(s) - Obtaining top management commitment
Situation analysis (i.e.. analyzing the current environment)	<ul style="list-style-type: none"> - Analyzing current business - Analyzing current organizational systems - Analyzing current information systems - Analyzing the current external business environment - Analyzing the current external IT environment
Strategy conception (i.e.. conceiving strategy alternatives)	<ul style="list-style-type: none"> - Identifying major IT objectives - Identifying opportunities for improvement - Evaluating opportunities for improvement - Identifying high level IT strategies
Strategy formulation (i.e. selecting strategy)	<ul style="list-style-type: none"> - Identifying new business processes - Identifying new IT architectures - Identifying specific new projects - Identifying priorities for new projects



Strategy implementation planning (i.e. planning strategy implementation)	<ul style="list-style-type: none"> - Defining change management approach - Defining action plan - Evaluating action plan - Defining follow-up and control procedure
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Source: H.E.Newkirk and A.L.Lederer, The effectiveness of strategic IS planning under environmental uncertainty, Information & Management, vol. 43, 2006, p.489.

Well managed SIS offers greater opportunities to the organization. SISP is one of the factors that could facilitate to manage SISs. Strategic planning uses a business vision and business drivers to create an IT architecture and tactical IS plans for the business use of information technology. The process illustrated in figure 2.8 is business driven not technical driven. Companies do SISP with four main objectives in mind.

- Business Alignment- Aligning investment in IT with a company’s business vision and strategic business goals.
- Competitive Advantage- Exploiting IT to create innovative and strategic business Information Systems for competitive advantage
- Resource Management- Developing plans for the efficient and effective management of company’s IS resources, including IS personnel, hardware, software, data, and network resource.
- Technical Architecture- Developing technology policies and designing an IT architecture that integrates the inter-networked computer systems, databases, and applications of the organizations [33].

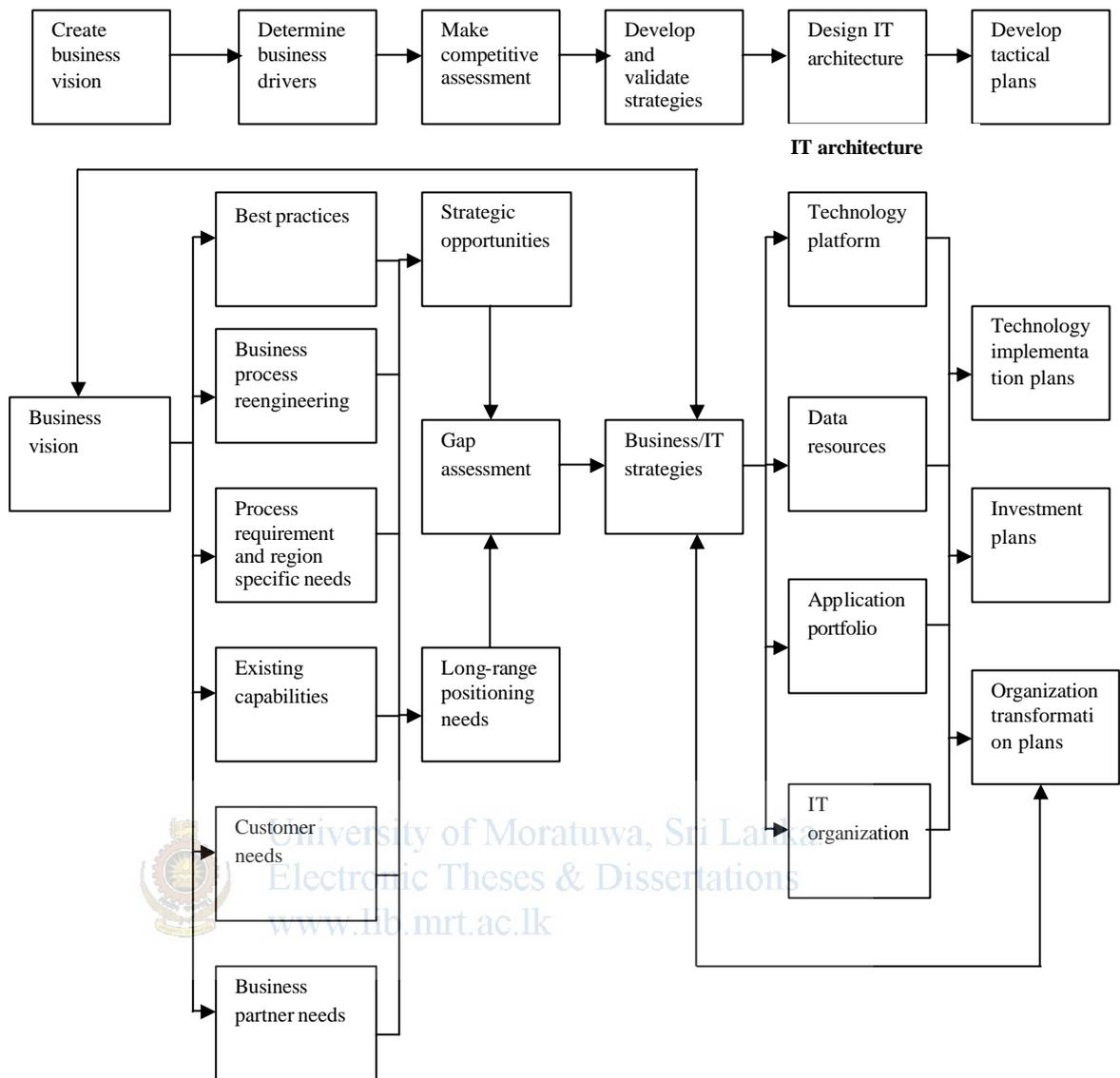


Figure 2.8- Model for IS planning

Source: Segars. A.H., and Gorver.V. (1999), Profiles of strategic IS planning, Information Systems research, vol.10, no.3, p.200.

Further researches have identified various models for IS planning. The model consists of four stages which are strategic planning, requirement analysis, resource allocation and project planning. Strategic IT planning establishes the relationship between the overall organizational plans and the IT plan. Information requirements analysis identifies broad, organizational information requirements to establish a strategic information architecture that can be used to direct specific application development. Resource allocation allocates both IT application development resources and operational resources. Project planning develops a plan that outlines schedules and resource requirements for specific IS projects. Most organizations engage in all four

stages, but their involvement in the specific stages tends to be sporadic and prompted by problems as they occur, instead of reflecting a systematic, stage by stage process. The four-stage model can be expanded to include major activities and outputs of the four stages. The model moves from a high level of abstraction to a more concrete formulation of IT planning activities.

2.6.7 SISP Approaches

Earl [23] described, sometimes IS planning is a special endeavor and sometimes it is a part of business planning at large. However when members of the organization describe how decisions on IS strategy are initiated and made, a coherent picture is gradually painted where the underpinning philosophy, emphasis, and influences stand out. There are the principles distinguishing features of an approach. The elements of an approach can be seen as the nature and place of method, the attention to and style of processors, and the focus on and probability of implementation. The five approaches are labeled as business led, method driven, administrative, technological, and organizational. In business led approach IT investment plan is defined on the basis of the current business strategy. This approach emphasize that the business strategy should lead IT strategy. In method driven approach IS needs are identified with the use of techniques and tools. Technological approach focus analytical modeling (Computer Aided Software Engineering) and other tools are used to execute the IT plans. Administrative approach describes that the IT plans is established by the steering committee or management to implement an approved IS initiative. In organizational approach present, the IT investment plan is derived from a business consensus view of all stakeholders in the organization of how IT/IS fits the organization's overall business objectives. Organizations may use one or more of these approaches, or some combinations or variant of them.

2.6.8 Parties Involved in SISP

Planning IS involves many parties. A SISP participant includes top business, functional areas, and IS managers [51]. It is not only the duty of top management but also all the parties working in systems should participate in planning. Getting user involvement in planning will improve the quality of the system. Hence, the target of the planning is typically the entire business enterprise or one or more of its business

units. In the broader sense the purpose of SISP is to align IT organization with the strategic goals of the enterprises or those units.

2.7 SISP Success

Even though there are many factors contributed to the success of SISP, the organization should be able to perceive the IS management system which the SISP is to support. Hence IS planning system must begin with understanding of basic components of IS management system [52]. Gover and Segars[48] argued that successful SISP should help achieve alignment between IS and business strategies, analyze and understand the business and its associated technologies, foster cooperation and partnership among functional managers and user groups, anticipate relevant events and issues within the competitive environment, and adapt to unexpected organizational and environmental change. Achieving SISP objectives can be used as achieving the success of SISP. One research identified the SISP objectives as follows [31].

These objectives are used as SISP success measures. Measures are listed below [5].

1. Align IT with business needs.
 - Organizations will be better able to know how to align SISP to its business environment and business needs[31]
2. Gain a competitive advantage from Information Technology
3. Identify new and higher payback applications
4. Identify strategic applications
5. Increase top management commitment to IT
6. Improve communication about IT with users
7. Forecast IT resource requirement
8. Allocate IT resources
 - Organizations will be better able to know how to allocate the limited resources wisely to various aspects of IT[31]
9. Develop an information architecture
10. Increase the visibility of IT in the organization

One research argues [48] that SISP success was defined as a combination of the extent to which an organization achieved each of its objectives. The followings are the objectives which are going to achieve

- Align information with business needs
- Gain competitive advantage from IT
- Identify new and higher pay back applications
- Identify strategic application

Successful SISP should achieve alignment between IS and business strategies, analyze and understand the business and its associated technologies, foster corporation and partnership among functional managers and user groups, anticipate relevant events and issues within the competitive environment, and adapt to unexpected organizational and environmental change.

IS planning success can be measured in terms of the benefits of the planning process (such as improved top management support and involvement, better understanding of the organization and its business), and/or in terms of applications that are developed as a result of planning [53]. Two dimensioned model were used to study the planning success. Figure 2.9 shows the schematic representation of the two-dimensional model of planning system success.

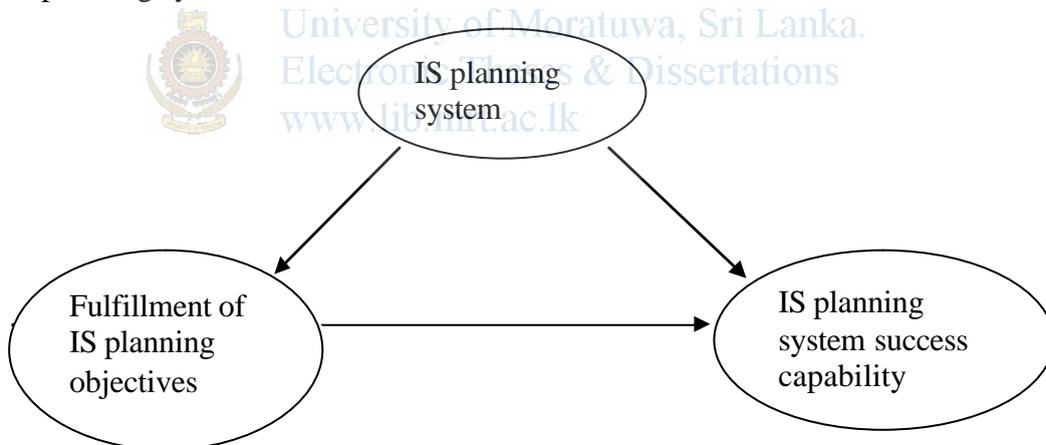


Figure 2.9- Two-dimensional model of planning system success

Source: B. Raguhunathan and T.S.Raguhunathan, “Adaptation of planning success model to IS planning”, Information Systems research, vol.5, no. 3, p.332, 1994,

A research conducted by Newkirk and Lederer identified the following factors as SISP success measure [50]

Alignment

- Understanding the strategic priorities of top management
- Aligning IS strategies with the strategic plan of the organization

- Adapting the goals/objectives of IS to changing goals/objectives of the organization
- Maintaining a mutual understanding with top management on the role of IS in supporting strategy
- Identifying IT-related opportunities to support the strategic direction of the firm
- Educating top management on the importance of IT
- Adapting technology to strategic change
- Assessing the strategic importance of emerging technologies

Analysis

- Understanding the information needs of organizational subunits
- Identifying opportunities for internal improvement in business processes through IT, Improved understanding of how the organization actually operates
- Development of a "blueprint" which structures organizational processes
- Monitoring of internal business needs and the capability of IS to meet those needs, maintaining an understanding of changing organizational processes and procedures.
- Generating new ideas to reengineer business processes through IT.
- Understanding the dispersion of data, applications, and other technologies throughout the firm

Cooperation

- Avoiding the overlapping development of major systems
- Achieving a general level of agreement regarding the risks/trade-offs among system projects establishing a uniform basis for prioritizing projects
- Maintaining open lines of communication with other departments
- Coordinating the development efforts of various organizational subunits
- Identifying and resolving potential sources of resistance to IS plans
- Developing clear guidelines of managerial responsibility for plan implementation

Capabilities

- Ability to identify key problem areas
- Ability to identify new business opportunities
- Ability to align IS strategy with organizational strategy,

- Ability to anticipate surprises and crises
- Ability to understand the business and its information needs.
- Flexibility to adapt to unanticipated changes.
- Ability to gain cooperation among user groups for IS plans

Earl [41] identified top management involvement, top management support, business strategy availability, study business before technology, and good IS management is the success factors of SISP. These success factors are the objectives of SISP. There are unsuccessful features of SISP which are resource constraints, not fully implemented, lack of top management acceptance, length of time involved, and poor user IS a relationship. Further the benefits of SISP is align IS with business needs, top management support, better priority setting, competitive advantage applications, top management involvement, and user/line management involvement.

2.8 Issues of Strategic IS Plan

Successfulness of IS planning depends on level of knowledge of IS planning problems. This will enhance the probability of a successfulness of the output of planning. When planning, following problems have faced during launching, development and implementation phases [54]. Planning problems are shown in table 2.8.

Table 2.8- Planning problems

Problems in launching the IS planning effort	
1	Failing to get top management support for the planning effort.
2	Not having free communication and commitment to change throughout the organization.
3	Being unable to obtain sufficiently qualified personnel to do a proper job.
4	Delegating the planning responsibility to an individual without sufficient experience, influence, or time to do a thorough job.
5	Not investing sufficient “front-end” time to ensure that all planning tasks and individual responsibilities are well understood.
6	Not having a steering committee that is highly committed.

