

**Developing Measurement Mathematical Model
in Management Change and Strategic Planning
using BSC Perspectives**

"Case Study"

Prepared by

Ala'a M. Al Mtour

Supervised by

Professor Abdul Naser Nour

This Thesis Submitted in Partial Fulfillment of the Master's
Degree in Business Administration

**Department of Business Administration
Faculty of Business
Middle East University for Graduate Studies**

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Authorization

I, Ala'a M. Al Mtour, hereby authorize Middle East University for Graduate Studies to provide copies of this thesis to all and any university libraries, institutions or related parties interested in scientific research upon their request.

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Committee Pronouncement

This thesis has been discussed under its title "Developing Measurement Model in Management Change and Strategic Planning Using BSC Perspectives ", and has approved on 26-5-2010

Committee Members	Title	Signature
Prof. Abdul Naser Nour	Supervisor	-----
Prof. Mohammad Alnuimi	Member and chairman	-----
Assis. Prof Samer Aldhayat	Member	-----

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Researcher

Dedication

There is a number of people without whom this thesis could not have been written, and to whom I am greatly indebted.

To my parents who taught me beyond the darkness there is always light and hope.

To my wife who is always there pushing me, encouraging and loving me.

To my daughters: Besan and Noorhan who know that the best kind of knowledge to have, is that which is learned for its own sake.

To my son Mohammad who knows that with science and knowledge we can take control of a situation that is out of control.

Researcher

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Abstract In English Language

Developing Measurement Mathematical Model in

Management Change and Strategic Planning

Using BSC Perspectives

Case Study

Prepared by

Ala'a Al Mtour

Supervised by

Prof. Abdul Naser I. Nour

The study aimed at developing measurement mathematical model in management change and strategic planning using BSC perspectives. Through identify the relation between the financial perspective, agent, internal processes and innovation and renewal evaluations perspectives of the BSC. In addition, to examine the Mathematical Model to Integrate BSC in to the Change Management and Strategic Planning in all the four areas.

The study instrument is a questionnaire to achieve study goals. The questionnaire was distributed to study sample which consists of (100) employee; every (20) from the sample was selected from different banks, the first one from Arab Bank, the second one from Jordan- Kuwaiti Bank, the third one from Al-Ahli Bank, the fourth one from Housing Bank and the final one from Jordan Bank.

The results of the study showed the following:

The results show that there is a significant relationship on the level ($\alpha \leq 0.05$) between the two means for the sample answer on financial, agents, internal processes and human resources innovation and renewal perspectives, and show that there is a relationship between the four perspectives with low integrations. For these reasons, the researcher proposed mathematical model measure integration between these perspectives.

The researcher recommended many recommendations, the most important is: The importance of applying mathematical model that proposed by the researcher in the Jordanian banks to facilitate organization to identify the operational factors that drive future success, align their strategic objectives and actions, to create long-term competitive advantage.

الملخص

تطوير نموذج قياس رياضي في إدارة التغيير والتخطيط الإستراتيجي

عن طريق استخدام محاور الأداء المتوازن

دراسة حالة

إعداد

علاء المطور

إشراف

أ.د. عبد الناصر نور

هدفت الدراسة إلى تطوير نموذج رياضي في إدارة التغيير والتخطيط الإستراتيجي باستخدام بطاقة قياس الأداء المتوازن، وذلك من خلال الكشف عن العلاقة بين المجال المالي ومجال العملاء ومجال العمليات الداخلية ومجال الموارد البشرية والابتكار والتعلم وبين قياس الأداء المتوازن. بالإضافة إلى التحقق من وجود علاقة تكاملية بين محاور الأنموذج المتوازن لقياس أداء تغيير الإدارة والتخطيط الاستراتيجي على المجالات الأربعة.

وفي سبيل تحقيق أهداف الدراسة فقد تم تصميم استبانة متخصصة تم توزيعها على عينة الدراسة والتي تكونت من (100) موظف، تم اختيار كل عشرين موظفاً من العينة من مصارف مختلفة هي: البنك العربي، بنك الأردن الكويتي، والبنك الأهلي، وبنك الإسكان وبنك الأردن.

أظهرت نتائج الدراسة عدداً من النتائج كان من أهمها:

وجود علاقة ذات دلالة إحصائية عند المستوى ($\alpha \leq 0.05$) بين متوسطات إجابة عينة الدراسة على فقرات المجال المالي والعملاء، ومجال العمليات الداخلية ومجال الموارد البشرية والابتكار والتعلم. وأظهرت وجود علاقة تكاملية بين المحاور الأربعة. لذلك اقترح الباحث نموذجاً رياضياً يقيس التكامل بين هذه المجالات.

وأوصى الباحث العديد من التوصيات أهمها: أهمية تطبيق نموذج رياضي لتكامل نظام بطاقة قياس الأداء المتوازن الذي اقترحه الباحث في المصارف الأردنية للتسهيل على المنظمة في تحديد العوامل التشغيلية التي تدفع إلى النجاح في المستقبل، ويساعدها في تأييد أهدافها الإستراتيجية وإجرائاتها، لخلق ميزة تنافسية على المدى الطويل.

Chapter One

Study Introduction

1-1 Introduction

1-2 Problem Statement

1-3 Research Questions

1-4 Research Hypotheses

1-5 Significance of the Study

1-6 Conceptual Frameworks

1-7 Study Limitations

1-8 Definition of Terms

1-1 Introduction

The unprecedented speeds in information and communication technologies have been advanced as well as the globalization of economic have accelerated in development in today's societies. The recent changes are reflected in all areas of the society, and the operating environment of organizations working has grown to be more complex and difficult to manage. Therefore new management theories and practices have been involved fast over the past decades.

As society changes, the companies and establishments involved in its development must also change. As the environment changes the conditions under which organizations operate also change. Adjusting to the altered operating environment constitutes challenge to the organizations as they review their management systems. Help in meeting this challenge can be sought from modern management tools.

Balanced scorecard (BSC) makes both practitioner and academic take notice today. The reason is that BSC rethinks performance measurement efficiency system of organizations. Furthermore, BSC has become a strategic management system that can facilitate organization to identify the operational factors which drive future success, align their strategic objectives and actions, and accumulate the resources that can create long term competitive advantage.

The BSC integrates the corporate management with the corporate strategy and making it explicit. A complete set of objectives and indicators, easy to display report and follow up disclose the strategic initiatives that compose it.

The easiness and clearness, in which the indicators evolution and the degree of achievement of the objectives are displayed, constitute a powerful means of

communication, allowing to clearly aligning the different sectors of the enterprise, both functional and managerial, in pursuit of the strategic objectives.

Regarding the traditional fixation and deployment of financial objectives by means of the budget, BSC adds important elements to enrich management possibilities, as (Akkermans & Kim, 2002):

- It includes, besides financial result indicators (lagging indicators), non-financial process indicators (leading indicators), which describe how the results will be obtained.
- It defines customer, innovation and learning perspectives, and internal process perspective, and puts them in the centre of the enterprise management and at the same level as the financial perspective.
- It includes the generation of strategic initiatives and drivers for future performance, which aligns the improvement process with the corporate strategy.
- It uses limited number of indicators and measurements, avoiding dispersion and waste of efforts.
- It invites review to the strategy in each BSC revision, according to the changes that might have happened.
- It develops, within the organization, a process of establishment of objectives and strategic initiatives generating an active communication and participation, to and from the upper management of the company, avoiding any resistance through the change management process.

The BSC measures organizational performance across four different, but linked, perspectives which are derived from organizational strategy (Chow et. Al.,1997):

- Financial perspective (P1).
- Customer perspective (P2).
- Internal process perspective (P3).
- Learning and growth perspective (P4).

The keen interest in designing effective performance, measurement systems arises from the management dictum that "if you can't measure it, you can't manage it".

Difficulties in placing a reliable financial value on intangible assets have prevented companies from being recognized on a company's balance sheet, which is (assets) critical for success, managers have searched to a system that would help them measure and manage the performance of their intangible, knowledge-based assets.

The balanced score card (BSC) provides a system for measuring and managing all aspects of a company's performance, which balances traditional financial measures of success, such as profits and return on capital, with non-financial measures as drivers of future financial performance (Rousseau & Rousseau, 2000).

The management system of an organisation has never been significant enough. The environment is changing and the systems, processes have to be improved continuously. In developing the management systems, we need to have a continuous information flow on the needs and perspectives of BSC in order to modify the strategic plan. We also need to have a solid management framework in order to faster the change and to measure whether the targets are met.