- 7 Not having a clear-cut corporate plan to guide the information systems planning effort.
- 8 Failing to anticipate new developments in information technologies (IT) which might affect the strategic IS plan.
- 9 Ignoring the people and politics side of planning.
- 10 Not being in sufficient control of systems development and computer operations performance to have credibility with users.
- 11 Underestimating the need for a clear, concise, formal planning procedure.
- 12 Deciding on too long a planning horizon.
- 13 Not viewing planning as a learning process for users.
- 14 Failing to get top management support for the planning effort.

Problems in developing the strategic IS plan

- 1 Failing to sufficiently involve top management.
- 2 Ignoring business goals.
- 3 Failing to translate goals and strategies into action plans.
- 4 Failing to sufficiently involve users.
- 5 Relying exclusively on user “wish lists” for application ideas.
- 6 Neglecting to assess realistically internal weaknesses of the IS group in determining capabilities to carry out the recommended strategy.
- 7 Not performing a top-down analysis to identify critical functional areas that the IS plan has to support.
- 8 Failing to consider and explicitly evaluate alternative IS strategies in order to give top management a meaningful choice.
- 9 Failing to review the strategic IS plan with all managers concerned so as to obtain support and cooperation for its implementation.
- 10 Requiring too much formality so as to restrain creativity on the part of the planners and users in defining information requirements.

Problems in using the strategic IS plan

- 1 Difficult to secure top management commitment to implement the IS plan.
- 2 Neglecting to adjust the IS plan to reflect major environmental changes.
- 3 Ignoring the IS plan once it has been developed.

- 4 Consistently making intuitive decisions which conflict with the approved strategy
- 5 Not using the IS plan as a standard for measuring managerial performance.
- 6 The IS plan is not comprehensive.

Source: T.S.H. Teo. and J.S.K. Ang, "An examination of major IS planning problems," International Journal of Information management, vol.21 no.6, 2001, p.461.

Due to the following reasons SISP success fails. Resource constraints, not fully implemented, lack top management acceptance, length of time involved, and poor user-IS relationships [41]. Strategic information systems mainly target the following areas. Aligning investment in IS with business goals, exploiting IT for competitive advantage, directing efficient and effective management of IS resources, and developing technology policies and architectures [41]

2.9 Organizational Commitment and SISP

OC and SISP has a relationship. This relationship leads to change the performance of the business organizations. One research identified as OC increases, SISP success increases until it reaches maximum; as OC continues to increase, success decreases. This is consistent with the notion that too much planning (in terms of OC) can be detrimental to SISP success. It thus suggests the existence of some optimum level of OC [8].

2.10 Conclusion

A strategic IS planning is an important and challenging management function. Chief executives, corporate general managers, and information systems executives want to improve it. Perhaps careful assessment of the extent of planning practices can help them do so.

The above diagram shows the conceptual frame work of the research. Dependant variable of the research is SISP success. SISP success can be measured by using the following criteria.

3.3 SISP Success Measures

3.3.1 Align IT with Business Needs.

Organizations should know the way of aligning SISP with its business environment and business needs [31] Aligning IS with business needs is taken as a measure of success of SISP [41]. CIO should directly involve in business planning, promotes understanding of business objectives and allows the CIO to contribute to the formulation of business strategies that reflects knowledge of IS opportunities. CIO involvement is essential in order that business processes management theories become a part of a CIO vocabulary and knowledge set. This further ensures that Information Technologies are properly associated with business needs and that the IS plans is built around the direction of the business [55]. Integrated the IS and business plans, assure that business and IS strategies are created simultaneously with a mutual understanding of organizational objectives and technological opportunities. Because such alignment produces more realistic strategies that fully reflect IT capabilities, implementation of these strategies likely to be more successful [55].

3.3.2 Gain a Competitive Advantage from Information Technology.

There are different ways to gain competitive advantages. Competitors are the major challenge of any organization. Competitive advantage can gain by seeking competitive advantage from IT [41]. Use of IT for the activities of the organization will stay the edge over competitors. SISP study reviewed competitors' IT [57].

3.3.3 Identify New and Higher Payback Applications.

Literature found that new and higher pay back application in identification is one of the success measures of SISP [51], [8].

3.3.4 Identify Strategic Applications.

Some researchers have recognized that identification of strategic application as a measure of success of SISP [51], [8].

3.3.5 Increase Top Management Commitment to IT.

At very high management support levels, resource management benefit is reduced. Perhaps when top management is too involved, a lot of red tapes occur. Every minute details in terms of resource allocation and usage has to pass top management for approval. Although it is healthy for top management to sit in meeting and spend more time with employees; it is unhealthy when top managers turn in to interrogators. Top management involvement and support are the important factors of the SISP success measures [41]. Lack of top management commitment on SISP, difficulty to obtain top management involvement, heavy top management involvement, and difficulty to get approvals from top management is the problems faced when planning SIS [57]. Top management should commit the necessary resources and stick to its role as the drivers of the IS planning process, rather than just controlling the participant [58].

3.3.6 Improve Communication about IT with Users.

Organizations have to improve communication about IT with their users. If the organizations do not have data communication plan it will be a problem for the SISP [57]. Lee and Pai[59] described communication effectiveness significantly and positively affects the strategic IS planning. Effective communication and coordination are essential to successful teamwork. Coordination is a major component of the cooperative competency that is established in organizational theory [60].The key objective of SISP is to establish a strategic IS plans that are satisfactory to different groups. Accordingly, organizations require effective coordination to achieve planning goals and ensure that the IS plan is implemented as expected [59].

3.3.7 Forecast IT Resource Requirement.

Earl identified that forecast IS resource requirement is one of the main success measure of SISP [41].

3.3.8 Allocate IT Resources.

Resource constraints are one of the unsuccessful factors of SISP. Hence organizations have to allocate IT resource sufficiently [41].Recruiting and developing IS human resources are rated as one of the top ten key issues in the Information Systems management [61].

3.4 Hypothesis

3.4.1 Sufficient Resource Allocation

In many SIS planning situations insufficiency of resource is the significance problem [62]. Researchers have emphasized the need for adequate resources for ensuring the quality of the planning process, but allocating sufficient resources has been a significant practical problem in organizations. Raghunathan and Raghunathan[37], found that planning resources were a very important factor in IS planning. It has also been found to be a major determinant of effectiveness of strategic business planning. Resources need to be adequate both in quantity and quality. A lack of resources could lead to reducing the scope of planning or failing to perform the later phases of planning (review, revision, etc.).Some researches have identified that resource allocation is used to show the commitment of the organizations. Sufficiently allocation of resource is one of the most significance factors which are used to measure the OC [8] on SISP. Wetherbe's have identified that allocation of resource means allocate both IT application development resources and operational resources. Sufficient resource allocation to SISP study is one of the factors to measure the OC[8]. However, in Sri Lanka, as a developing country is suffering inadequacy of resource for planning. Therefore the following hypothesis is proposed.

H1: Sufficient resource allocation for SISP leads to a greater SISP success.

3.4.2 Organizational Support

Organizational support was taken as a key predictor of SISP [56], [8].

H2: More organizational support for SISP leads to a greater SISP success

3.4.3 Key People Stay on SISP from Start to Finish Maintains the Continuity

One of the important factors rated as the measurement of OC is key people stay on SISP from start to finish maintains the continuity [8]. Key people involvement in the process is very important factor. It will enhance the quality of the planning and reduce errors during the process.

H3: Key people stay on SISP from start to finish maintaining continuity and it will leads to a greater SISP success.

3.4.4 Management Control

Management control is a key factor to resolve conflict among different organizational subunits when planning SIS [56], [8]

H4: Management control for SISP will lead to a greater SISP success.

3.4.5 Management Expectation

Management's expectations for the results of the SISP study were taken as a key predictor of SISP [56], [8]. One research identified that top management expectation is one of the main problems in SISP methodologies [57].

H5: There is a relationship between SISP success and management expectation of SISP

3.4.6 High Credibility

SISP team members with high credibility were chosen and team members were chosen on the basis of competence. These two have taken as key predictors of SISP [56], [8].

H6: High credibility of SISP leaders and sponsors will lead to a greater SISP success.

3.4.7 Organizational Commitment

Grater OC would results in more and better planning resources that could produce a higher quality plan. That is the better accomplisher's organizational objective. But excessive OC could result excessive planning resources that would require excessive communication among planners, hence delay the creation or updating of the plan while the business changes and thus result in the failure to accomplish objectives. By considering the above argument the relationship between OC and SISP success would not only be positive, but also reach an optimum. Beyond this as they continue to increase SISP success would decrease [8].

H7: Higher OC will lead to a greater SISP success.

3.5 Pilot Survey

IT managers in nine banks were asked to participate in the pilot test. All agreed and filled the questionnaires. One IT manager was asked to add professional qualifications field under Educational Qualifications part.

3.6.1 Data Collection

In the preliminary stage, researcher discussed with the supervisor and some of the academics to design a questionnaire. Further discussed with bank managers, IT managers and executives to identify the content included to the questionnaire. In addition read very many articles and identified the way of preparing a questionnaire. Previous literature suggested that the method of Questionnaire survey is suitable for collecting data for this type of researches [54], [8], [31], [50].

Sample is the IT managers and IT executives who work in the licensed commercial and licensed specialized banks listed in the central bank web [16]. Questionnaires were given to 31 banks where head officers of the banks are located in Colombo. Researcher personally visited and collected data from 23 bank 8 questionnaires were e-mailed. 30 success responses were returned and entered to the SPSS sheet. The questionnaire consists of four parts (see Appendix 01). Part A used to check whether the organization has SIS. All questions are in lickert scale. Part A has five sections. Questions were developed based on the definition in [1]. It scaled using 5 measures from Strongly Disagree to Strongly Agree. Part B contains questions in six sections to measure the OC in the banking sector in Sri Lanka. Part C includes eight sections to measure the SISP success. All questions were asked in lickert scale which was scaled using 5 measures from “Not at all” to “To a very greater extent”. Part D questioned some demographic information (See Appendix 02 for questions in section wise).

3.6.2 Reliability and Validity of the Variables

In a research, measuring reliability and checking validity is very important. By measuring and checking reliability and validity researcher try to conduct the research in a best manner. Reliability means the findings of the research would be constantly the same if the study were done over again.

3.6.3 Method of Measuring SIS

In this regard researcher first identified the measures of Strategic Information Systems in the banks. 14 questions in Part A of the questionnaire were asked under 6 variables and tested (see Appendix 1). This was measured using five point likert scales. In coding data, response categories of likert scale provided in the questionnaire were assigned with the following scores with respective of positive and negative statements. Table 3.1 shows the measures.

Table 3.1- Likert scales to measure SIS

Scale	Points
Strongly Disagree	1
Disagree	2
Neither Agree nor Disagree	3
Agree	4
Strongly Agree	5

3.6.4. Method of Measuring OC and SISP

There were 22 questions in Part B of the questionnaire, under 6 identified variables to measure the commitment of the banking sector and 23 questions in Part C of the questionnaire were given under 8 variables to measure SISP success of the banking sector (see Appendix 1). This was measured using five point likert scales and is listed in table 3.2.

Table 3.2- Likert Scales to measure OC & SISP

Scale	Points
Not at All	1
To a little Extent	2
To Some Extent	3
To a Great Extent	4
To a Very Great Extent	5

3.7. Decision Rules and Methods of Interpretation

The mean value of these five point scales of Part A, B, and C was 03, i.e. $[1+2+3+4+5]/5 = 03$. Hence, this mean value was taken as the deciding factor, which determines whether the respondents are in favour of the particular variable or not. However, the degree of the result of the measurement of these variables, i.e. the average score, was interpreted with the decision rules in the following way for each and every variable.

3.7.1. Measuring SIS in the Banking Sector

Let P be the Average Score of the responses for SIS measuring.

If $P \geq 3$, then the bank has SIS.

If $P < 3$, then the bank does not has SIS.

3.7.2. OC Measuring Method

Let P be the Average Score of the responses for OC.

If $P > 3$, then OC is high.

If $P = 3$, then OC is average.

If $P < 3$, then OC is low.

Organizational Commitment Measuring Variables

Resource allocation measuring method

Let P be the average score of the responses for resource allocation.

If $P > 3$, then resource allocation is high

If $P = 3$, then resource allocation is average

If $P < 3$, then resource allocation is low

Organizational Support

Let P be the average score of the responses for organizational support.

If $P > 3$, then organizational support is high.

If $P = 3$, then organizational support is average.

If $P < 3$, then organizational support is low.

Management Expectation

Let P be the average score of the responses for management expectation.

If $P > 3$, then management expectation is high.
If $P = 3$, then management expectation is average.
If $P < 3$, then management expectation is low.

High Credibility

Let P be the average score of the responses for high credibility.
If $P > 3$, then credibility is high.
If $P = 3$, then credibility is average.
If $P < 3$, then credibility is low.

Key People Stay on SISP

Let P be the average score of the responses for key people stay on SISP.
If $P > 3$, then key people stay on SISP.
If $P \leq 3$, then key people not stay on SISP.

Management Control

Let P be the average score of the responses for management control.
If $P > 3$, then management control is high.
If $P = 3$, then management control is average.
If $P < 3$, then management control is low.

3.7.3. SISP Measuring Method

Let P be the Average Score of the responses for SISP.
If $P > 3$, then SISP is high.
If $P = 3$, then SISP is average.
If $P < 3$, then SISP is low.

3.8 Analysis Tools

To accomplish the objectives of the research, following statistical analysis tools and SPSS 15.0 software were used.

1. Univariate Analysis
2. Bivariate Analysis

Univariate Analysis

Each and every variable in the research model was analyzed using descriptive statistical method. Frequencies and central tendencies of the variables were measured. Frequency plots in percentage are presented in table and diagrams such as pie charts and bar charts.

Bivariate Analysis

Descriptive Statistics were used to analyze the demographic information of the research. Descriptive statistics were used to measure the state of the IS (whether it is SIS or not) in each bank. If the average value is greater than 3 it was considered as a bank which has SIS. Correlation was used to explain the behavior of variables and give a conclusion for the research. Regression Analysis was used to build a model for the research.

3.9 Conclusion

This chapter explained the conceptual model for the research by identifying dependant and independent variables. It also shows the hypothesis of the research and the way back literature for designing the questionnaire. Further it discussed the data analysis tools for the research

CHAPTER 04

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

In any research transformation of raw data into a body of information through different survey techniques is very important. Hence this chapter devoted to present the analysis of data in a tabular and graphical form. The data transferred in to a body of facts would not give meaning and be helpful to achieve the research objectives unless those were analyzed well. Thus the chapter attempts to present data in different forms and analyze it.