On the other hand, strategic management has become more and more important to different kinds of organizations. Development of a management and strategic planning system, moving towards the management of processes, improving customer intimacy, and better management of people are among the most topical

management issues. Understanding that quality is an issue of strategic management helps an organization to manage the change needed to reach an excellent performance and become a top quality institute.

The proposed mathematical model in this study can be a guideline, how an organization can effectively develop its activities and continuously improve its management process performance, through adapting BSC tool.

1-2 Problem Statement

This study will adopt case study method, focusing on the efficiency measuring structures (feedback) of developing scorecard. The purpose is to find key success factors of building and implementing a mathematical model from a feedback loops perspectives, and simple mathematical equation.

Case study will be chosen to support the model idea, that implementing a measurement system (evaluation) that touch the BSC perspectives successfully and study its evaluation structure by performing the tables and model analysis for using through a proposed equation.

By building a mathematical model of the case where using the BSC perspectives evaluation, we can deeply understand the dynamic complexity of developing BSC and the difficulties of achieving dynamic strategic alignment in this case.

We hope to find some dynamic principles and potential relations to implement BSC and its four perspectives evaluation effectively.

1-3 Research Questions

- Is there any relation between the financial, agent, internal processes and innovation and renewal evaluations perspectives of the BSC?

- Is there any gap in practicing of financial, agent, internal processes and innovation and renewal evaluations perspectives of the BSC?
- Dose the Mathematical Model integrate BSC in the Change Management and Strategic Planning in all of the four areas?

1-4 Research Hypotheses

Ho1: there is no relation between the financial, agent, internal processes and innovation and renewal evaluations perspectives of the BSC.

Ho2: there is no gap in practicing of financial, agent, internal processes and innovation and renewal evaluations perspectives of the BSC.

Ho3: Mathematical Model does not integrate BSC in the Change Management and Strategic Planning in all the four areas.

1-5 Significance of the Study

The significance of the study lies in the following:

- Providing a performance measurement system, using BSC to allow an agency to align its strategic activities to the strategic plan.
- Forming a measurement of process efficiency, to provide a rational basis for selecting what business process improvements should be taken first (process compensation-improvement).
- Reducing risk through the visibility that will be provided by the model using BSC measurement system, which in turn will support better and faster budget decisions and control of the process efficiency in the organization.
- Reducing the Resistance for management process change, since it will be always a major challenge in deploying the BSC system, because it must touch

every significant activity in the organization. Since the BSC process affects everyone in the organization, it has to confront the organization's culture.

- Maximizing performance and maintaining results, by using the process improvement (compensation) concept, to refill process evaluation shortages (Management Gap).
- Introducing a framework for building and implementing a BSC performance system, through continuous efficiency measuring.

1-6 Concepts & Terms:

- **Balanced Scorecard:** a concept for measuring whether the activities of a company are meeting its objectives in terms of vision and strategy. By focusing not only on financial outcomes but also on the human issues, the balanced scorecard helps to provide a more comprehensive view of a business which in turn helps organizations to act in their best long-term interests (Amaratunga, et. Al., 2001)

And for the purpose of the study, Balanced Scorecard defines as a concept for measuring whether the activities of bank meeting its objectives in terms of vision and strategy.

- **Strategic Planning:** an essential process in preparing to carry out your organization's mission. An effective strategic planning process provides a framework to make decisions on how to allocate organizational resources, address challenges and take advantage of opportunities that arise along the way (Bryson, 1997).

And for the purpose of the study, Strategic Planning defines as an essential process preparing to carry out bank mission.

- **Change Management:** is a structured approach to transitioning individuals, teams, and organizations from a current state to a desired future state. Change management

(or change control) is the process during which the changes of a system are implemented in a controlled manner by following a pre-defined framework/model with, to some extent, reasonable modifications (Lorenzi, Riley, 2000).

And for the purpose of the study, Change Management defines as a structured approach to transitioning individuals, teams, and banks from a current state to a desired future state.

- **Financial Perspective:** The financial perspective addresses how shareholders view the firm and which financial goals are desired from the shareholder's perspective. The specific goals depend on the company's stage in the business life cycle (Kaplan and Norton, 2004).

And for the purpose of the study, financial Perspective addresses how shareholders view the bank and which financial goals are desired from the shareholder's perspective.

- **Customer Perspective:** The customer perspective addresses how the firm is viewed by its customers and how well the firm is serving its targeted customers in order to meet the financial objectives (Kaplan and Norton, 2004).

And for the purpose of the study, customer Perspective addresses how its customers view the bank and how well the bank is serving its targeted customers in order to meet the financial objectives.

- **Internal Business Processes:** Internal business process objectives address the processes are most critical for satisfying customers and shareholders (Kaplan and Norton, 2004).

And for the purpose of the study, internal Business Processes addresses the processes are most critical for satisfying bank customers and shareholders.

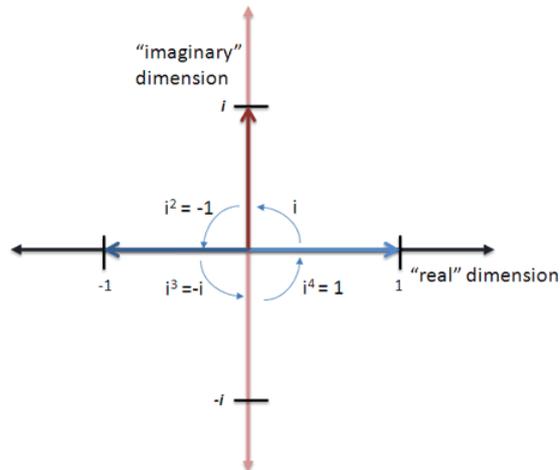
- **Learning and Growth:** Learning and growth metrics address how the firm must learn, improve, and innovate in order to meet its objectives. Growth metrics address the question of how the firm must learn, improve, and innovate in order to meet its objectives (Kaplan and Norton, 2004).

And for the purpose of the study, learning and Growth addresses how the bank must learn, improve, and innovate in order to meet its objectives.

- **Algebra:** refers to any mathematical system which uses the concepts of equality, addition, subtraction, multiplication and division. For example, the algebra of real numbers is what we normally call "arithmetic"; but algebraically concepts can be applied to other mathematical system of which the system of complex numbers is one. In meeting a new mathematical system for the first time, the concepts of equality, addition, subtraction, multiplication and division need to be properly defined, and that is the purpose of the present section. In some cases, the definitions are fairly obvious, but need to be made without contradicting ideas already established in the system of real numbers which complex numbers include (Croft & Davison, 2010).

- **Complex Numbers:** is a number of the form $a+bi$ where a and b are real numbers. If $z = a + bi$ then a is known as the real part of z and b as the imaginary part, we write $a = \text{Re } z$ and $b = \text{Im } z$. Note that real numbers are complex ___ a real number is simply a complex number with zero imaginary part (Arfken, Weber & Harris, 2000).

- **The Argand Diagram:** The complex numbers, having two components, their real and imaginary parts, can be represented as a plane; indeed, \mathbb{C} is sometimes referred to as the complex plane, but more commonly, when we represent \mathbb{C} that the x-axis contains all the real numbers, and so is termed the real axis, and the y-axis contains all those complex numbers which are purely imaginary (i.e. have no real part), and so is referred to as the imaginary axis (Arfken, Weber & Harris, 2000).

Figure (1) The Geometric Interpretation

In this interpretation we call the x-axis the real axis and the y-axis the imaginary axis. We often call the xy-plane in this interpretation the complex plane.

A Complex number Z in complex plane can be represented by Cartesian coordinates, its real and imaginary parts, but equally useful is the representation of z by polar co-ordinates. If we let r be the origin to z makes with the positive real axis, then we can write

$$z = x + iy = r \cos \theta + ir \sin \theta$$

The relations between z 's Cartesian and polar co-ordinates are simple _we see that

$$x = r \cos \theta \text{ and } y = r \sin \theta$$

$$r = \sqrt{x^2 + y^2} \text{ and } \tan \theta = y/x$$

1-7 Study Limitations

The study will be limited to the following:

- The procedures and duration of the study.
- The results are not bound for generalization to other resource evaluation.
- The findings of the study will be limited by the instruments that will be used in the evaluation with its validity and reliability.
- The study will be limited to local banks in Jordan.

Chapter Two

Theoretical Framework and Literature Review

2-1 Theoretical Framework

2-1.1 The Balanced Scorecard (BSC)

2-1.2 Strategic Planning

2-1. 3 Change Management

2-2 Literature Review

2-3 Distinguishing Features of the Study over the Previous Studies

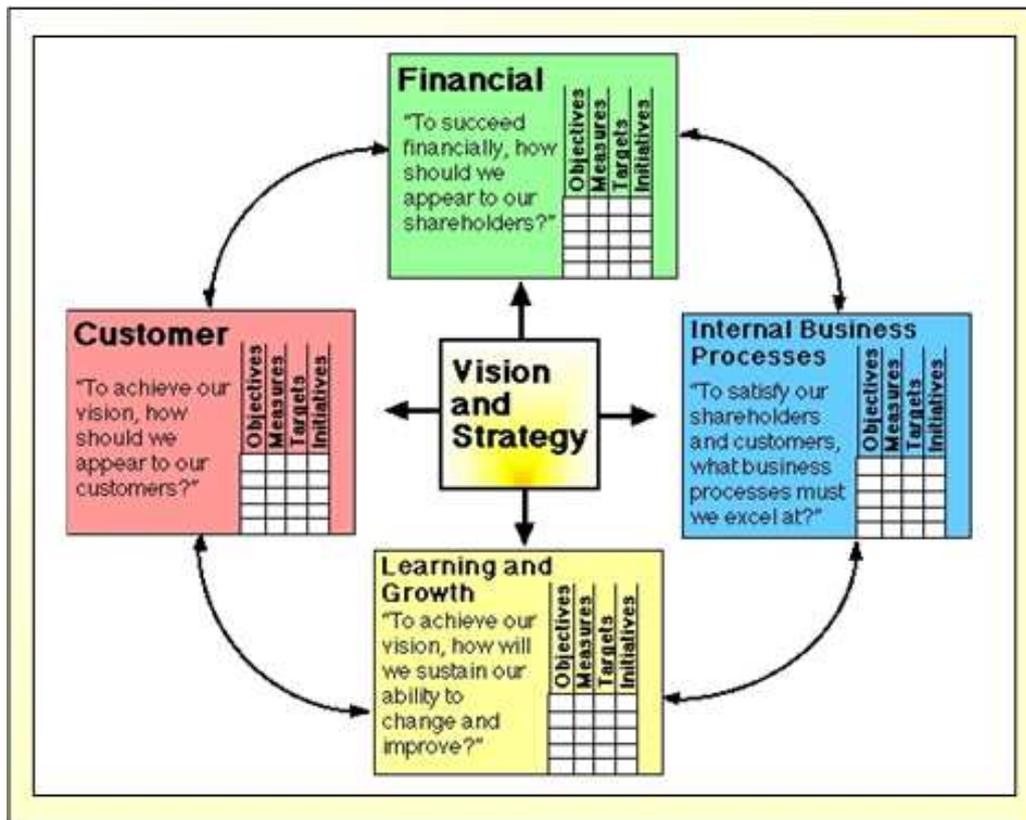
2-1 Theoretical Framework

2-1.1 The Balanced Scorecard (BSC)

The Balanced Scorecard (BSC) is a technique developed by Kaplan and Norton (1992) that helps organizational decision makers to navigate the organization towards success. The technique enables organizations to translate their mission and strategy into a comprehensive set of performance measures that provide the framework for a strategic measurement and management system. Organizations have used the Balanced Scorecard to; (1) clarify and translate vision and strategy, (2) communicate and link strategic objectives and measures, (3) plan, set targets and align strategic initiatives and (4) enhance strategic feedback and learning, and succeed in realizing both tangible and intangible benefits of their investments (Kaplan and Norton, 1992, 1996, 2000).

The Balanced Scorecard measures organizational performance, with emphasis on financial objectives. But, it also includes the performance drivers of these financial objectives, and measures organizational performance across four balanced perspectives; (1) financial, (2) customer, (3) internal business processes and (4) learning and growth, see Figure (2):

Figure (2) Balanced Scorecard Perspectives



Robert, Kaplan & Norton, 1996

1. Learning and Growth Perspective

The BSC is a popular performance measurement system that uses multiple measures. The BSC measures across four hierarchical perspectives and describes a series of causal relations between four perspectives that culminate in the achievement of financial objective. The lowest level in the hierarchy is the learning and growth perspective because actions taken there. Outcome measures of the learning and growth perspective become indicators of the outcomes of each of the three perspectives above it in the hierarchy. Employees with higher skills and knowledge are compensated with higher salaries and employee benefits (Milkovich and Newman, 2002). The employee skills could increase internal business process perspective (Bryant et al., 2004). Common outcome measures include employee satisfaction,

employee retention, employee productivity and turnover (Niven, 2002; Kaplan and Norton, 2004).

2. Internal Business Process Perspective

The second level in the BSC hierarchy is the internal business process perspective. It encompasses the entire internal value, which includes innovation, customer management, operational, and regulatory (Kaplan and Norton, 2001). Other outcome measures are operating process quality, cycle time and inventory turnover (Niven, 2002; Wang, 2006).

3. Customer Perspective

The third level in the BSC is the customer perspective, which focuses organizations on the external environment and allows firms emphasize customer needs, which includes customer satisfaction and market share. Other outcome measures of the customer perspective are market share and sales growth (Batt, 2002).

4. Financial Perspective

The financial perspective is considered the highest-level perspective. Companies improve shareholder value through a revenue strategy and a productivity strategy. The outcome measurements are return of investment and profit.

Creators of the Balanced Scorecard argue that, traditional financial measures “Tell the story of the past” (Kaplan and Norton, 1992). They try to address this inadequacy by complementing past performance measures (financial measures) with the drivers of future performance indicators (customers, suppliers, employees, processes, technologies and innovation. The fundamental concept of the Balanced Scorecard is

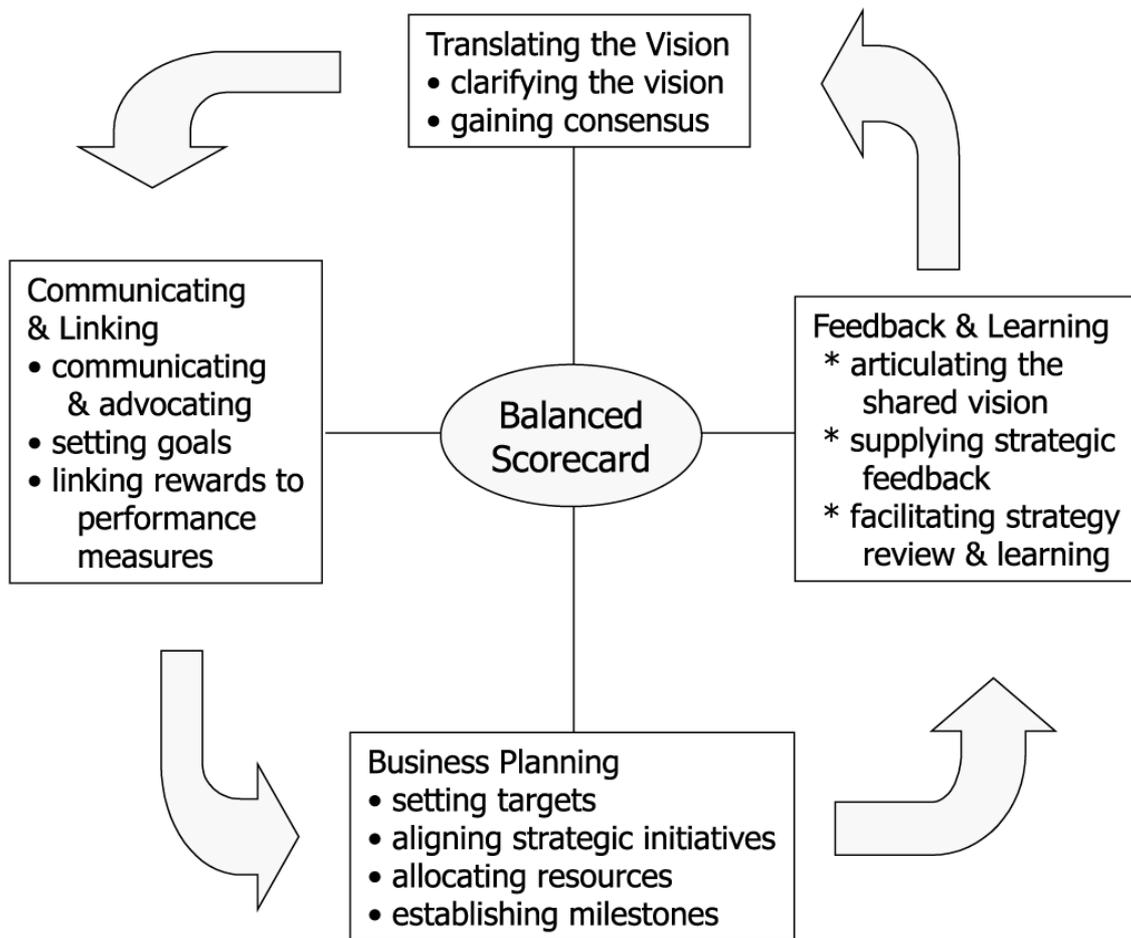
to derive the objectives and measures from the overall corporate vision and strategy and to use the four perspectives as a “balanced” framework to monitor and achieve these objectives. A properly developed Balanced Scorecard should:

- (1) Represent financial and non-financial measures from all levels of the organization (front line to executives)
- (2) Maintain equilibrium between:
 - 2 External measures (developed for the stakeholders and customers) and internal measures (developed for the business processes, innovation, learning and growth).
 - 3 Outcome measures (results from the past) and measures that are for Future performance.
 - 4 Objective (easily quantifiable outcome measures) and Subjective (judgmental performance drivers) outcome measures.
- (3) Include only measures that are elements in a chain of cause-and-effect relationships that communicate the meaning of the organization's (or business unit's) strategy.