4.1.1 Presentation and Analysis of Data

4.1.2 Reliability and Validity Analysis

Reliability is the consistency of your measurement, or the degree to which an instrument measures the same way. Each time it is used under the same condition with the same subjects. Validity is the strength of our conclusions, inferences or propositions



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4.1.2.1 Reliability Analysis

Reliability analysis is done by using Cronbach's Alpha which measures how well a set of items (or variables) measures a single uni-dimensional latent construct. When data has a multidimensional structure, alpha value will usually be low. Most of the Social Science research situations have considered the reliability coefficient should be, .70 or higher [63]. The research measures the inter item consistency reliability. Table 4.1 shows the reliability of lickert scale questions and (in Part A, appendix 1) which is going to test whether the Sri Lankan banks have SIS or not. The Cronbach's Alpha is 0.809. which indicates that the reliability of the data is high.

Table 4.1-Reliability Statistics of Part A, B, and C

Variable	Cronbach's Alpha	N of Items
Part A	.809	14
Part B	.864	22
Part C	.904	23
Part A,B, & C	.934	59

Table 4.1 also shows the reliability in Part B of the questionnaire which measures the OC. According to the Alpha value .864 the reliability is high. Part C in the table shows the reliability measurement of success of SISP, which is 0.904 and has high reliability. Overall reliability of Part A, B, and C is 0.934 and in the highest level.

4.1.3 Identification of Strategic Information Systems

Firstly, the important thing in the research is to identify whether selected banks have Strategic Information Systems. To identify Strategic Information Systems, researcher allocates separate part in the questionnaire and uses the results for the analysis. In Sri Lankan context no prior researches have been conducted in the field of SISP and OC. Further no research found out the banks which have Strategic Information Systems. The first section of the questionnaire centered to find out whether Sri Lankan banking sector has Strategic Information Systems. Lickert scale questions by following the definition [1] of SIS were asked from IT managers and IT executives of the banks. According to the definition by Laudan and Laudan, questions were asked under six sub headings. Results were analyzed and calculated the mean of total variables and came out with the solution. Results that are shown in table 4.2 show the average of SIS measuring variables. Averages of all variables are three or more than 3. Researcher decides that if the test value is 3 or more, banks information systems are strategic. Results indicate that all the values are greater than 3 and signify all 30 banks Information Systems are Strategic Information Systems.

Table 4.2- Average of SIS measures

Bank Name	Goals have Changed	Operations	Product Development	Product Change	Environment Change	Overcome Competitors	Average of All Variables
Peoples Bank	3.5	4	4	4	3.33	3	4
SCB	4	4.5	4	4.5	3.33	4.67	4
Indian Bank	4	4	4	3.5	3.33	3	4
PABC	5	4.5	4.5	4.5	5	4.67	5
CSV	3.5	4.5	2.5	4	4.33	4.33	4
Indian Overseas Bank	2	3.5	3.5	3	2.67	3	3
NSB	3	4	3.5	3.5	3.33	3.33	3
Sampath	4	4.5	4.5	4.5	4	4	4
SME	2	4	2.5	2.5	3	3.67	3
Commercial Bank	3.5	4.5	5	4.5	4.67	4.33	4
HNB	4.5	4	5	4.5	3.33	2.67	4
BOC	3.5	3.5	4.5	4.5	3.33	2.67	4
DFCC	4	3.5	4	4	2.67	3	4
Lanka Putra Development Bank	4	4.5	3	4	4	3.67	4
MCB	4	4.5	4.5	5	3.67	3.33	4
Union Bank	3.5	4.5	4.5	3	4.33	4	4
Habbi Bank	3	4.5	3	4	4.33	3.33	4
NDB	4.5	4.5	4	3.5	4.67	3.67	4
Seylan Bank	4	4.5	4.5	4.5	4	4	4
DFCC Vardana	4	3.5	4	4	2.67	3	4
Sanasa Development Bank	3	4	3.5	3.5	3.33	3.33	3
ICICI	4	4	3.5	3.5	4.67	4	4
Deuches Bank	4	4	4	4.5	5	4.67	4
HDFC	3.5	4	4.5	4	3.33	3	4
State Bank of India	2.5	3.5	3.5	3	3.33	3.67	3
State mortgage Bank	3	3.5	3.5	4.5	3.67	4.67	4
Citi Bank	4	4.5	5	3.5	4.33	4.33	4
NTB	4	4.5	3	5	4.33	4	4
Public Bank bread	4	4.5	4	3.5	4.67	3.67	4
Union Bank Colombo	4	4	4.5	3.5	4	4	4

Further one sample t-test was conducted to test the IS. The one-sample t-test compares the mean score of a sample to a known value. Usually, the known value is a population mean. Following is an output of a one-sample t-test. We compared the mean value of the population for our sample variables to a known population value of 3. Descriptive statistics are shown in table 4.3.

Table 4.3 - Descriptive statistics of one-sample t-test

	N	Mean	Std. Deviation	Std. Error Mean
Goals have change	30	3.6500	.68418	.12491
Operations have changed	30	4.1333	.39246	.07165
Product development	30	3.9333	.69149	.12625
Product change	30	3.9333	.62606	.11430
Environment change	30	3.8222	.69334	.12659
Competitive advantage	30	3.6889	.61857	.11294



The mean of our sample variables is more than 3, which is slightly higher than our population mean of 3. Results of one sample t-test are shown in table 4.4.

Table 4.4-One-sample t-test

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Goals have change	5.204	29	.000	.65000	.3945	.9055
Operations have changed	15.817	29	.000	1.13333	.9868	1.2799
Product development	7.393	29	.000	.93333	.6751	1.1915
Product change	8.165	29	.000	.93333	.6996	1.1671
Environment change	6.495	29	.000	.82222	.5633	1.0811
Competitive advantage	6.100	29	.000	.68889	.4579	.9199

Our significance value of all the variables is .000 and is significant (the significance is less than .05). Therefore, we can say that our sample means are significantly greater than the population mean of 3.

4.1.4 Presentation and Analysis of Demographic Data

The following data were collected as demographic data

1. Type of the organization
2. No of branches
3. Sector
4. Designation
5. Age
6. Gender
7. Educational qualifications
8. Working experience

1. Type of the Organization

According to the table 4.5, 85.7% of the licensed commercial banks were in private sector. Within private sector 81.8% banks are licensed commercial banks. When compared to the commercial banks with specialized banks in private sector, numbers of commercial banks are large. Out of all commercial banks 18 banks are in private sector and 3 banks in public sector and in percentage it is 14.3% and is low when compared to the private sector commercial banks. Licensed specialized banks are less in both public and private sectors when compared to the commercial banks.

Table 4.5- Type of organization- sector cross tabulation

Type of Organization	Licensed	Count	Sector		Total
			Private	Public	
Licensed commercial banks	Commercial banks	Count	18	3	21
		% within Type of Organization	85.7%	14.3%	100.0%
		% within Sector	81.8%	37.5%	70.0%
	Specialized banks	Count	4	5	9
		% within Type of Organization	44.4%	55.6%	100.0%
		% within Sector	18.2%	62.5%	30.0%
Total	Total	Count	22	8	30
		% within Type of Organization	73.3%	26.7%	100.0%
		% within Sector	100.0%	100.0%	100.0%
		% of Total	73.3%	26.7%	100.0%

70% of the respondents were in licensed commercial banks and 30% of the respondents were in a licensed a specialized bank which is shown in figure 4.1.

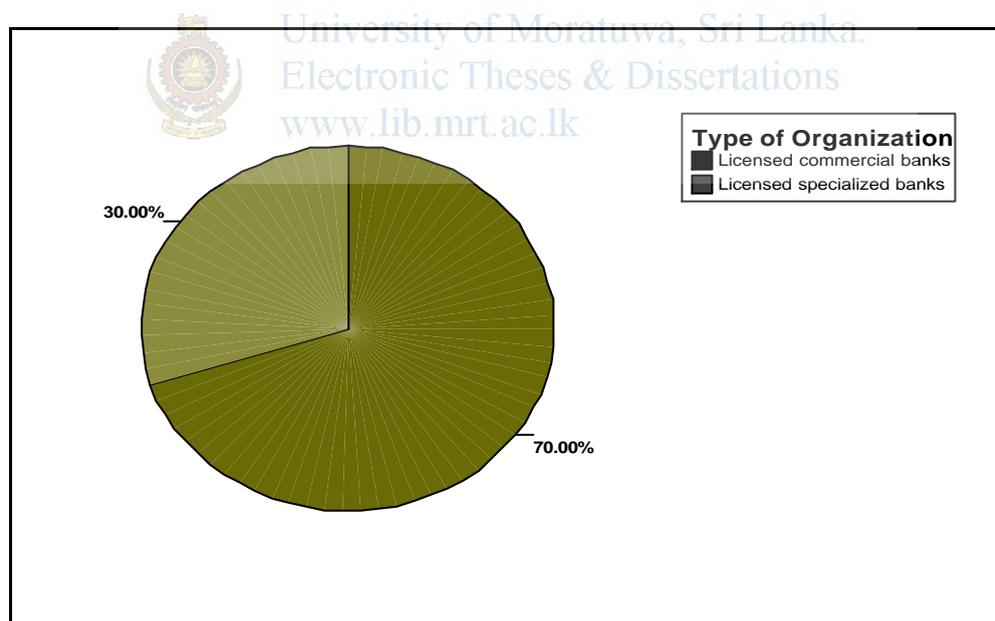


Figure 4.1-Type of organizations

Table 4.6 shows the frequency distribution of respondent in sector wise. From all the banks 73.3% were in private sector and the public sector banks were 26.7%.

Table 4.6-Banks distribution in sector wise

	Frequency	Percent
Private	22	73.3
Public	8	26.7
Total	30	100.0

2. No of Branches

Table 4.7 shows the number of branches that banks have. 15 responses were made and which is 50% of the total. From responded banks 1/4 banks have branches less than 10. Without considering missing values, more than 50% banks lie between 0-10 ranges.

Table 4.7 -No of branches

Rang	Frequency	Percent	Valid Percent	Cumulative Percent
0-10	8	26.7	53.3	53.3
11-100	3	10.0	20.0	73.3
101-400	4	13.3	26.7	100.0
Total	15	50.0	100.0	
Missing	15	50.0		
Total	30	100.0		

3. Designation

As shown in table 4.8 and figure 4.2 majority of response were IT managers which were 66.7% and 33.3% of the respondents were IT executives.

Table 4.8-Designation of respondents

	Frequency	Percent
Valid IT Manager	20	66.7
IT Executive	10	33.3
Total	30	100.0

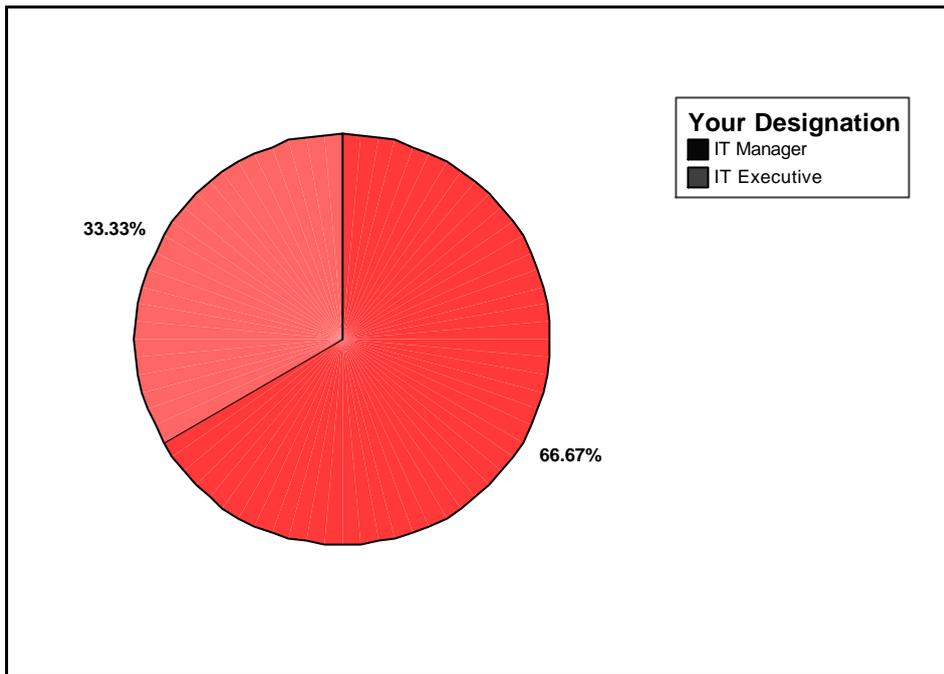


Figure 4.2- Designation of respondents

5. Age

According to the table 4.9 numbers of responses are 28 out of 30. Ages range lies between 30 and 55 of the responses and mean is around 38 which indicates that most of the responses are in matured age.

Table 4.9- Descriptive statistics of age

	N	Minimum	Maximum	Mean	Std. Deviation
Age	28	30	55	38.18	5.531
Valid N (list wise)	28				

Source: Analyzed data

Figure 4.3 depicts that the majority of the data values fall to the left of the mean and cluster at the lower end of the distribution. This is called positively skewed or right skewed and also the mean is to the right of the median, and the mode is to the left of the median. The results indicate that most of the respondents are at a matured level.

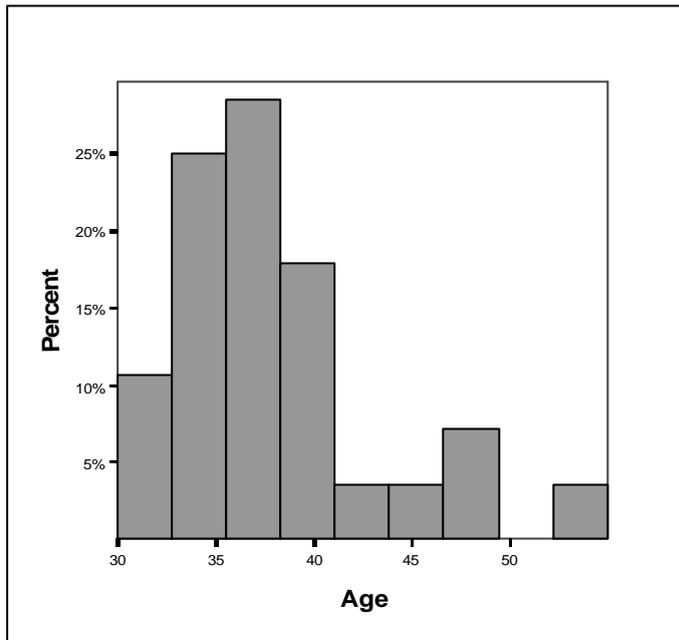


Figure 4.3-Histogram for age

Source: Analyzed data

6. Gender

Table 4.10 and figure 4.4 shows the responses in gender wise. Out of all responded, male respondents are 86.7% and which is the highest of the total respondents. Contributions of females are less when compared to the males.

Table 4.10-Responses in gender wise

	Frequency	Percent
Male	26	86.7
Female	4	13.3
Total	30	100.0

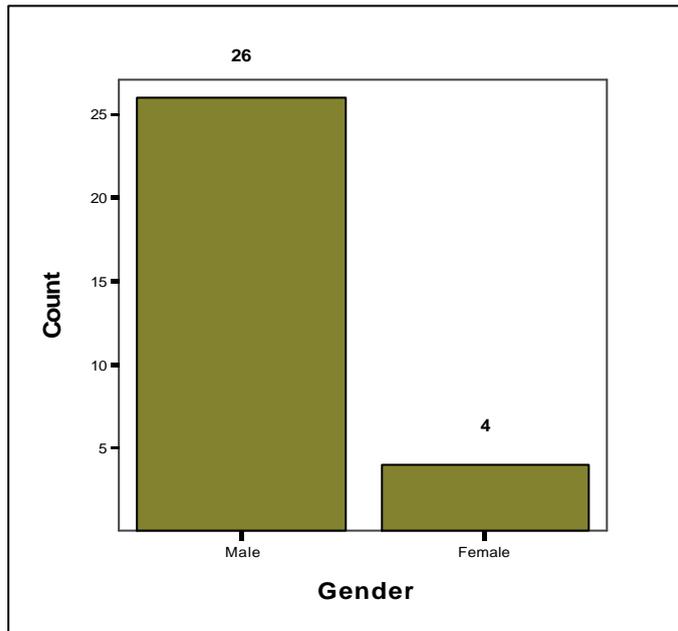


Figure 4.4- Responses in gender wise

7. Educational Qualifications

Educational Qualifications were classified as Banking Diploma, IT Degree, Non-IT Degree, Postgraduate/Masters, and Professional Qualification. Following table 4.11 and figure 4.5 shows the level of education of responses. Out of all, 9 responses have Postgraduate/Master level education and which is 30 in percentage. Lowest responses are in Professional Qualification level. 26.7 % responses are gain from IT Degree holders.

Table 4.11- Educational Qualifications

	Frequency	Percent
Banking Diploma	5	16.7
IT Degree	8	26.7
Non-IT Degree	7	23.3
Postgraduate/Masters	9	30.0
Professional Qualification	1	3.3
Total	30	100.0

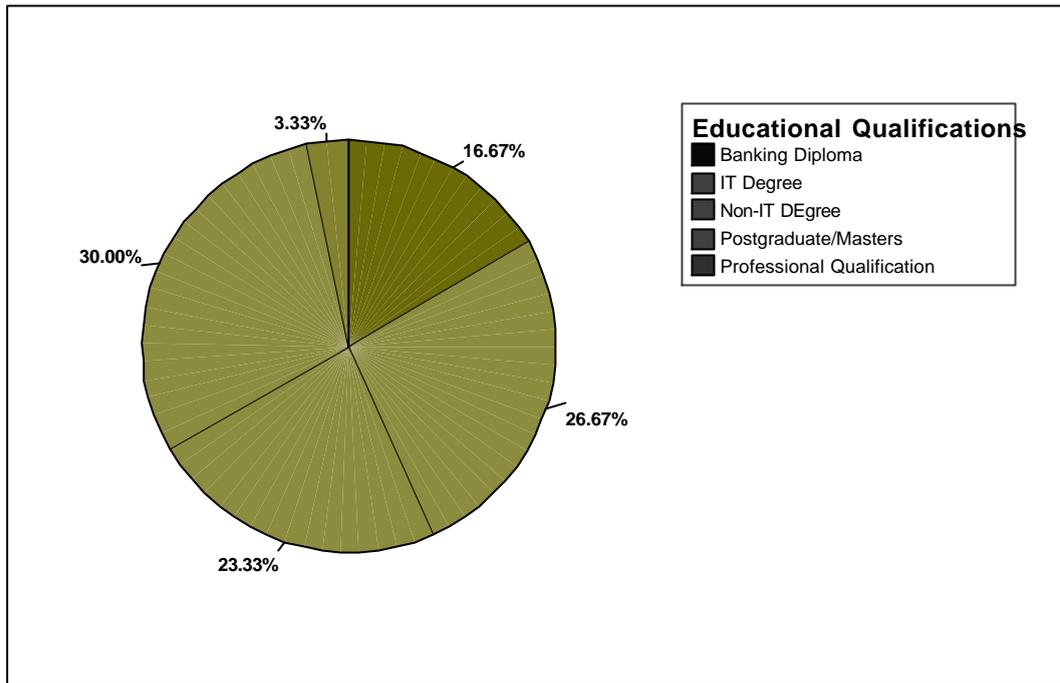


Figure4.5 –Educational Qualification

8. Working Experience

Researcher categorized working experience as recently (within three months), Less than one year, 1-5 year, and More than 5 year. Majority of resonance have more than 5 year experience which is 53.3% of the total. Recently (within three months) experienced people are a few and are 10%. Table 4.12 and figure 4.6 shows frequency tables of the working experience.

Table 4.12 -Working Experience

	Frequency	Percent
Recently(Within 3 Months)	3	10.0
Less than one year	4	13.3
1-5 year	7	23.3
More than 5 year	16	53.3
Total	30	100.0

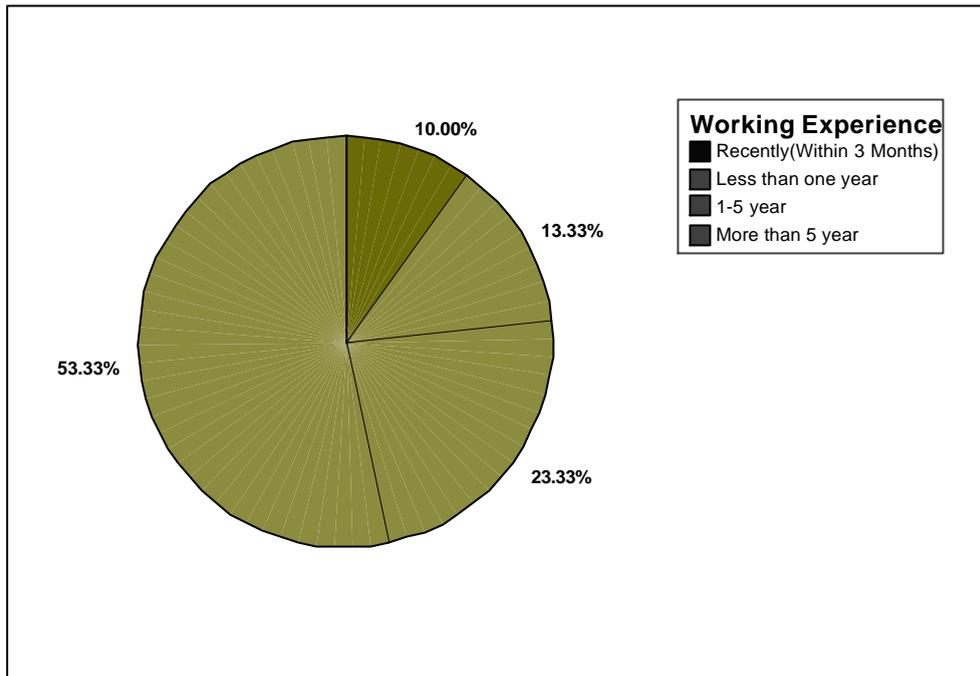


Figure 4.6-Working Experience

4.2.4. Frequency Statistical Analysis for Dependant and Independent Variables

Dependant and independent variables have taken separately for frequency statistical analysis. Frequency statistical tables were used to observe the distribution of the data within the scale.

4.2.4.1. Organizational Commitment Measuring Variables -Independent Variables

Table 4.13 -Descriptive statistics of independent variables

	N	Minimum	Maximum	Mean	Std. Deviation
Resource Allocation	30	2.60	4.80	3.7400	.58757
Organizational Support	30	2.50	5.00	3.8583	.58606
Management Expectation	30	3.00	5.00	4.0833	.60291
High Credibility	30	2.67	4.33	3.6111	.54726
Key people stay ...	30	2.40	4.60	3.7733	.61191
Management Control	30	1.67	4.00	3.3778	.68219
Valid N (list wise)	30				

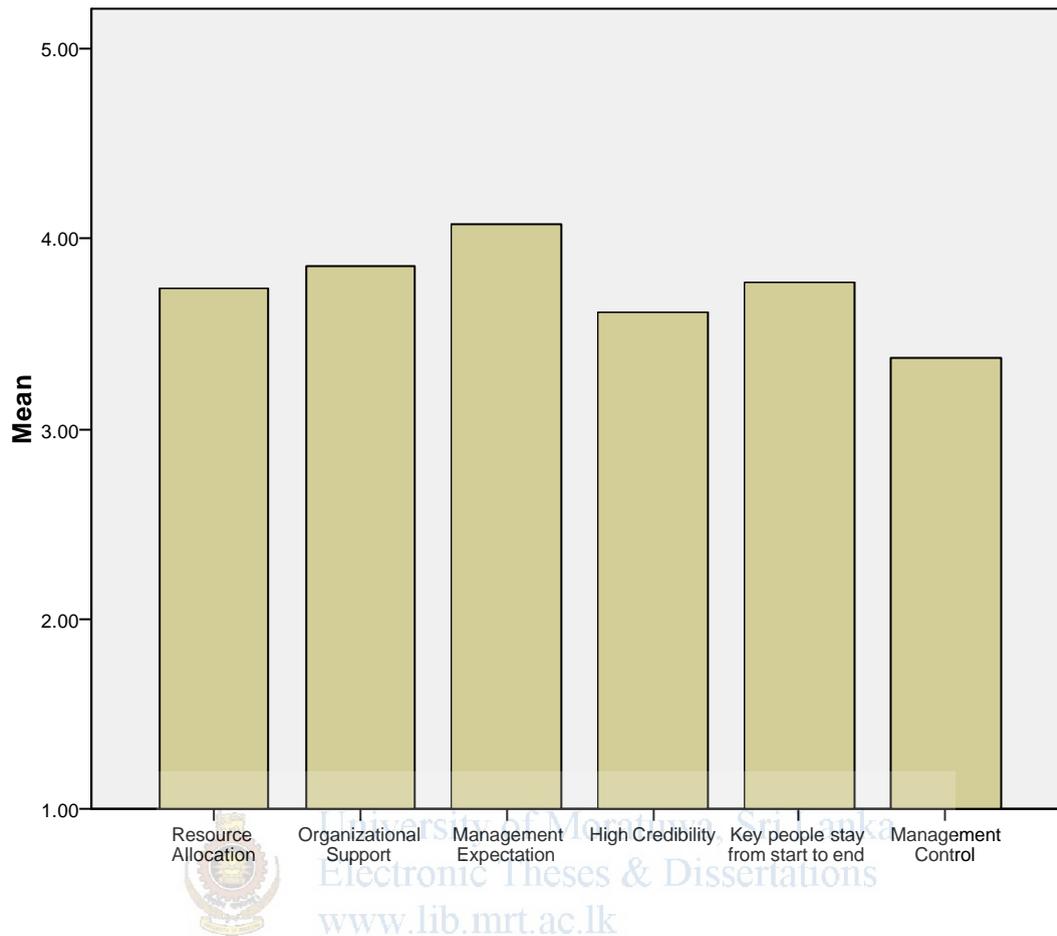


Figure 4.7-Column chart for independent variables

The above table 4.13 and figure 4.7 illustrate the descriptive analysis of the organizational commitment variables. There are six variables that were used to measure the OC. By using mean and standard deviation it can be identified the level of commitment and the most important factors for the commitment in the banking sector. The mean of a data set is simply the arithmetic average of the values in the set, obtained by summing up the values and dividing by the number of values. Recall that when we summarize a data set in a frequency distribution, we are approximating the data set by "rounding" each value in a given class to the class mark. The mean is a measure of the center of the distribution. The standard deviation is both measures of the spread of the distribution about the mean. The standard deviation is the most common measure of statistical dispersion, measuring how widely spread the values in a data set is. If many data points are close to the mean, and then the standard deviation is small; if many data points are far from the mean, then the standard deviation is

large. If all the data values are equal, then the standard deviation is zero. Taking a factor at a time analysis is written as follows.

a. To what Extent the Banks Allocated Resources Sufficiently for SISP.

As indicated table 4.13 the minimum value of the outcome is 2.6 and the maximum is 4.80. The mean value is 3.74 and it placed resource allocation to high scale. Stranded deviation 0.587 despites that the dispersion of the results from the mean. The data points are not so closer to the mean as well as not far to the mean. Further the figure 4.7 exhibits the graphical presentation of the mean of resource allocation variable. It shows the variable is in above the value 3.

b. To what Extent the Organization Supports to Build a SISP

As table 4.13 shows the minimum value of the data points are 2.5 and maximum is 5. That declares there are some banks very great extents in the variable of organizational support built for SISP. The mean value is 3.85 and organizational support for SISP is high. Data points are not closer to mean or zero and shows .586. Further the figure 4.7 exhibit the graphical presentation of the mean of organizational support to build a SISP variable.

c. To what Extent the Management Expectation of the SISP

As table 4.13 shows the minimum value of the data points are 3.0 and maximum is 5. That declares there are some banks very great extents in the variable of organizational support built a SISP. Mean value of the distribution is 3.85. It shows management expectation for SISP is high. Data points are not closer to mean or zero and shows .586. Further the figure 4.7 exhibits the graphical presentation of the mean of management expectation to build a SISP variable.

d. To what Extent SISP Leaders and Sponsors have High Credibility

As table 4.13 shows the minimum value of the data points are 2.67 and maximum is 4.33. Mean of the variable is 3.61. It illustrated that SISP leaders and responses have high credibility. Data points are not closer to mean and shows 0.547. Further the figure 4.7 exhibit the graphical presentation of the mean of high credibility to build a SISP variable.

e. To what Extent Key People Stay with SISP from its Start to Finish Maintaining the Continuity

As table 4.13 shows the minimum value of the data points are 2.54 and maximum is 4.6. Mean value of the distribution is 3.77. It indicated that key people stay with SISP from start to finish maintaining the continuity. Data points are not closer to mean and shows 0.611. Further the figure 4.7 exhibits the graphical presentation of the mean of key people stay with SISP to build a SISP variable.

f. To what Extent the Management Controlled the SISP to Resolve Conflicts with different sub units of the Organization itself.