Using the Balanced Scorecard to Support the Strategic Management Process

The Balanced Scorecard, which was initially proposed as a general measurement system, has rapidly evolved into a strategic management system for implementing a company's strategic vision (Kaplan 1994). The Scorecard has developed into a system that supports the strategic management process (see figure3).

Using the Scorecard as the central, organizing framework for the strategic management process implies the use of four successive management steps:

Figure (3) Strategic Management Process

Thomas, 2007

Clarifying and translating vision and strategies the process starts with senior management working together on the vision and how it is to be implemented. This linking of the competitive position of the organization to the operational of its processes is necessary to translate strategy into action (Booth 1996).

In the Academic Information Service, a business consultant assisted a group of senior staff in the formulation of a corporate vision and strategies according to the four perspectives of the Balanced Scorecard. The emphasis, here, was on the process and principles of cooperation and specifically co-creation – unless the whole team was fully engaged in the process, a successful outcome was unlikely and consensus of shared vision and strategies throughout the organization not attainable.

Communicating and linking serves to signal to all employees the critical objectives that must be achieved if an organization's strategy is to succeed. The Balanced Scorecard is thus used as a vehicle for communication by cascading it down through the organization and by defining measures that relate to more and more detailed activities. It then becomes possible to use the Scorecard as a basis for setting personal goals and linking these goals to personal rewards (Booth, 1996).

With the aim of ensuring multidirectional open communication channels allowing free circulation of organizational information, the director of the Academic Information Service communicated the vision and strategies to the rector of the organization, as well as having a series of open information sessions with the staff of the Academic Information Service on a regular basis. Translation of the vision and strategies resulted in one of the most influential vehicles for the transformation process namely the establishment of a Performance Management System based on competencies and outcomes.

As a direct result of continuous communication with the organization top-management, a similar system is now in the process of being implemented for the university as a whole.

Planning and target setting can be used as a basis for business planning. Through quantifying long-term outcomes to be achieved, establishing short-term goals, and identifying mechanisms for achieving these outcomes, an organization provides for the alignment of organizational plans with financial and other resources.

Specific targets for renewal plans for the Academic Information Service were set for one, two and three year periods and strategic coordinators for the various established perspectives were appointed. This renewal team is annually reconsidered and adapted

to changing circumstances. Leaders of service units are responsible for the translation of strategic objectives into feasible action plans on the operational level.

Feedback and learning permits a feedback loop to be established (Booth, 1996) and is regarded by Kaplan and Norton (1996) as being the most innovative and most important aspect of the entire Scorecard management process. By setting targets during planning sessions and making mid-course corrections (Birchard, 1995) strategy can consistently be evaluated as to its appropriateness within the developing organizational environment.

In the Academic Information Service, this process serves as a way of ensuring that it becomes a real learning organization. Quarterly feedback sessions are held by the strategic coordinators and the service unit leaders, monitoring the progress made with the three-year plan. Open feedback sessions with the rest of the staff are also held regularly. Information that is fed back through these processes results in modifications to strategies where necessary. In June 2000, a strategic discourse was held by the leader-corps in the light of the renewal objectives. A panel discussion format was used. Three topics received attention:

- i) The formulation of an Internet strategy;
- ii) The implications of knowledge management on the functioning of the Academic Information Service;
- iii) The possible convergence with the CSIR Information Service.

Balanced scorecard and strategic planning always come together because this is a tool that is often used for decision making. Most of the time, it is being called as a decision making application. This is because it has been a proven method for anyone who wants to make sure that the decision that they have in mind are appropriate for the conditions of their concerns.

First of all, the company should be able to provide a record of their performance regarding the sales, customers and other aspects in order for them to use the BSC.

These records will be used as an input for the balanced scorecard. Now, the tool will evaluate the company's progress through the data that have been given. What the company will do now is to observe the important elements that have an effect on their development. Later, they can make the right decisions that will promote the organization's growth.

It may sound simple, but the balanced scorecard only helps in the decision making process. At the end, it is up to the person running the company to make the final choice. It is important to remember that each of the selections he makes will create a difference in the company but it does not mean that it will always yield good results.

With this, there has to be an analysis in the strategies and the objectives of the firm.

In this tool, an individual particularly the manager of the company will have to take into consideration the important factors that are considered the backbone of every organization. These are the customers, the money, the development and the internal processes. Each of these elements has their own aspects that are being covered individually.

In the customer factor, it is important that you measure the improvements based on the loyalty, the satisfaction and the contentment of the customers to your products or services. In the financial terms, this includes the sales, the profitability, the growth in production and the ROI. On the other hand, development focuses on the rewards, the trainings and the other activities that can improve the processes. Lastly, the internal processes are those that include delivery cycle, value added services and others. Now, you have the power to draw strategy map because of the BSC strategies.

Balanced Scorecard as a Strategic Planning Model

In the early 1990s, researchers Robert Kaplan and David Norton of the Harvard Business School determined that 90% of their private sector clients were unable to implement their own strategic objectives into daily operations (Niven, 2002). According to Kaplan and Norton (1992), the reasons why those organizations failed to realize ongoing, sustainable results are the same reasons why, over 20 years later, strategic planning efforts in many of today's public and nonprofit organizations continue to fail: conflicting and competing work priorities, declining revenues or sources of funding, more work done with less staff, increased costs, and lack of an effective approach to plan and execute strategy. While the success of private sector firms is measured by return on investment and profit margins, success in public and nonprofit organizations is primarily realized through constituent satisfaction and cost containment. Even though organizational structures, methods of operations, and values may differ among private, public, and nonprofit organizations, the challenge of performing and implementing strategic planning is common to all of them. Whether an organization is profit or people-driven, Kaplan and Norton's Balanced Scorecard provides a practical model for managers to define strategic themes and objectives, to implement strategy through all levels of the organization, and to measure performance. Simply stated, the Balanced Scorecard is a tool managers can employ to measure an organization's operational success through direct cause-and-effect linkages back into daily operations (Huselid, Becker, & Beatty, 2005).

2-1.2 Strategic Planning

There are numerous definitions of strategic planning, and there are many different approaches that can be used to undertake strategic planning. Most definitions focus on aligning the organization with its environment in the future and are based on ideal constructs that yield planning methods that are primary rational, sequential, and comprehensive.

Bryson (1995), drawing on Olsen ve Eadie (1982) defines strategic planning as a disciplined effort to produce fundamental decisions and actins that shape and guide what an Organization is, what it does and why it does it. According to Bryson (1995: p. 9) clearly, strategic planning is no panacea. As noted, strategic planning is simply a set of concepts, procedures and tools designed to help leaders, managers and planners think and act strategically. Used in wise and skillful ways by a “coalition of the willing”, strategic planning can help organizations focus on producing effective decisions and actions that further the organization’s mission meets its mandates and satisfy key stakeholders. Nevertheless, strategic planning is not a substitute for strategic thinking and acting. Furthermore, strategic planning is not a substitute for leadership.

Typically, strategic planning includes the following components: setting a vision for the organization; scanning the external environment; assessing internal capabilities; and establishing goals, performance measures, and implementation plans. Implementation addresses specifics about how the organization’s financial resources, human resources, information, and reward systems, along with structure and culture, will be changed in the near term to achieve long-term, strategic goals (Galbraith & Kazanjian, 1986).

“Strategic planning is the process by which the guiding members of an organization envision its future and develop the necessary procedures and operations to achieve that future”, (Goodstein, Nolan, & Pfeiffer, 1992). It is an iterative process, with no clear beginning or ending point. It can be viewed much like a merry-go-round. What an organization does first depends upon where it “gets on.”