As table 4.13 shows the minimum value of the data points are 1.67 and maximum is 4. Mean value of the distribution is 3.37. It illustrated that management controlled is high to resolve the conflict arising during SISP. Data points are not closer to mean and shows 0.682. Further the figure 4.7 exhibits the graphical presentation of the mean of management controlled to build a SISP variable.

Further one sample t-test was conducted to test the present level of OC on SISP. The one-sample t-test compares the mean score of a sample to a known value. Usually, the known value is a population mean. Following is an output of a one-sample t- test. The mean value of the distribution is 3.77 and which is shown in table 4.14. It compared the sample outcomes with test value of 3 and it shows that it is higher than test value (population mean). As discussed in chapter 3, if $p > 3$ ($p =$ mean value of the distribution) then OC is high. This illustrated that OC is high for SISP in banks. Table 4.14 shows the descriptive statistics of one sample t-test.

Table 4.14 - Descriptive statistics of one-sample t-test

	N	Mean	Std. Deviation	Std. Error Mean
OC	30	3.7758	.40887	.07465

Table 4.15 shows the results of the one-sample t-test:

Table 4.15-One-sample test

t	df	Sig. (2-tailed)	Test Value = 3 Mean Difference	95% Confidence Interval of the Difference	
				Lower	Upper
OC 10.393	29	.000	.77583	.6232	.9285

Significant value of OC is .000.and is significant (the significance is less than 0.05).Therefore, we can say, sample mean is significantly greater than the population mean of 3 and OC is high for SISP.

4.2.4.2. SISP Success Measuring Variables-Dependant Variables

Table 4.16 -Descriptive statistics of independent variables

	N	Minimum	Maximum	Mean	Std. Deviation
Align information with business need	30	3.00	4.67	3.7667	.48066
Gain competitive advantage	30	1.60	4.00	3.0067	.76741
New and higher payback application	30	2.00	4.50	3.6167	.76207
Gain top management commitment	30	2.00	4.33	3.7000	.48225
Improve communication about IT	30	3.00	5.00	3.7667	.66609
Allocate IT resource	30	3.00	4.67	3.8667	.47626
Increase visibility	30	3.00	5.00	3.6444	.61235
Identification	30	3.00	4.50	3.6667	.51417
Valid N (list wise)	30				

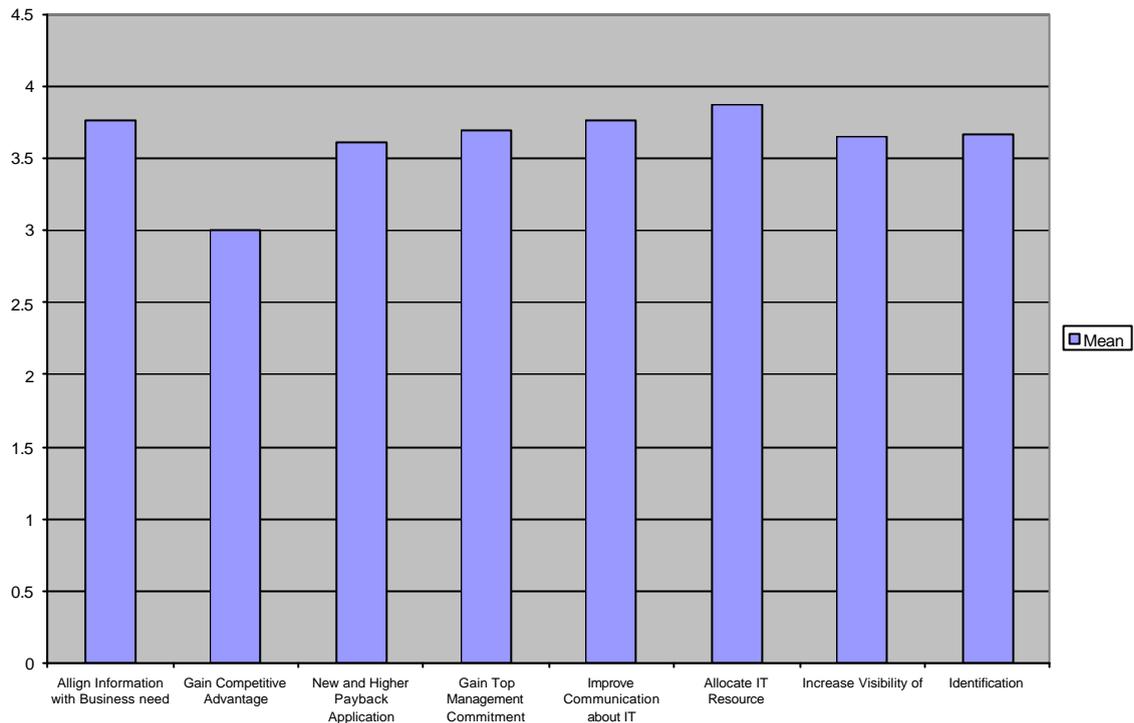


Figure 4.8-Column chart for dependent variables

a. Align IT with Business Needs

As table 4.16 shows the minimum value of the data points are 3.0 and maximum is 4.67. Mean value of the distribution is 3.76 and it is greater than 3. It confirmed that alignment of IT with business need is high. Data points are closer to mean or zero and shows 0.480. Further the figure 4.8 exhibits the graphical presentations of the mean of the variable of align IT with business needs.

b. Gain a Competitive Advantage from Information Technology.

As table 4.16 shows the minimum value of the data point is 1.6 and maximum is 4.0. Mean value of the distribution is 3.0067 and value is greater than 3. It illustrated that gaining competitive advantage from IT is high. Data points are not so closer to mean or zero and shows 0.767. Further the figure 4.8 exhibits the graphical presentations of the mean of the variable of gain competitive advantage from IT.

c. Identify New and Higher Payback Applications

As table 4.16 shows the minimum value of the data points are 2.0 and maximum is 4.5. Mean value of the distribution is 3.61 and it is greater than 3. It showed that

identification of new and higher pay back application is high. Data points are not so closer to mean or zero and shows 0.762. Further the figure 4.8 exhibits the graphical presentations of the mean of the variable of identify new and higher payback application.

d. Increase Top Management Commitment to Information Technology

As table 4.16 shows the minimum value of the data points are 2.0 and maximum is 4.33. Mean value of the distribution is 3.7 and it is greater than 3. It confirmed that top management commitment to IT is high. Data points are closer to mean or zero and shows 0.482. Further the figure 4.8 exhibits the graphical presentations of the mean of the variable of increase top management commitment to IT.

e. Improve Communication about IT with users

As table 4.16 shows the minimum value of the data points are 3.0 and maximum is 5.0. Mean value of the distribution is 3.76 and which is greater than 3. It illustrated that communication about IT with users is improved. Data points are not so closer to mean or zero and shows 0.666. Further the figure 4.8 exhibits the graphical presentations of the mean of the variable of improve communication about IT with users.

f. Allocation IT Resources

As table 4.16 shows the minimum value of the data points are 3.0 and maximum is 4.67. Mean value of the distribution is 3.86 and which is greater than 3. It explained that IT resource allocation is high. Data points are closer to mean or zero and shows 0.476. Further the figure 4.8 exhibits the graphical presentations of the mean of the variable of allocate IT resources.

g. Increase the Visibility of Information Technology in the Organization

As table 4.16 shows the minimum value of the data points are 3.0 and maximum is 5.0. Mean value is 3.64 and it is greater than value 3. It illustrated that increase the visibility of IT in the organization. Data points are not so closer to mean or zero and shows 0.612. Further the figure 4.8 exhibits the graphical presentations of the mean of the variable of increase visibility of IT in the organization.

h. Identification

As table 4.16 shows the minimum value of the data points are 3.0 and maximum is 4.5. Mean value of the distribution is 3.66 and it is greater than value 3. It indicated that identification is high. Data points are not so closer to mean or zero and shows 0.514. Further the figure 4.8 exhibits the graphical presentations of the mean of the variable of identification.

Further one sample t-test was conducted to test the present level of SISP success. The one-sample t- test compares the mean score of a sample to a known value. Usually, the known value is a population mean. Following is an output of one-sample t-test. We compared the mean level of the population for our sample variables to a known population value of 3. First, table 4.17 illustrates the descriptive statistics.

Table 4.17 - Descriptive statistics of one-sample t-test

	N	Mean	Std. Deviation	Std. Error Mean
SISP	30	3.6293	.43483	.07939



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The mean of our sample variables is 3.629, which is higher than our population mean of 3. It illustrated that SISP success is high. Next in table 4.18, we see the results of the one-sample t- test:

Table 4.18-One-sample t-test

	t	df	Sig. (2-tailed)	Test Value = 3		
				Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
SISP	7.927	29	.000	.62931	.4669	.7917

Significant value of all the variables are 0.000 and it is significant (the significance is less than .05). Therefore, we can say that the sample means are significantly greater than the population mean of 3.

4.2.5 Bivariate Analysis for Dependant and Independent Variables

4.2.5.1 Correlation Analysis

Using the Pearson's Product Moment Correlation with two-tailed test of significance, the correlation analysis was made to investigate the relationship between the following set of variables.

- a. Correlation between sufficient resource allocation for SISP and SISP success
- b. Correlation between organizational support for SISP and SISP success.
- c. Correlation between key people stays on SISP from start to finish and maintaining continuity and SISP success.
- d. Correlation between high credibility of SISP leaders and sponsors and SISP success
- e. Correlation between management expectation for SISP and SISP success.
- f. Correlation between management control for SISP and SISP success.
- g. Correlation between higher OC and SISP success

a. Correlation between Sufficient Resource Allocation for SISP and SISP Success

According to the results of the Pearson's correlation shown in the table 4.19, there is a positive significance between resource allocation for SISP and SISP success of the respondents.

Table 4.19: Correlation between resource allocation for SISP and SISP success

	Resource allocation	SISP
Pearson Correlation	1	.448(*)
Resource allocation		.013
Sig. (2-tailed)		
N	30	30

* Correlation is significant at the 0.05 level (2-tailed).

Pearson correlation between the two variables is 0.448, which is positive. It shows that there is a positive relationship between resource allocation for SISP and SISP success. The found relationship is statistically significant as correlation is significant at 0.013

levels (2-tailed). Thus, there is statistical evidence to claim that resource allocation for SISP and SISP success are positively related.

b. Correlation between Organizational Support for SISP and SISP Success

According to the results of the Pearson’s correlation shown in the table 4.20, there is a positive significance between organizational support for SISP and SISP success of the respondents.

Table 4.20: Correlation between organizational support for SISP and SISP success

	Organizational support	SISP
Pearson Correlation	1	.552(**)
Organizational support Sig. (2-tailed)		.002
N	30	30

** Correlation is significant at the 0.01 level (2-tailed).

Pearson correlation between the two variables is 0.552, which is positive. It shows that there is a positive relationship between organizational support for SISP and SISP success. The found relationship is statistically significant as correlation is significant at 0.02 levels (2-tailed). Thus, there is statistical evidence to claim that organizational support for SISP and SISP success are positively related

c. Correlation between Key People Stays on SISP from Start to Finish and Maintains the Continuity and SISP Success.

According to the results of the Pearson’s correlation shown in the table 4.21, there is no relationship of key people stay on SISP from start to finish and maintain the continuity and SISP success of the respondents.

Table 4.21: Correlation between key people stay on SISP from start to finish maintains the continuity and SISP success

		Key people stay from start to finish	SISP
Key people stay from start to finish	Pearson	1	.224
	Correlation		
	Sig. (2-tailed)		.235
	N	30	30

Pearson correlation between the two variables is 0.224, which is positive. But it is not significant as the significant value is .235. It was said that there is no relationship between key people stay on SISP from start to finish maintains the continuity and SISP success.

d. Correlation between Management Control for SISP and SISP Success.

According to the results of the Pearson's correlation shown in the table 4.22, there is no relationship between Management control for SISP and SISP success of the respondents.



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Table 4.22: Correlation between Management control for SISP and SISP success

		Management Controlled	SISP
Management Controlled	Pearson Correlation	1	.215
	Sig. (2-tailed)		.254
	N	30	30

Pearson correlation between the two variables is 0.215, which is positive. But it is not significant as the significant value is 0.254 (not less than 0.05). That says there is no relationship between management control for SISP and SISP success.

e. Correlation between Management Expectation for SISP and SISP Success

According to the results of the Pearson's correlation shown in the table 4.23, there is a positive significance between management expectation for SISP and SISP success of the respondents.

Table 4.23: Correlation between management expectation for SISP and SISP success

	Management Expectation	SISP
Management Expectation	Pearson Correlation	1 .618(**)
	Sig. (2-tailed)	.000
	N	30 30

** Correlation is significant at the 0.01 level (2-tailed).

Pearson correlation between the two variables is 0.618, which is positive. It shows that there is a positive relationship between management expectation for SISP and SISP success. The found relationship is statistically significant as correlation is significant at 0.000 levels (2-tailed). Thus, there is statistical evidence to that management expectation for SISP and SISP success is positively related.

f. Correlation between High Credibility of SISP Leaders and Sponsors and SISP Success

According to the results of the Pearson's correlation shown in the table 4.24, there is a positive significance between high credibility for SISP and SISP success of the respondents.



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Table 4.24: Correlation between high credibility for SISP and SISP success

	High Credibility	SISP
High Credibility	Pearson Correlation	1 .657(**)
	Sig. (2-tailed)	.000
	N	30 30

** Correlation is significant at the 0.01 level (2-tailed).

Pearson correlation between the two variables is 0.657, which is positive. It shows that there is a positive relationship between high credibility for SISP and SISP success. The found relationship is statistically significant as correlation is significant at 0.000 levels (2-tailed). Thus, there is statistical evidence to claim that high credibility for SISP and SISP success are positively related

g. Correlation between Higher Organizational Commitment and SISP Success

According to the results of the Pearson's correlation shown in the table 4.25, there is a positive significance between OC and SISP success of the respondents.