The purpose of strategic planning is to transform the organization. Strategic planning helps leaders to:

- Create their own organization’s future
- Provide a framework and a focus for improvement efforts
- Optimize organizational systems
- Provide guidance for day-to-day decisions
- Provide a learning opportunity for top leaders
- Build a “critical mass”
- Provide a means for assessing progress

Strategic Planning Process

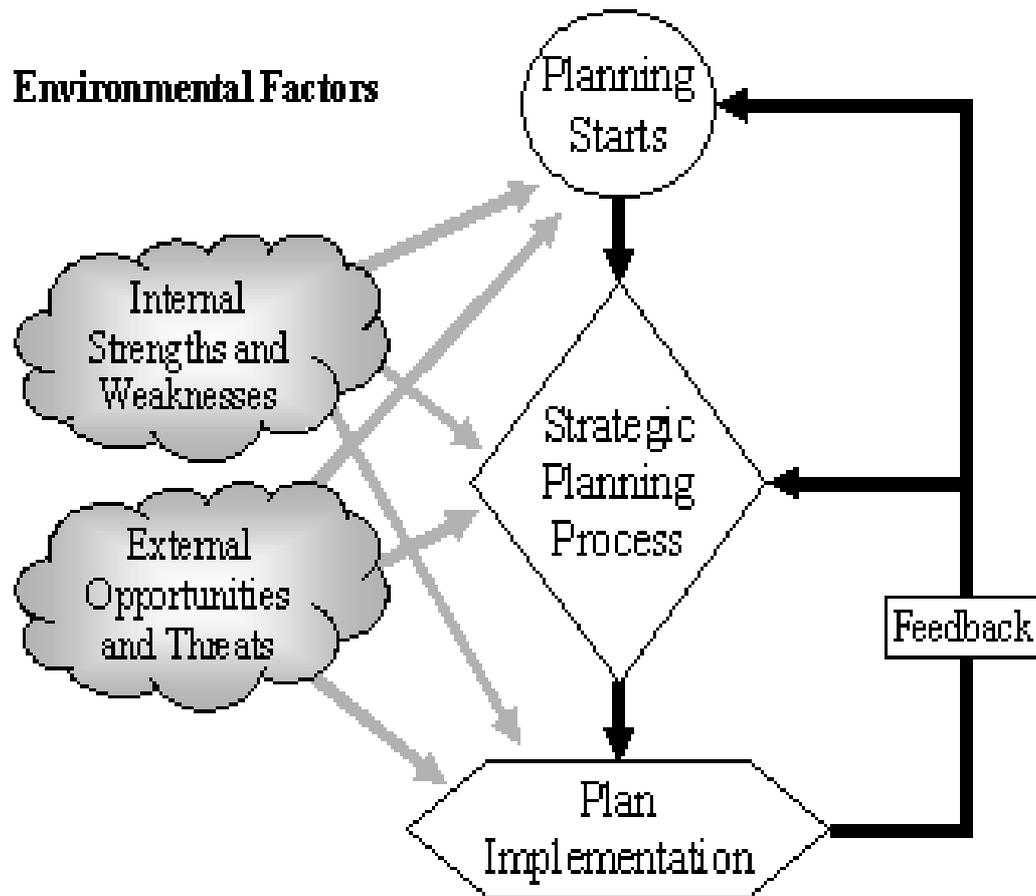
Keller notes that “any organization with competitors, with aspirations of greatness, or with threats of decline has come to feel the need for a strategy, a plan to overcome” (1983, p. 75). This brief observation captures the core of the strategic planning: planning, at all levels, is a dynamic continuous process, operating in and impacted by an environment with both internal and external factors (Figure 4). Understanding and implementing this process is the key to success.

In 2001, research was conducted to define and model the strategic planning process of strategic planning for distance learning in higher education (Pisel, 2001). The research

employed a panel of experts in the field to develop, refine, and validate the model. The product of the research was a 10-phase model with over 200 hyperlinked issues and questions that should be considered in developing and implementing a strategic plan for distance learning. The model is flexible and the lines between phases may become blurred as individual steps collapse together. The importance of each phase will also vary with the experience of the planner and the situation. The 10 phases of the model are listed below. A more-detailed depiction of the model is shown in figure 5.

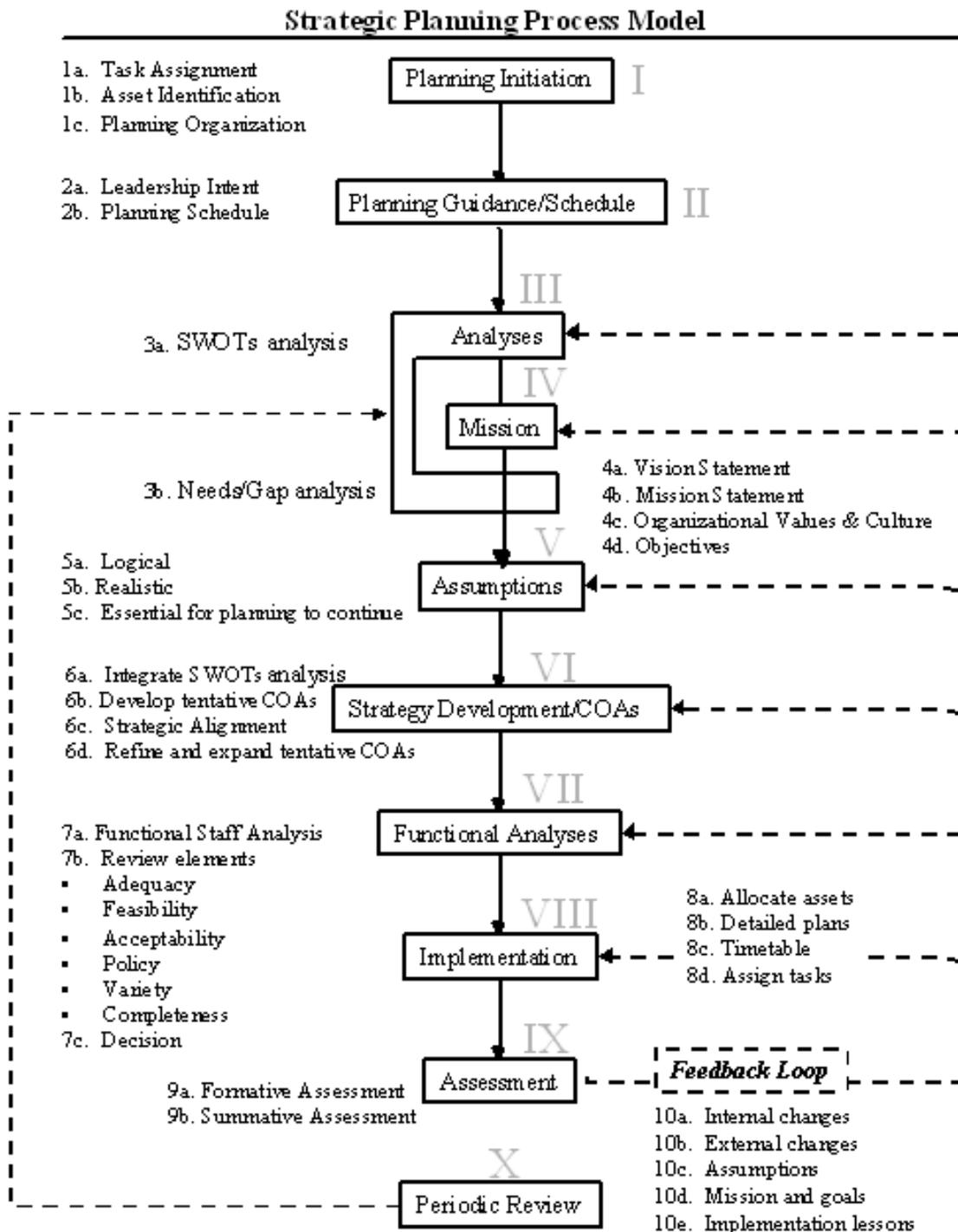
- I. Planning Initiation
- II. Planning Guidance and Scheduling
- III. Analyses
- IV. Mission Refinement
- V. Assumptions
- VI. Strategy Development and Courses of Action
- VII. Functional Analyses
- VIII. Implementation
- IX. Assessment
- X. Periodic Review

Figure 4 . Strategic planning



Pisel & Ritz, 2005

Figure 5. Strategic planning phases



Phase I – Planning Initiation

Three things occur in this phase that set the planning process in motion: a decision to start, identification of assets available for planning, and the assignment of a team to conduct the planning. The decision to start begins with an idea. This idea can be either internal or external to the institution. At a public institution, it is very possible that the idea is driven from state legislature or other directive body and forces the institution to embark in planning. At a private institution, it may be an internal decision. Regardless of the source, an individual or group within the institution that has the authority to approve the plan, allocate resources, and create policies for implementation and accountability must assume the lead; otherwise, the process will be stillborn.