Table 4.25: Correlation between organizational support for SISP and SISP success

	OC	SISP
OC Pearson Correlation	1	.692(**)
Sig. (2-tailed)		.000
N	30	30

** Correlation is significant at the 0.01 level (2-tailed).

Pearson correlation between the two variables is 0.692, which is positive. It shows that there is a positive relationship between OC and SISP success. The found relationship is statistically significant as correlation is significant at 0.000 levels (2-tailed). Thus, there is statistical evidence to claim that OC and SISP success are positively related

4.2.6. Hypothesis Testing

The hypothesis testing was carried using the results of Person's Product Movement Correlation analysis and the results of regression analysis. All the hypotheses were tested using those results. As all the hypotheses were concerned with a positive relationship ($H_A > 0$), two – tailed test was used in the correlation analysis. Following list shows the alternative hypothesis of the study.

- H1: Sufficient resource allocation for SISP leads to a greater SISP success.
- H2: More organizational support for SISP lead to a greater SISP success
- H3: Key people stay on SISP from start to finish to maintains the continuity will leads to a greater SISP success
- H4: Management control for SISP will lead to a greater SISP success.
- H5: There is a relationship between SISP success and management expectation of SISP
- H6: High credibility of SISP leaders and sponsors will lead to a greater SISP success.
- H7: Higher OC will lead to a greater SISP success.

4.2.6.1. Testing Hypothesis 1

The alternative hypothesis was formulated as:

H1: Sufficient resource allocation for SISP leads to a greater SISP success.

According to the results of Pearson's Product Movement correlation analysis, between sufficient resource allocation for SISP and SISP success, the correlation coefficient is 0.448, which is significant at 5% ($p=0.013$). According to the results, the null hypothesis is rejected and the alternative hypothesis is accepted ($p<0.05$). Hence the data supports the hypothesis that there is a positive relationship between sufficient resource allocation for SISP and SISP success in Sri Lankan banking sector.

4.2.6.2 Testing Hypothesis 2

The alternative hypothesis was formulated as:

H2: More organizational support for SISP leads to a greater SISP success.

According to the results of Pearson's Product Movement correlation analysis between organizational support for SISP and SISP success, the correlation coefficient is 0.552, which is significant at 1% ($p=0.002$). According to the results, the null hypothesis is rejected and the alternative hypothesis is accepted ($p<0.05$). Hence the data supports the hypothesis that there is a positive relationship between organizational support for SISP and SISP success in Sri Lankan banking sector.

4.2.6.3 Testing Hypothesis 3

The alternative hypothesis was formulated as:

H3: Key people stay on SISP from start to finish maintaining the continuity will lead to a greater SISP success.

According to the results of Pearson's Product Movement correlation analysis between key people stay on SISP from start to finish and maintain the continuity will leads to greater SISP success, the correlation coefficient is 0.224, which is not significant at 5% ($p=0.235$). According to the results, the null hypothesis is accepted and the

alternative hypothesis is rejected ($p > 0.05$). Hence the data supports the hypothesis that there is no relationship between key people stay on SISP from start to finish and maintain the continuity will leads to greater and SISP success in Sri Lankan banking sector.

4.2.6.4 Testing Hypothesis 4

The alternative hypothesis was formulated as:

H4: Management control for SISP will lead to greater SISP success.

According to the results of Pearson's Product Movement correlation analysis between management control for SISP and SISP success, the correlation coefficient is 0.215, which is not significant at 5% ($p = 0.254$). According to the results, the null hypothesis is accepted and the alternative hypothesis is rejected ($p > 0.05$). Hence the data support the hypothesis that there is a positive relationship between management control for SISP and SISP success in Sri Lankan banking sector.

4.2.6.5 Testing Hypothesis 5

The alternative hypothesis was formulated as:

H5: There is a positive relationship between SISP success and management expectation of SISP

According to the results of Pearson's Product Movement correlation analysis between management expectation for SISP and SISP success, the correlation coefficient is 0.618, which is significant at 1% ($p = 0.000$). According to the results, the null hypothesis is rejected and the alternative hypothesis is accepted ($p < 0.05$). Hence the data supports the hypothesis that there is a positive relationship between management expectation for SISP and SISP success in Sri Lankan banking sector.

4.2.6.6 Testing Hypothesis 6

The alternative hypothesis was formulated as:

H6: High credibility of SISP leaders and sponsors will lead to a greater SISP success.

According to the results of Pearson's Product Movement correlation analysis between high credibility of SISP leaders and sponsors and SISP success, the correlation coefficient is 0.657, which is significant at 1% ($p=0.000$). According to the results, the null hypothesis is rejected and the alternative hypothesis is accepted ($p<0.05$). Hence the data supports the hypothesis that there is a positive relationship between high credibility of SISP leaders and sponsors and SISP success in Sri Lankan banking sector.

4.2.6.7. Testing Hypothesis 7

The alternative hypothesis was formulated as:

H7: Higher OC will lead to a greater SISP success.

According to the results of Pearson's Product Movement correlation analysis between organizational commitment and SISP success, the correlation coefficient is 0.692, which is significant at 1% ($p=0.000$). According to the results, the null hypothesis is rejected and the alternative hypothesis is accepted ($p<0.05$). Hence the data supports the hypothesis that there is a positive relationship between OC and SISP success in Sri Lankan banking sector.

4.2.7. Bivariate Analysis

4.2.7.1. Regression Analysis

Regression analysis conducted to identify the variables that are required to develop a model for the research by taking one variable at a time and run the simple linear regression.

Table 4.26: Results of regression analysis

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.388	.473		5.049	.000
Resource allocation	.332	.125	.448	2.654	.013

Dependent variable: SISP

According to table no 4.26, regression equation of SISP success is:

$$\text{SISP success} = 2.388 + 0.332 (\text{Resource Allocation})$$

The β value of the equation, the gradient of the regression, is 2.388, which is significant at 5% (significant = 0.013). Analyzed data also illustrated that there is a success of SISP even if the resource allocation is zero. Hence, the results showed R^2 value is 0.201. R squared is the proportion of variance in the dependant variable (SISP) which can be predicted from the independent variable (resource allocation). In short R square shows how well the model fit the population. This value indicated that 20.1% of variance in SISP can be predicted from the resource allocation variable. It also showed the structure of association of the variables.

Table 4.27: Results of regression analysis

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.050	.456		4.493	.000
Organizational support	.409	.117	.552	3.501	.002

Dependent variable: SISP

According to table no 4.27, regression equation of SISP success is:

$$\text{SISP success} = 2.050 + 0.409 (\text{Organizational support})$$

The β value of the equation, the gradient of the regression, is 2.388, which is significant at 1% (significant = 0.002). Analyzed data also illustrated that there is a success of SISP even if the organizational support is zero. Hence, the results showed R^2 value is 0.304. R squared is the proportion of variance in the dependant variable (SISP) which can be predicted from the independent variable (organizational support). This value indicated that 30.4% of variance in SISP can be predicted from the organizational support variable. It also showed the structure of association of the variables.

Table 4.28: Results of regression analysis

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.809	.442		4.092	.000
Management Expectation	.446	.107	.618	4.161	.000

Dependent variable: SISP

According to table no 4.28, regression equation of SISP success is:

$$\text{SISP success} = 1.809 + 0.446 (\text{Management Expectation})$$

The β value of the equation, the gradient of the regression, is 1.809, which is significant at 1% (significant = 0.000). Analyzed data also illustrated that there is a success of SISP even if the management expectation is zero. Hence, the results showed R^2 value is 0.372. R squared is the proportion of variance in the dependant variable (SISP) which can be predicted from the independent variable (management expectation). In short R square shows how well the model fit the population. This value indicated that 37.2% of variance in SISP can be predicted from the management expectation variable. It also showed the structure of association of the variables.

Table 4.29: Results of regression analysis

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.054	.347		5.922	.000
High Credibility	.412	.089	.657	4.611	.000

Dependent variable: SISP

According to table no 4.29, regression equation of SISP success is:

$$\text{SISP success} = 2.054 + 0.412 (\text{High Credibility})$$

The β value of the equation, the gradient of the regression, is 2.054, which is significant at 1% (significant = 0.000). Analyzed data also illustrated that there is a success of SISP even if the high credibility is zero. Hence, the results showed R2 value is 0.344. R squared is the proportion of variance in the dependant variable (SISP) which can be predicted from the independent variable (high credibility). In short R square shows how well the model fit the population. This value indicated that 34.4% of variance in SISP can be predicted from the high credibility variable. It also showed the structure of association of the variables.

Table 4.30: Results of regression analysis

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.029	.500		6.057	.000
Key people stay From start to finish	.159	.131	.224	1.215	.235

Dependent variable: SISP

According to table no 4.30, $P > .05$ and it is 0.235. It is not significant. Further the R square value is 0.050. It illustrated that the independent variable is not strong to predict the dependant variable.

Table 4.31: Results of regression analysis

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.167	0.405		7.816	0.000
Management Controlled	0.137	0.118	0.215	1.164	0.254

Dependent variable: SISP

According to table no 4.31, $P > .05$ and it is 0.254. It is not significant. Further the R square value is 0.046. It illustrated that the independent variable is not strong to predict the dependant variable.

Table 4.32: Results of regression analysis

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.849	0.551		1.542	0.134
OC	0.736	0.145	0.692	5.077	0.000

Dependent variable: SISP

According to table no 4.32, regression equation of SISP success is:

$$\text{SISP success} = 0.849 + 0.736 (\text{OC})$$

The β value of the equation, the gradient of the regression, is .849, which is significant at 1% (significant = 0.000). Analyzed data also illustrated that there is a success of SISP even if the OC is zero. Hence, the results showed R^2 value is 0.201. R squared is the proportion of variance in the dependant variable (SISP) which can be predicted from the independent variable (OC). In short R square shows how well the model fit the population. This value indicated that 20.1% of variance in SISP can be predicted from the OC variable. It also showed the structure of association of the variables.

4.3. Conclusion

This chapter employed Univariate, Bivariate and multivariate analyses to test the seven hypotheses of the study and to achieve main objective of the study.

CHAPTER 05

DISCUSSION OF RESULTS

5.1. Introduction

This chapter discusses the findings from the data analysis presented in chapter four. It includes the discussion of the relationships between the dependent variable (SISP success) and the independent variables (Sufficient resources Allocation for SISP, Organizational support for SISP, Management's expectations, High credibility, Key people stay on the SISP, and management controlled) in the research model.

5.2. Discussion on the SIS in the Banking Sector in Sri Lanka

The results of the research found that IS in banking sector is strategic information systems. The average value of the results of the likert scale is 3. The average results of each bank provide the value of more than 3. Therefore all the tested banks Information Systems are strategic Information Systems. The research conducted to find out the OC on SISP success in the banking sector and IS should be SIS. The above test identify that all these banks have strategic information systems. Based on the above argument this research can continue. Further one sample t-test was conducted to identify SIS in the banking sector in Sri Lanka. The sample mean of each variable is more than 3. It is higher than the identified the test value/population mean. The significance of all the variables is 0.000. It was decided that all banks in Sri Lanka has SIS.

5.3 Present level of OC on SISP in Banking Sector.

According to the statistical data the averages of all OC measuring variables are listed below. Means of resource allocation is 3.74, mean of organizational support is 3.85, means of management expectation is 4.08, means of the key people stay from start to end of the study is 3.77, and mean of the management control variance is 3.377. Means of all the variables are greater than the average of likert scale variable. This indicates that the selected banks OC on SISP is high. Further one sample t-test was used to identify the level of OC on SISP. It was decided that the tested variable means are greater than 3. Accordingly it was found that the level of OC on SISP is in higher level.

5.4 Measure the degree of SISP success in Banking Industry.

According to the statistics it was found that means of the following variables are greater than 3. [Aligned IT with business need is 3.76, gained competitive advantage is 3.00, new and higher payback application is 3.61, gained top Management commitment is 3.7, improved communication about IT is 3.76, allocated IT resource is 3.86, increased visibility is 3.64 and identification is 3.66.]. That shows the SISP successes in the selected banks are above the average level. That says the SISP success is high. Further to generalize the sample to population one sample t-test can be conducted. It was found that the test value is 3. It is the population mean. Mean of the sample is 3.62 with the confidence level of 95%. The answer is significant and is 0.000(two tailed). Accordingly the level of SISP success in Sri Lankan banking sector is in the higher level.

5.5 Discussion on Sufficient Resource Allocation for SISP and SISP Success

It was found that there is a positive relationship between sufficient resource allocations for SISP and SISP success. The correlation between these variables was 0.448, which is significant at 0.013 levels. Hence the results support for the alternative hypothesis H1 and reject H0. That indicates for the success of SISP in the banking sector, sufficient resource allocation is necessary. When resource is increasing for the SISP, the success too increases.

According to the results of simple regression analysis, sufficient resource allocations for SISP were found to have a positive impact on SISP success with the strength of beta value of 0.448. The significant value is 0.013 (two-tailed). Based on the results of the findings it was built a model for the variable.

$$\text{SISP success} = 2.388 + 0.332 (\text{Resource Allocation})$$

Therefore, resource allocation for SISP is one of the important factors for the success of SISP in the banking sector in Sri Lanka.

5.6 Discussion on Organizational Support for SISP and SISP Success

It was found that there is a positive relationship between organizational support for SISP and SISP success. The correlation between these variables was 0.552, which is

significant at 0.002 levels. Hence the results support for the alternative hypothesis H2 and reject H0. It indicates that for the success of SISP in the banking sector, organizational support is necessary. When organizational support is increasing for the SISP, the success too increases.

According to the results of simple regression analysis, organizational support for SISP was found to have a positive impact on SISP success with the strength of b value of 0.552. The significant value is .002(2 tailed). Based on the results of the findings it was built a model for the variable.

$$\text{SISP success} = 2.050 + 0.409 (\text{organizational support})$$

Therefore, organizational support for SISP is one of the important factors for the success of SISP in the banking sector in Sri Lanka.

5.7 Discussion on Key People stays on SISP from start to Finish and Maintain the Continuity and SISP Success

It was found that there is no relationship between key people stay on SISP from start to finish and maintain the continuity and SISP success. The correlation between these variables was 0.224, which is not significant. Hence the results do not support for the alternative hypothesis H3 and accept H0. It indicates that key people stay on SISP from start to finish and maintain the continuity. It will not support for the success of SISP in the banking sector. When Key people stay on SISP from start to finish and maintain the continuity will not lead to increase the SISP success.