There are myriad assets that can be addressed in this phase. The primary assets of the higher education institution include faculty, support services, technology infrastructure and support, and funding, but planners must also consider intangible assets such as expertise and experience. When considering funding, the planners must know the types of budgets or fiscal allocations to be assigned. It is essential to understand whether there will be a fixed budget, one-time funding, or ongoing funding. Each approach to funding poses different challenges and opportunities.

Phase II – Planning Guidance and Scheduling

Two functions should occur in this phase: leadership intent is articulated and a planning schedule is established. Leadership intent is a guiding statement that clearly states the purpose of the planning effort. It gives the opportunity for all involved to understand the need for and overall goals of the planning effort. It is also a clear statement of ownership of the planning process by the organization's leadership. Such

guidance should include the intended direction of the planning process and any predetermined constraints. If the planning task is externally driven, it is essential that there be a clear understanding of all guidance and stipulations that accompanied it. Since public institutions are more likely to be engaged in distance learning, the likelihood of external guidance may be greater, but both public and private institutions are subject to influence from policy groups, coalitions, and funding grants (Allen & Seaman, 2007 & Fain, 2007).

The planning schedule keeps the process moving forward at a defined pace. It establishes realistic parameters for the planning process based on leadership intent. Periodic milestones and/or phases can be used to reduce the process into more-manageable elements that give the ability to gauge the progress of planning. Not all milestones are of equal importance and the schedule should note where the objectives are rigidly set and where there is flexibility.

Phase III – Analyses

The Analyses phase contains two critical and distinct elements—the environmental analysis and the needs/gap analysis. These two individual analyses bracket the Mission phase that follows, effectively causing the two phases to run concurrently. Mintzberg describes strategy as a pattern that reflects the dynamics of the environment (1994). It is this phase that enables the planning process to assess the environment.

The environmental analysis precedes the Mission phase and gives it shape, aligning services and activities with changed and changing environmental conditions. At the core of the environmental scan is the SWOT analysis (SWOT is an acronym for Strengths, Weaknesses, Opportunities, and Threats).

Phase IV – Mission Refinement

The Mission phase describes how distance learning is important to and aligned with the core mission and future vision of the institution. It is, perhaps, the most challenging phase because participants can spend so much time arguing about where they need to go that they run out of steam when it comes to actually going there. It is critical that the mission and vision define an achievable objective, but planners must guard against it becoming more of an intellectual than a practical exercise. If planners are not cautious, it may lead to seeing the plan as the end rather than the means to achieve it.

At the core of the Mission phase is the organizational vision. Unlike the mission, the vision is for internal consumption, designed to provide direction and inspiration for the organization (Aaker, 1992; Hoyle, 1995). The vision statement defines success, describing what it looks like and clearly establishing the institution's long-term core intentions. Two important elements of the vision are timing and organizational buy-in. It is critical that the ideal vision be developed first, before restricting the group's imagination with real-world data (Kaufman & Herman, 1991). It is equally critical that the leadership sell the vision internally. A vision not shared by the organization is a recipe for failure (Bothel, 2001).

While the vision is inspirational, the mission is to be stated in measurable terms that provide a clear and concise picture of what is to be accomplished and why (Kaufman, 2005; JFSC, 2002). It will serve as the basis for all phases to follow. This statement tells everyone what is to be accomplished, by whom (person or organization), when, where (target audience), and why. Normally, the "how" or the means by which the mission will be accomplished is left to the course of action (COA) development phase, but it may be known if the process is commenced with predetermined external

direction. The focus of the mission is on the ends—not the means to achieve them. Kaufman stresses the importance of understanding the difference between ends and means. Ends are the desired results, accomplishments, and outcomes; means are the way to achieve those ends (1995). Means include such things as the resources and methods employed in a plan.

Strategy, because it is an organizational process, is inseparable from the structure, behavior, and culture of the organization in which it occurs (Andrews, 1987). Structurally, there is an organizational hierarchy that must be considered in developing the vision and mission. If, for example, a subordinate school is developing a strategic plan, it must align its mission and vision with the higher university plan (Kaufman, 2006b). Planners must also consider organizational culture and values—items identified in the internal analysis. The design, structure, and leadership of an organization are unique functions of its culture and values (Hardy, 1991; Murgatroyd & Woudstra, 1989). Ultimately, whatever strategy is developed will have to survive and be implemented through that same filter of culture and values (Vestal, Fralicx, & Spreier, 1997).

Phase V – Assumptions

Assumptions are one of the least understood aspects of planning. They are used to fill a gap in knowledge so planning can continue. While they are absolutely critical to the process, they cannot be treated as items of convenience. A planning assumption is a hypothesis on the current situation or on the future course of events that is assumed to be true in the absence of positive proof and normally cover issues over which the planning team has no control. Only those items necessary to enable planners to complete an estimate of the situation and make decisions can become assumptions. A

valid assumption has three characteristics: it is logical, realistic, and essential for the planning to continue. Because of their influence on planning, the fewest possible number of assumptions should be included. As planning proceeds, additional assumptions may be needed, some early assumptions may prove to be faulty, and still others may be replaced with facts or new information gained during the planning process. All planning assumptions should be documented to ensure that everyone involved—particularly those who join the process later—has a common frame of reference.

Phase VI – Strategy Development

Here, the analysis of the earlier phases is crafted into a strategic direction. Armed with the results of the gap analysis, the planning group should be able to move forward with strategic options for consideration and assessment.

This step takes the process beyond identifying who, what, when, where, and why by specifying how the institution intends to achieve its mission and vision. An essential element of this step is to ensure that there is broad staff involvement and all stakeholders are informed.

Phase VII – Functional Analyses

With strategy developed, the next phase will be to review and compare them against a number of criteria. This analysis assesses whether each strategy does the following: complies with any relevant policies; is feasible within the resources available or projected to be available; adequately achieves the stated mission; has acceptable costs; completely answers the questions of who, what, when, where, and why; and is sufficiently different so as to create a range of alternatives.

The purpose of this step is to have each staff element identify the strengths and weaknesses of each strategy from their functional perspective. Functional analysis allows details to surface from functional experts that may not otherwise be visible to a planning team. This process is particularly important for a plan developed by a campus-wide team or administrators where members are two or three steps removed from actual implementation. When the planning is done by those directly involved in, or only one step removed from, implementation, most of these issues are addressed in the act of planning and thus unnecessary as a separate step; however, the process still can play a key role in gaining stakeholder acceptance.

Phase VIII – Implementation

Implementation is the phase where the lead shifts away from the planning team to those who will actually execute the plan. The institutional leadership must clearly define who has the authority and responsibility for implementation and formally task all elements of the organization that are responsible for support. Resources are allocated and any assumptions made about funding, personnel, or other assets are reconciled. Detailed operational or tactical plans, that identify near-term objectives that must be achieved as part of the strategic plan, are developed and implemented.

Phase IX – Assessment

A common point of failure for strategic planning is the post-implementation period. Too often, the plan is developed and, once implementation begins, the process stops. Assessment represents the continuation of the process. It provides the data to allow continual minor or major course adjustments that bring the plan in line with (or refine)

the mission and vision in response to whatever internal or external forces are affecting it.

Since strategic planning is a continuous process, the argument can be made that there is no summative assessment. However, in the context of this model, summative assessment refers to the evaluation of individual objectives and milestones as they are completed.

Phase X – Periodic Review

The Review phase enables the institution to adapt to short-term volatility while maintaining its long-term strategic vision. Review is a critical element of strategic planning. It recognizes that planning is a continuous systematic process and that the plan is a living document existing within a dynamic environment (Watkins, 2004). Periodic review is required to identify and assess the impact in changes to internal strengths and weaknesses, external opportunities and threats, assumptions, and the original mission and goals. The institution must establish some periodicity for the review process.

Implementing the Strategic Plan via Balanced Scorecard

The real benefit comes from making the scorecard the cornerstone of the way you run the business. Imagine an organization in which everyone understands the strategy and his or her role in executing it. A high performance workforce prepared and motivated to achieve the results. An organization so agile that strategy can be tested and adapted in a continual process of feedback, learning, and innovation, Where all resources are aligned toward a unified strategy view. This new management model is called the Strategy-Focused Organization (SFO). (Kaplan & Norton 2004)

Kaplan and Norton present a SFO framework that describes the five principles that organizations use to achieve breakthrough performance. The principles transform the Balance Scorecard from a measurement to a leadership and management system. Each SFO principles actively support the roles of leadership and management.

- Translate the strategy to operational terms
- Align the organization to the strategy
- Make strategy everyone's job
- Make strategy a continual process
- Mobilize change through executive leadership

The strategic planning necessary to implementing change involves, in part, with ensuring that employees and stakeholders are on side and committed to the process. But it is inevitable that there is resistance from all quarters. As a result even the best plans are doomed to failure unless this resistance is met and defeated.

2-1.3 Change Management

Change management is always going to be a major challenge in deploying the balanced scorecard system, because it must touch every significant activity in the organization. John Kotter in *Leading Change* provides a description of the conditions that should prevail in order to ensure success. The most important of these conditions is a sense of urgency by the senior management members of the organization. Does your agency's management have a sense of urgency, or complacency? How can you instill greater urgency in them? This effort should not be underestimated, because success depends on their consistent support and understanding of the deployment.

Key Performance Indicators (KPI's)

A set of quantifiable measures that a company or industry uses to gauge or compare performance in terms of meeting their strategic and operational goals. KPIs vary among companies and industries, depending on their priorities or performance criteria, also referred to as "key success indicators (KSI)".

A company must establish its strategic and operational goals and then choose the KPIs which best reflect those goals. For example, if a software company's goal is to have the fastest growth in its industry, its main performance indicator may be the measure of revenue growth year-by-year. A company's KPIs will be stated in its annual report. Also, KPIs will often be industry-wide standards, like "similar store sales", in the retail sector.

Key Performance Indicators (KPIs) provide vital information to the organization for tracking and predicting business performance against strategic objectives in a way that compliments financial measures. KPIs can be part of a corporate-wide Balance Scorecard implementation or can be used to monitor each individual business function. By measuring and monitoring operational efficiency, employee performance and innovation, customer satisfaction, as well as financial performance, long term strategies can be linked to short term actions. (From Wikipedia, Online free encyclopedia)

"The first and foremost obvious definition of change management refers to the making of changes in a planned and managed or systematic fashion"(Nickols, 2002, p.1) Change Management is the art or science of making changes to a certain method or system in an orderly, systematic fashion, to make sense out of the organizational chaos that is permeating the company, its employees, its suppliers and vendors and most importantly its customers. The "change" that will take place to the organization

is internal. This means that the change will take place within the confines of the company and not outside the "walls" of the organization.

The reason for the change, however, might be completely externally oriented. For example, many companies might have to adjust their pricing or changes in their products, react to a large cut in funding, the need to attract new customers and business, the changing of their current customer base due to external conditions, (i.e. economy, aging, etc.), the increased need for productivity and the hiring or laying off of large quantities of employees and managers. Some changes take place when the new "Boss" or Chief Executive Officer takes over the company and their personal interaction or philosophies slowly but surely change the culture of the company or organization. (Ledez, Robert E, 2008, change management: getting a tuned up organization)

The change management of organization changes the implications for organizations that are attempting to develop collaborative relationships with their suppliers, focusing on four dimensions of the collaborative relations including joint buyer-supplier cost reduction, supplier involvement in new product development, delivery and logistics management, and core business strategy. An organization can adopt a strategy that leads to extensive outsourcing and adoption of more collaborative relations with its key suppliers.

The pursuit of this strategy has acted as a stimulus for change within the organization, including the adoption of an integrated approach to the management of strategic change, the pivotal role of senior managers as facilitators of this change, and the involvement of those most affected by the movement toward more collaborative buyer-supplier relationships. (From journal of supply chain management)

Over the past few decades large-scale organization change has become a way of life in American business. TQM, cycle-time reduction, process re-engineering, theory of constraints, and general flattening of the organization have, at various times, led the parade of favored approaches to organization change. But many organization change initiatives, in these or other forms, have failed to deliver promises of increased productivity and morale, decreased costs, decreased waste, and increased customer satisfaction. McKinsey has reported that more than two-thirds of quality initiatives over the past few decades have failed to realize the benefits stakeholders expected.

Often among the failures, a common theme has been the lack of collaborative cultural inquiry and re-designs. New work structures, such as autonomous teams, are established and people simply are expected to become empowered by these new ways in which they are working. Yet, largely due to a lack of understanding of the power of the collective human system to obstruct the progress of initiatives, many merely structural change programs have foundered. A sad result of these failures has been to reinforce fear, defensiveness, and cynicism among people at work toward organization change efforts.

In cases of successful, durable change, what are the characteristics of these programs that we can point to as important factors in the successes to date? If there are common factors in successes, what are they, and how can we learn whether these and/or other factors may be helpful for particular change agendas? And even if we can point to fortunate success stories, the question arises: what is missing in these initiatives that could help them to be even more successful? As the 21st Century dawns, we increasingly see a move toward the integration of methods and techniques from

widespread disciplines into meta-methodologies for organization change. As diverse as family therapy, martial arts, systems science, and organizational behavior are working together in teams to design new, more sophisticated approaches to change.

This monograph sketches one particular, integrative approach to organization change. This integrative approach seeks to help organizations continually reinvent themselves by helping the people in them develop and refine new sets of interlinked skills and capabilities, ones that will help them become powerful players in the dynamics of change, minimizing the likelihood that they or their organizations will be left in the dust. The general, or contextual, model of organization change is one featuring at least three streams of coordinated inquiry and design.

These streams correspond with the following categories of group activity:

- **Structural:** in which work structures, processes, and procedures are examined, diagnosed, re-engineered, implemented, and evaluated.
- **Group tools and skill building:** individuals in groups develop enhanced skill in managing group processes. This includes meeting facilitation, the use of group problem-solving and continuous improvement skills, and development of skills for establishing dialogue as a model of exploratory group communication.
- **Cultural:** in which all the stakeholders examine the culture and values they currently have, reinventing them, if necessary, to help the people work together effectively in new and more effective ways. In addition, practices from fields such as family therapy, mindfulness meditation, and the martial art of Aikido are offered for enhancing individual leadership through increasing inner mastery.

Many individuals in successful organizations have developed skills in refining both structural stream activities, and group process and meeting management. Fewer individuals appear to have developed skill in speaking and listening in order to lead

non-coercive cultural inquiry and design. On the other hand, individuals fewer still appear to have established practices of mindfulness, grounded presence, and connectedness with others which can lead to increase leadership through inner mastery.

- **Inner Mastery:** The innermost circle denotes that set of practices and skills by which individuals are able to maintain a grounded, focused, and authentic presence in the midst of mounting chaos and stress. Individuals with developed skill in Inner Mastery tend to appear to others as leaders worthy of trust. Leaders with Inner Mastery skills can sense and maintain a connection with others because they are more completely in touch with themselves. In contrast, most of us are not at all at home in our bodies. We are not in touch with the physical sensations that may accompany our being effective or ineffective. We do not have a sense of where our physical center is, and our reactive thoughts and fears seem to drag us in every direction, especially in stressful situations. (By Jeff Dooley, 1998)

Effective change management is crucial to any organizations ability to adapt and react. The objective of any change management is to maximize benefits, while minimizing the risk of failure during the change implementation. Globalization, localization, privatization, outsourcing, mergers and acquisitions are just some of the revolutionary changes encompassing organizations today, in addition to the rapid change in technology and higher levels of competition. The volatile environments in which corporations operate make it easy for senior management to ignore what is often called the 'soft side' of doing business. A recent Harvard Business study conducted in 255 companies showed that shorter, more frequently evaluated projects

are more likely to succeed than longer ones, which are evaluated more than two months apart.

Senior management's fear of employee reaction often keeps them from successfully implementing change. Industry analysts believe that the 'human aspect' becomes the most important issue once change management initiatives are rolled out in any organization.

The following are the key aspects of any change management initiative that the executives should bear in mind as change sweeps their company:

Create Ownership

Whenever any form of change hits a company, people seek and need answers to all their queries. If left unanswered, such questions give way to dissent and mistrust about the change. The credibility of the management executing the change also comes under scrutiny. Teams with nominated or appointed leaders should be created to dissipate such a scenario, which can dampen the objectives of change in any firm, big or small. Appointed leaders operating in small teams have been observed to be more effectual than the manager you last saw at the annual conference.

Communicate the Change

Good communication is, more often than not, the biggest carrier of any proposed change. Senior leadership often assumes the communication process to be effective, when it is not. The focus on the formal communications network should be interspersed with the way in which the informal networks are used: an impromptu meeting with the CEO or an extempore at the quarterly meeting could sometimes be more emphatic than a formal memo. Research has exhibited that the various

communication channels companies' use has different levels of effectiveness: a face-to-face conversation always work better than an email, which could at best serve to reinforce.