According to the results of simple regression analysis, there is no relationship between key people stay on SISP from start to finish maintains the continuity and SISP. Therefore, Key people stay on SISP from start to finish maintains the continuity and can not considered as important factor for the success of SISP in the banking sector in Sri Lanka.

5.8 Discussion on High Credibility of SISP Leaders and Sponsors and SISP

Success

It was found that there is a positive relationship between high credibility of SISP leaders and sponsors for SISP and SISP success. The correlation between these variables was 0.657, which is significant at 0.000 levels. Hence the results support for the alternative hypothesis H4 and reject H0. It indicates that for the success of SISP in the banking sector, high credibility of SISP leaders and sponsors are necessary. When the credibility is high, SISP success will increase.

According to the results of simple regression analysis, high credibility of SISP leaders and sponsors provide a positive impact on SISP success with the strength of beta value of 0.657. The significant value is .000(2 tailed). Based on the results of the findings a model for the variable was built as follows.

$$\text{SISP success} = 2.054 + 0.412 (\text{High credibility of SISP leaders and sponsors})$$

Therefore, High credibility of SISP leaders and sponsors is one of the important factors for the success of SISP in the banking sector in Sri Lanka.

5.9. Discussion on Management Expectation of SISP and SISP Success

It was found that there is a positive relationship between management expectations of SISP and SISP success. The correlation between these variables was 0.618, which is significant at 0.000 levels. Hence the results support for the alternative hypothesis H5 and reject H0. It indicates that for the success of SISP in the banking sector, management expectation of SISP is necessary.

According to the results of simple regression analysis, management expectation of SISP was found to have a positive impact on SISP success with the strength of beta value of 0.618. The significant value is .000(2 tailed). Based on the results of the findings a model for the variable was built as follows.

$$\text{SISP success} = 1.809 + 0.446 (\text{management expectation})$$

Therefore, management expectation of SISP is one of the important factors for the success of SISP in the banking sector in Sri Lanka.

5.10. Discussion on Management Control for SISP and SISP Success

It was found that there is no relationship between management control for SISP and SISP success. The correlation between these variables was 0.215, which is not significant. Hence the results do not support for the alternative hypothesis H6 and accept H0. It indicates that for the success of SISP in the banking sector, management control is not a necessary factor. Therefore, management control for SISP is not considered as important factors for the success of SISP in the banking sector in Sri Lanka.

5.11. Discussion on OC and SISP Success

It was found that there is a positive relationship between OC and SISP success. The correlation between these variables was 0.224, which is significant at 0.000 levels. Hence the results support for the alternative hypothesis H7 and reject H0. It indicated that for the success of SISP in the banking sector OC is an important requirement. When increasing OC, the success of SISP will increase. The research findings empirically confirmed by Basu and et,al [8]. They argued that as OC increases SISP success increases. According to the results of simple regression analysis, OC was found to have a positive impact on SISP success with the strength of beta value of 0.224. The significant value is .000(2 tailed). Based on the results of the findings, a model was built for the variable.

$$\text{SISP success} = 3.029 + 0.159 (\text{OC})$$

Thus by looking at the R square values of the OC measuring variables, management expectation variable showed the highest R square value and which is 37.2%. High credibility and organizational support variables shows high values and which are too important. Among other variables R square value of resource allocation is less when compared to the variables discussed above. R square value of management controlled and key people stay from start to finish maintaining continuity are low and were not support to predict SISP success. Overall OC R square is 0.479 and which is highest when compared to the R square values of other variables. Therefore, OC is one of the important factors for the success of SISP in the banking sector in Sri Lanka.

By looking at the research findings, it is important to discuss the importance of the factor which was used to measure the OC. Findings illustrated that two variables are not significant which are management controlled and key people stay from start to finish maintaining continuity. Other variables are significant and illustrated the positive relationship with the success of SISP.

a. Summary of the Hypothesis Testing

Table 4.33 shows the summary of the hypothesis testing

Table 4.33- Summary of the hypothesis testing

No	Hypothesis	Result
1	Sufficient resource allocation for SISP leads to a greater SISP success.	H0-Rejected H1-Accepted
2	More organizational support for SISP lead to a greater SISP success	H0-Rejected H2-Accepted
3	Key people stay on SISP from start to finish to maintains the continuity will leads to a greater SISP success	H0-Accepted H3-Rejected
4	Management control for SISP will lead to a greater SISP success	H0-Accepted H4-Rejected
5	There is a relationship between SISP success and management expectation of SISP	H0-Rejected H5-Accepted
6	High credibility of SISP leaders and sponsors will lead to a greater SISP success.	H0-Rejected H6-Accepted
7	Higher organizational commitment will lead to a greater SISP success.	H0-Rejected H7-Accepted

b. Model Summary

The following table shows the summary of the models developed.

Table- 4.34 Summary of the models developed.

OC Variable	Model
Resource Allocation	SISP success = 2.388 + 0.332 (Resource Allocation)
Organizational Support	SISP success = 2.050 + 0.409 (Organizational support)
High Credibility of SISP Leaders and Sponsors	SISP success = 2.054 + 0.412 (High credibility of SISP leaders and sponsors)
Management Expectation	SISP success = 1.809 + 0.446 (Management Expectation)
OC	SISP success = 3.029 + 0.159 (OC)

5.12. Conclusion

This chapter illustrated the discussion of the findings of the study. The relationship between the independent variables and the dependent variables are discussed more advance in this chapter.

CHAPTER 06

CONCLUSION AND RECOMMENDATIONS

6.1. Introduction

This chapter contains the findings, recommendations, implications, and the limitation of the study.

6.2. Findings

The concept of SISP is very important to all most all other sectors in Sri Lanka. Success and survival depend on the extent to which the organization can plan information systems strategically. If the organization is competent to overcome the competitors and implement the plans to enhance the system activities, they can win the market. The banking sector was selected for the study with the intension of experiencing a mature IT usage and having enough work ground when compared to the other sectors in the country.

The problem of the research was that the degree of organizational commitment which contributes to the success of SISP in the banking sector in Sri Lanka. In my study based on the theoretical information, conceptual framework is developed to test the relationship of the success of SISP with other independent variables such as sufficient resource allocation, organizational support, key people stay on SISP from start to finish maintaining the continuity, management control, management expectation, high credibility, and organizational commitment.

According to the findings, it is substantiated that there is a strong positive relationship between SISP success and OC in the banking sector in Sri Lanka. Hence, the following independent variables do not show the relationship with SISP success and they are management control and key people stay on SISP from start to finish maintaining the continuity. Other variables such as sufficient resource allocation, organizational support, management expectation, and high credibility show a strong positive relationship with SISP success. According to the research it was indicated that the success of SISP depends on the higher OC in banking sector in Sri Lanka

6.3. Recommendations

There are bureaucratic delays due to both insufficient resources available in the public sector and the availability of too much of resources. Due to bureaucratic delays most government banks were unable to compete with the private sector banks. During these delays business objectives, stakeholders are change and also insufficient resource allocation for planning may prevent the SISP objectives. Over controlling the SISP process is a problem. To rectify the above, a proper target must be given to the planning groups; there by they will move on in a successful direction to achieve SISP success.

Implications and Further Studies

This study confirmed that the management controlled for SISP and key people stay on SISP from start to finish maintaining continuity can be detrimental the SISP success. In future the research could attempt to explain why the above two became detrimental factors for SISP success.

Future researchers could also consider other factors such as team involvement, senior management involvement on SISP success. Especially in Sri Lankan context no prior research has been conducted in the field of SISP. It is the best opportunity to conduct the research without sticking to the banking sector and considering the other sectors in Sri Lanka.

Findings are limited to Sri Lankan context and its Socio-cultural, political, and legal environmental situations are differing from the developed countries. Further researchers can conduct cross sectional researches are the social contexts and SISP success in the banking sector.

6.4. Limitations of the Study

The study was limited to investigate the OC factors such as sufficient resource allocation, organizational support, key people stay on SISP from start to finish maintaining the continuity, management control, management expectation, and high credibility of the banking sector in Sri Lanka. These are not only the factors for determining the OC in the banking sector in Sri Lanka. This analysis was a cross-section of study by nature. Additional research is suggested to carry out longitudinally in order to valuate the impact of the variables over a period of time. Longitudinal studies using quantitative and qualitative techniques are required in order to

understand the changes in the five variables over the time. The study was conducted among the sample of IT executives and IT managers as a whole, which did not include different types of workers such as users, managers in the other departments, and other executives etc.. The subjects are the users of the IS and also their ideas may change the results of the study.



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APPENDIX 1

Study on the organizational commitment on strategic IS planning success in the banking sector in Sri Lanka

I convey my gratitude for spending your invaluable time for this survey. These data are only for academic research purpose and will be treated as strictly confidential. Therefore please mark most appropriate measures which fit best with your organization

Please circle one of the following numbers to indicate extent to which the **Strategic IS Planning** (SISP) study followed each of the subsequent actions. From 1-17 questions are to check whether the system in your bank is strategic or not

1= Strongly Disagree 2=Disagree 3=Neither Agree nor Disagree 4=Agree 5=Strongly Agree

1. IS at my bank helps to change its goals.	1	2	3	4	5
2. IS at my bank helps to change its policies.	1	2	3	4	5
3. IS makes most of the financial activities easier.	1	2	3	4	5
4. IS helps to change activities of the marketing department at my organization.	1	2	3	4	5
5. My organization introduced a new deposit system to facilitate customers with the help of information system.	1	2	3	4	5
6. The IS at the bank facilitated to change the existing transactions methods other than deposits and withdrawals.	1	2	3	4	5
7. Bank IS facilitates to change its withdrawal system.	1	2	3	4	5
8. Some of the new brands have introduced because of the new developments of the Information Technologies applied to the bank.	1	2	3	4	5
9. My bank captures new markets through IS before competitors.	1	2	3	4	5
10. We are always trying to enhance market share and our IS help to do so.	1	2	3	4	5
11. We were able to link with the international organizations without any disturbances.	1	2	3	4	5
12. We have updated information about our competitors and their plans.	1	2	3	4	5
13. Our IS leads the way providing better service to our customers than the competitors.	1	2	3	4	5
14. Numbers of customers have increased because of the facilities provided using information system.	1	2	3	4	5

From 18-44 questions are to measure the organizational commitment on SISP. Please select the appropriate answer.

1=Not at All 2=To a little Extent 3=To Some Extent 4=To a Great Extent 5=To a Very Great Extent

15. We analyze resource limitations of the IS before planning.	1	2	3	4	5
16. We have technically competent people to plan the resource requirement.	1	2	3	4	5
17. Our bank has policies in obtaining skilled people for planning the information system.	1	2	3	4	5
18. When we preparing budget we always consider education and the training cost of the staff.	1	2	3	4	5
19. We always record the comments from the potential users about the system requirement.	1	2	3	4	5
20. Top management always communicates with us regarding IS plans.	1	2	3	4	5
21. Both top management and we discuss about the threats against the organization.	1	2	3	4	5
22. Top management always discuss with us about the organizational objectives.	1	2	3	4	5
23. We all discussed about the issues arising during the planning of information systems.	1	2	3	4	5
24. We always think about main input before going to a plan.	1	2	3	4	5
25. We always consider outcome of the system when we planning.	1	2	3	4	5
26. We are able to keep up with new developments in IT industry.	1	2	3	4	5
27. We have authority to influence IS plans.	1	2	3	4	5
28. We participate in solving the conflicts among stakeholder arising during planning.	1	2	3	4	5
29. We regularly attend business planning meetings.	1	2	3	4	5
30. The CEO aware of competitors and their use of information system.	1	2	3	4	5
31. The CEO has frequent informal contacts with us.	1	2	3	4	5
32. The CEO aware of IS opportunities exist within the organization itself.	1	2	3	4	5
33. We follow up the strategic IS planning process from start to finish maintaining the continuity.	1	2	3	4	5
34. We help to resolve some conflicts exist owing to expertise and their perception when planning information system.	1	2	3	4	5
35. Stakeholders have different opinions, so we assist in solving problems arise during the planning.	1	2	3	4	5
36. We are always ready to solve the conflicts arising from stakeholders not being satisfied with resource allocation.	1	2	3	4	5

From 45-68 questions are to measure the success of SISP in the bank. Please select the appropriate answer.

1=Not at All 2=To a little Extent 3=To Some Extent 4=To a Great Extent 5=To a Very Great Extent

37. Our organization's corporate vision is aligning with the information technology.	1	2	3	4	5
38. Our organization's business need is align with information technology.	1	2	3	4	5
39. Our organization objectives are aligning with the information technology.	1	2	3	4	5
40. Our IS generates very important information about our rival banks.	1	2	3	4	5
41. We have a better IS than competitors to deal with our customers.	1	2	3	4	5
42. Our IS provides facilities to deal with our suppliers.	1	2	3	4	5
43. Our IS always provides necessary information about new entrance to the market.	1	2	3	4	5
44. We have all records regarding the substitute product and services.	1	2	3	4	5
45. Because of new and higher payback application would help to reduce mistakes.	1	2	3	4	5
46. Use of user friendly system reduced error.	1	2	3	4	5
47. Degree to which the top management participate in the SISP process.	1	2	3	4	5
48. Degree to which the middle management's commitment in the SISP process.	1	2	3	4	5
49. Degree to which Users commitment in the SISP process.	1	2	3	4	5
50. Bank IS facilitate to a clear communication.	1	2	3	4	5
51. Bank IS speeds up communication.	1	2	3	4	5
52. We have initial plan to allocate hardware resources for the information system.	1	2	3	4	5
53. We have initial plan to obtain software resource requirements for the system.	1	2	3	4	5
54. Our corporate plan display recruitment of number of IT personal.	1	2	3	4	5
55. We prepare IS plans that reflects the mission of business plan.	1	2	3	4	5
56. Our IS plan reflects the goals of business plan.	1	2	3	4	5
57. Bank IS plan supports the business strategy.	1	2	3	4	5
58. Understanding the information needs of organization and its subunits	1	2	3	4	5
59. Identifying opportunities for internal improvement of the business process through IT	1	2	3	4	5

Company Background

Please cross the appropriate answer.

60. Type of the organization Licensed commercial banks licensed specialized banks

Sector Private Public

61. No of Branches -----

62. Your designation

IT Manager Non- IT Manager IT Executive Non-IT Executive

63. Age.....

64. Gender Male Female

65. Educational qualifications

Banking Diploma IT Degree Non-IT Degree
 Postgraduate/Masters Ph.D. Professional Qualification

66. How long have you been working at the bank attached to the department of IT

Recently (Within 3 months) Less than one year 1-5 year

More than 5 year

If you wish to receive the outcome of the research findings please specify your e-mail address:

.....

Thank you

APPENDIX 2

Study on the organizational commitment on strategic Information System planning success in the banking sector in Sri Lanka

I convey my gratitude for spending your invaluable time for this survey. These data are only for academic research purpose and will be treated as strictly confidential. Therefore please mark most appropriate measures which fit best with your organization

Part -A

Please circle one of the following numbers to indicate extent to which the **Strategic Information System Planning (SISP)** study followed each of the subsequent actions. From 1-17 questions are to check whether the system in your bank is strategic or not

1= Strongly Disagree 2=Disagree 3=Neither Agree nor Disagree 4=Agree 5=Strongly Agree

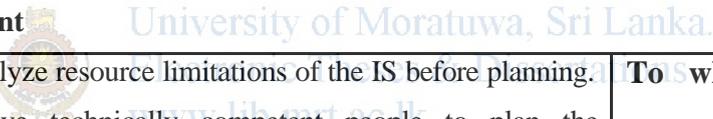
1. IS at my bank helps to change its goals. 2. IS at my bank helps to change its policies.	Organizational goals have changed
3. IS makes most of the financial activities easier. 4. IS helps to change activities of the marketing department at my organization.	Some of the operations were changed
5. My organization introduced a new deposit system to facilitate customers with the help of information system. 6. The IS at the bank facilitated to change the existing transactions methods other than deposits and withdrawals.	Development of Current products or services
7. Bank IS facilitates to change its withdrawal system. 8. Some of the new brands have introduced because of the new developments of the Information Technologies applied to the bank	Current products or services have changed

<p>9. My bank captures new markets through IS before competitors.</p> <p>10. We are always trying to enhance market share and our IS help to do so.</p> <p>11. We were able to link with the international organizations without any disturbances.</p>	<p>Environmental relationship have changed</p>
<p>12. We have updated information about our competitors and their plans.</p> <p>13. Our IS leads the way providing better service to our customers than the competitors.</p> <p>14. Numbers of customers have increased because of the facilities provided using information system.</p>	<p>Able to overcome the competitors</p>

Part -B

From 18-44 questions are to measure the organizational commitment on SISP. Please select the appropriate answer.

1=Not at All 2=To a little Extent 3=To Some Extent 4=To a Great Extent 5=To a Very Great Extent



<p>15. We analyze resource limitations of the IS before planning.</p> <p>16. We have technically competent people to plan the resource requirement.</p> <p>17. Our bank has policies in obtaining skilled people for planning the information system.</p> <p>18. When we preparing budget we always consider education and the training cost of the staff.</p> <p>19. We always record the comments from the potential users about the system requirement</p>	<p>To what extent banks were allocate resource sufficiently for strategic IS planning</p>
---	--

<p>20. Top management always communicates with us regarding IS plans.</p> <p>21. Both top management and we discuss about the threats against the organization.</p> <p>22. Top management always discuss with us about the organizational objectives.</p> <p>23. We all discussed about the issues arising during the planning of information systems.</p>	<p>To what extent the organization support to build a SISP</p>
<p>24. We are able to keep up with new developments in IT industry.</p> <p>25. We have authority to influence IS plans.</p> <p>26. We participate in solving the conflicts among stakeholder arising during planning.</p>	<p>To what extent SISP leaders and sponsors have high credibility</p>
<p>27. We regularly attend business planning meetings.</p> <p>28. The CEO aware of competitors and their use of information system.</p> <p>29. The CEO has frequent informal contacts with us.</p> <p>30. The CEO aware of IS opportunities exist within the organization itself.</p> <p>31. We follow up the strategic IS planning process from start to finish maintaining the continuity.</p>	<p>To what extent Key people stay with SISP from its start to finish to maintain the continuity</p>
<p>32. We help to resolve some conflicts exist owing to expertise and their perception when planning information system.</p> <p>33. Stakeholders have different opinions, so we assist in solving problems arise during the planning.</p> <p>34. We are always ready to solve the conflicts arising from stakeholders not being satisfied with resource allocation.</p>	<p>To what extent management controlled the SISP to resolve conflicts with different sub units of the organization itself.</p>
<p>35. We always think about main input before going to a plan.</p> <p>36. We always consider outcome of the system when we planning.</p>	<p>To what extent management expectation of the SISP study</p>

Part –C

From 45-68 questions are to measure the success of SISP in the bank. Please select the appropriate answer.

1=Not at All 2=To a little Extent 3=To Some Extent 4=To a Great Extent 5=To a Very Great Extent

<p>37. Our organization's corporate vision is aligning with the information technology.</p> <p>38. Our organization's business need is align with information technology.</p> <p>39. Our organization objectives are aligning with the information technology.</p>	<p>Align IT with business needs</p>
<p>40. Our IS generates very important information about our rival banks.</p> <p>41. We have a better IS than competitors to deal with our customers.</p> <p>42. Our IS provides facilities to deal with our suppliers.</p> <p>43. Our IS always provides necessary information about new entrance to the market.</p> <p>44. We have all records regarding the substitute product and service.</p>	<p>Gain a competitive advantage from information technology.</p>
<p>45. Because of new and higher payback application would help to reduce mistakes.</p> <p>46. Use of user friendly system reduced error.</p>	<p>Identify new an higher payback applications</p>

<p>47. Degree to which the top management participate in the SISP process.</p> <p>48. Degree to which the middle management's commitment in the SISP process.</p> <p>49. Degree to which Users commitment in the SISP process.</p>	<p>Increase top management commitment to information technology</p>
<p>50. Bank IS facilitate to a clear communication.</p> <p>51. Bank IS speeds up communication.</p>	<p>Improve communication about IT with users</p>
<p>52. We have initial plan to allocate hardware resources for the information system.</p> <p>53. We have initial plan to obtain software resource requirements for the system.</p> <p>54. Our corporate plan display recruitment of number of IT personal.</p>	<p>Allocation IT resources</p>
<p>55. We prepare IS plans that reflects the mission of business plan.</p> <p>56. Our IS plan reflects the goals of business plan.</p> <p>57. Bank IS plan supports the business strategy.</p>	<p>Increase the visibility of IT in the organization</p>
<p>58. Understanding the information needs of organization and its subunits</p> <p>59. Identifying opportunities for internal improvement of the business process through IT</p>	<p>Identification</p>

APPENDIX 3

a. Reliability Analysis Tables

Item Statistic

	Mean	Std. Deviation	N
SISA1	3.87	.900	30
SISA2	3.43	.898	30
SISB1	4.60	.498	30
SISB2	3.67	.711	30
SISC1	3.70	.702	30
SISC2	4.17	.791	30
SISCC1	3.77	.898	30
SISCC2	4.10	.607	30
SISD1	3.37	.964	30
SISD2	3.73	.980	30
SISD3	4.37	.490	30
SISE1	3.23	.898	30
SISE2	3.77	.858	30
SISE3	4.07	.640	30



Item Statistics

	Mean	Std. Deviation	N
OCA1	3.80	.925	30
OCA2	3.73	.785	30
OCA3	3.70	.837	30
OCA4	3.80	.925	30
OCA5	3.67	.661	30
OCB1	3.90	.845	30
OCB2	3.90	.845	30
OCB3	3.93	.640	30
OCB4	3.70	.702	30
OCC1	4.00	.788	30
OCC2	4.17	.592	30
OCD1	3.80	.761	30
OCD2	3.60	.814	30
OCD3	3.43	.679	30
OCE1	3.53	.571	30
OCE2	3.93	.828	30
OCE3	3.83	.913	30
OCE4	3.83	.950	30
OCE5	3.73	.640	30
OCF1	3.37	.718	30
OCF2	3.27	.907	30
OCF3	3.50	.731	30

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Item Statistics

	Mean	Std. Deviation	N
SISPSA1	3.67	.661	30
SISPSA2	3.87	.681	30
SISPSA3	3.77	.626	30
SISPSB1	2.97	1.299	30
SISPSB2	3.23	.858	30
SISPSB3	3.23	.898	30
SISPSB4	2.60	.894	30
SISPSB5	3.00	1.083	30
SISPSC1	3.33	1.093	30
SISPSC2	3.90	.712	30
SISPSD1	3.77	.626	30
SISPSD2	3.73	.521	30
SISPSD3	3.60	.675	30
SISPSE1	3.57	.728	30
SISPSE2	3.97	.765	30
SISPSF1	4.00	.743	30
SISPSF2	4.03	.615	30
SISPSF3	3.57	.728	30
SISPSG1	3.63	.718	30
SISPSG2	3.60	.621	30
SISPSG3	3.70	.702	30
SISPSH1	3.70	.651	30
SISPSH2	3.63	.615	30

b. Validity Checking tables

Communalities

	Initial	Extraction
SISA1	1.000	.580
SISA2	1.000	.580

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.159	57.972	57.972	1.159	57.972	57.972
2	.841	42.028	100.000			

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
SISB1	1.000	.597
SISB2	1.000	.597

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.195	59.731	59.731	1.195	59.731	59.731
2	.805	40.269	100.000			

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
SISC1	1.000	.857
SISC2	1.000	.857

Extraction Method: Principal Component Analysis.



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Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.713	85.675	85.675	1.713	85.675	85.675
2	.287	14.325	100.000			

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
SISCC1	1.000	.680
SISCC2	1.000	.680

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.360	68.024	68.024	1.360	68.024	68.024
2	.640	31.976	100.000			

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
SISD1	1.000	.725
SISD2	1.000	.715
SISD3	1.000	.715

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.155	71.819	71.819	2.155	71.819	71.819
2	.431	14.354	86.173			
3	.415	13.827	100.000			

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
SISE1	1.000	.648
SISE2	1.000	.748
SISE3	1.000	.371

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.768	58.933	58.933	1.768	58.933	58.933
2	.816	27.216	86.149			
3	.416	13.851	100.000			

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
OCA1	1.000	.441
OCA2	1.000	.458
OCA3	1.000	.772
OCA4	1.000	.509
OCA5	1.000	.355

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.535	50.707	50.707	2.535	50.707	50.707
2	.886	17.710	68.417			
3	.831	16.611	85.028			
4	.490	9.797	94.825			
5	.259	5.175	100.000			

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
OCB1	1.000	.493
OCB2	1.000	.641
OCB3	1.000	.571
OCB4	1.000	.687

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.392	59.810	59.810	2.392	59.810	59.810
2	.858	21.438	81.248			
3	.439	10.982	92.230			
4	.311	7.770	100.000			

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
OCC1	1.000	.759
OCC2	1.000	.759

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.517	75.873	75.873	1.517	75.873	75.873
2	.483	24.127	100.000			

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
OCD1	1.000	.444
OCD2	1.000	.769
OCD3	1.000	.380

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.594	53.125	53.125	1.594	53.125	53.125
2	.960	32.004	85.129			
3	.446	14.871	100.000			

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
OCE1	1.000	.435
OCE2	1.000	.517
OCE3	1.000	.693
OCE4	1.000	.893
OCE5	1.000	.445

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.983	59.663	59.663	2.983	59.663	59.663
2	.871	17.428	77.090			
3	.739	14.771	91.862			
4	.305	6.099	97.960			
5	.102	2.040	100.000			

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
OCF1	1.000	.659
OCF2	1.000	.887
OCF3	1.000	.693

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.240	74.651	74.651	2.240	74.651	74.651
2	.574	19.137	93.789			
3	.186	6.211	100.000			

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
SISPSA1	1.000	.763
SISPSA2	1.000	.597
SISPSA3	1.000	.275

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.635	54.512	54.512	1.635	54.512	54.512
2	.924	30.812	85.325			
3	.440	14.675	100.000			

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
SISPSD1	1.000	.702
SISPSD2	1.000	.658
SISPSD3	1.000	.538

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.897	63.250	63.250	1.897	63.250	63.250
2	.651	21.685	84.935			
3	.452	15.065	100.000			

Extraction Method: Principal Component Analysis.

Communalities

	Initial	Extraction
SISPSE1	1.000	.796
SISPSE2	1.000	.796

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.592	79.624	79.624	1.592	79.624	79.624
2	.408	20.376	100.000			

Extraction Method: Principal Component Analysis.

c. Correlation Tables



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		Resource allocation	Organizational support	Management Expectation	High Credibility	Key people stay From start to finish	Management Controlled	OC	SISP
Resource allocation	Pearson Correlation	1	.285	.336	.520(**)	.279	.322	.696(**)	.448(*)
	Sig. (2-tailed)		.127	.070	.003	.135	.082	.000	.013
	N	30	30	30	30	30	30	30	30
Organizational support	Pearson Correlation	.285	1	.693(**)	.247	.321	.232	.692(**)	.552(**)
	Sig. (2-tailed)	.127		.000	.188	.084	.218	.000	.002
	N	30	30	30	30	30	30	30	30
Management Expectation	Pearson Correlation	.336	.693(**)	1	.284	.081	-.023	.586(**)	.618(**)
	Sig. (2-tailed)	.070	.000		.128	.670	.903	.001	.000
	N	30	30	30	30	30	30	30	30
High Credibility	Pearson Correlation	.520(**)	.247	.284	1	.162	.082	.599(**)	.657(**)
	Sig. (2-tailed)	.003	.188	.128		.393	.666	.000	.000
	N	30	30	30	30	30	30	30	30
Key people stay From start to finish	Pearson Correlation	.279	.321	.081	.162	1	.873(**)	.701(**)	.224
	Sig. (2-tailed)	.135	.084	.670	.393		.000	.000	.235
	N	30	30	30	30	30	30	30	30
Management Controlled	Pearson Correlation	.322	.232	-.023	.082	.873(**)	1	.646(**)	.215
	Sig. (2-tailed)	.082	.218	.903	.666	.000		.000	.254

OC	N	30	30	30	30	30	30	30	30
	Pearson Correlation	.696(**)	.692(**)	.586(**)	.599(**)	.701(**)	.646(**)	1	.692(**)
	Sig. (2-tailed)	.000	.000	.001	.000	.000	.000		.000
SISP	N	30	30	30	30	30	30	30	30
	Pearson Correlation	.448(*)	.552(**)	.618(**)	.657(**)	.224	.215	.692(**)	1
	Sig. (2-tailed)	.013	.002	.000	.000	.235	.254	.000	
	N	30	30	30	30	30	30	30	30

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).





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