Create Layers and Address Each Group

As mentioned previously, the groups created with the objective of implementing change successfully should be small. An average employee feels 'lost' in a maze of people and keeps his questions and objections, if any, to himself. As the change cascades throughout the organization, each group should feel involved and empowered; each individual should feel that he has contributed towards the successful implementation of the efforts. He should feel aligned with the company's vision, and understand the need for change, in the context of their markets, competition and other related aspects. Lou Tice, the founder of **The Pacific Institute**, once said "All meaningful and lasting change begins on the inside and works its way out."

Address the Human Aspect – Reach Out to Every Individual in the Value Chain

Any change effort requires people to reconcile and adjust to the new situation they find themselves in. As job functions are moved around, responsibilities reassigned, and in some cases restructuring of the company (read: firings), people are led by their personal agendas to protect themselves. If not given the credence of being an important part of the organization, employees are vulnerable and susceptible to the 'water-cooler' conversations that often act as rumor mills, impeding the change process. As Steven Covey famously said, "People can't live with change if there's not a changeless core inside them. The key to the ability to change is a changeless sense of who you are, what you are about and what you value."

Create Checkpoints and Feedback Loop

However, drawn-out the change effort, a feedback loop helps to take stock of the current company culture and the ‘voice of the employees’. This helps in making modifications to the change management rollout plan, which can be an effective way to concurrently make amends, rather than making iterations only at the end of the engagement. This ties-in with the Harvard Business recommendation that constant evaluations should form part of the change effort. Creation of a feedback loop also tells the employees that they are being heard, and their suggestions are valued – this single fact can do wonders for the organization. (Shanker, From business performance consulting, www.CGN.Net).

2-2 Literature Review

1. **Pienaar and Penzhorn, (2000)**, conducted a study titled "**Using the Balanced Scorecard to Facilitate Strategic Management at an Academic Information Service**". The study reports on the implementation of the balanced scorecard model for facilitating strategic management at the Academic Information Service (academic library) of the University of Pretoria, South Africa. Robert Kaplan and David Norton developed the concept of the Balanced Scorecard in the early 1990s for motivating and measuring business performance. This management methodology is seen as an excellent vehicle for implementing organizational transformation measures in the Academic Information Service. The article starts by giving a short theoretical introduction to the concept of the Balanced Scorecard, followed by an outline of the implementation of the Scorecard on both the strategic and operational levels. It concludes by examining the ways in which the Balanced Scorecard is currently being used to facilitate the strategic management process at the Academic Information Service.

2. **Saad, (2001)**, conducted a study titled "**Strategic performance evaluation: descriptive and prescriptive analysis**". The study addresses the question of how to assure effective performance evaluation of a public service strategic unit. Both descriptive and prescriptive approaches are discussed. Based on this analysis a practical model for performance evaluation is developed. The model comprises key drivers of performance, including internal and external factors, as well as both quantitative and qualitative factors, simultaneously.

The model has been designed using the Analytical Hierarchy Process (AHP) and tested by using the Expert Choice Software. The testing results show that the

evaluation outcomes differ as a function of the criteria used, the weight assigned, and the meaning given to each criterion, by using the same criteria with a different weighting scheme results in different outcomes for the same performance. This counter-intuitive finding has important implications for management practice.

In this part the researcher highlights extracts from the related studies by taking into account some international and regional studies, which are mainly focuses on the balanced score card concept and its formulation and implementation in the private and public sectors.

3. Arora, (2002), conducted a study titled “**Implementing Knowledge Management – a balanced score card approach**”. The study states that in today’s fast changing and non-linear business environment the only way to gain competitive advantage is by managing intellectual capital, which is more commonly known as knowledge management (KM). There are basically three broad objectives of KM: leveraging the organization’s knowledge; creating new knowledge or promoting innovation; and increasing collaboration and hence enhancing the skill level of employees.

The most common KM programmer involves development of a knowledge repository, and forming and nurturing of the communities of practice. These two, jointly, address all the three objectives of KM. Many organizations are embracing KM, but few of them are able to implement it successfully to see the benefits.

Implementation of KM is a strategic process that needs careful target setting and review. Organizations, which use balanced scorecard for strategy deployment, can effectively implement KM in their organization by developing and deploying a KM index.

4. Sedera, Gable and Rosemann, (2002), conducted a study titled "**A Balanced Scorecard Approach to Enterprise Systems Performance Measurement**". The study aim was to propose the Balanced Scorecard as an appropriate approach for measuring the performance of ES employed in the public sector. It first introduced the design and objectives of the research, detailing results from past ES success and failure studies, and justifying the need for a balanced ES performance measurement. The Balanced Scorecard approach was then introduced, proposing its appropriateness for ES performance evaluation in both private and public sectors. Finally, the Queensland Government Balance scorecard approach was discussed describing the overall goals and techniques of applying a balanced scorecard in the public sector. A high-level case study of the overall QGBRN and an example of DPI's Balanced Scorecard with a comprehensive literature review has been completed to date. Further tasks planned include: a number of case studies of ES benefits realizations projects in Queensland Government agencies to evaluate the effectiveness of the Balanced Scorecard approach to measure Enterprise Systems performance. A pilot case study of the Queensland Police followed by a multiple case study of other agencies practicing the QGBRN guidelines will be conducted, and the proposed Balanced Scorecard measurement instrument will be developed and justified using pattern analysis techniques.

5. Wongrassamee and Simmons (2003), conducted a study titled "**Performance Measurement Tools: the Balanced Scorecard and the European Foundation of The Quality Management (EFQM) Excellence Model**". The study states that performance improvement is high on the agenda of many companies around the world and with the growing number of improvement models now available care has to be

taken to adopt an approach that will yield the most attractive return on investment. This paper compares and contrasts two widely known and well-publicized improvement models: Kaplan and Norton's Balanced Scorecard and the EFQM Excellence Model. Each consists of a non-prescriptive template offering managers; a relatively small number of categories of key performance metrics to focus on.

Here the models were examined from a critical perspective with regard to five central issues represented by five questions relating to objectives, strategies and plans, target setting, reward structures and information feedback loops. The conducted analysis revealed that despite having some significant differences, both approaches seem to be developed from similar concepts.

The study concludes that it is difficult to find a perfect match between a company and a performance measurement framework and that further research should concentrate on how to implement strategic performance frameworks effectively in specific types of organization.

6. El-Anati, (2004), conducted a study titled **“Deriving a Model for Performance Evaluation by Using Balanced Scorecard (BSC) for Jordanian Construction Companies”**. The study is about deriving a model for performance evaluation by using Balanced Scorecard as a modern and essential performance measurement tool, and at the same time, this study was applied on Jordan construction sector which represents one of the most basic and important Jordanian economic sectors in socioeconomic development.

The results of the study were:

1. There is a positive relationship between the ability of using modern managerial accounting systems (BSC, ABC, ABM) and the class of the company ($r=$

0.68); nevertheless, systems are not appropriate for construction companies classification.

2. The derived model for performance evaluation that can be used by the construction companies is as follows

$$P= 0.48F+ 0.17C+ 0.14E+0.10S+ 0.09W+0.02R$$

Where

P: Performance measurement

C: Customer measurement

E: Internal process

S: Safety measurements

W: Employees Innovation and learning

R: Social Responsibility

7. **Al-Jaberi, (2005)**, conducted a study titled “**Building a Performance Measurement Model for Jordanian Telecommunication Sector in the Light of Global Experience: Japan, Europe, and U.S.A**”. The objective of this study is to build a performance measurement model through analyzing the criteria, differences and similarities of three adopted international models. These are Total Integrated Management (TIM), Business Excellence Model (BEM), and Balanced Scorecard (BSC). Then a framework for evaluating performance measurement systems are applied in Jordanian Telecommunication sector to test the extent of the above international models to achieve the relevance, timelines, aid the decision making process, and self-reflection.

The study reveals the following results and implication:

1. Using international performance measurement models in Jordanian Telecommunication sector companies' dose not achieve the relevance of performance measurement.
2. Using international performance measurement models in Jordanian Telecommunication sector companies that achieve the timeliness, did the decision making process and self- reflex ion.
3. The derived model for performance measurement that may be used by Jordanian Telecommunication sector companies as follows:

$$P= 0.367F+0.191C+0.135L+0.124I+ 0.119R+ 0.063S$$

Where

P: Performance measurement

C: Customers and agencies

L: Learning and growth

R: Government regulations.

F: Financial performance

I: Internal business process

S: Suppliers

8. Green and Ryan, (2005), conducted a study titled “**A Framework of Intangible Valuation Areas (FIVA): Aligning Business Strategy and Intangible Assets**”. The study investigates the adequacy of existing intangible asset models and defines and codifies common principal valuation drivers of intangible assets for use in enterprise balanced scorecard valuation practices of information technology (IT) firms. IT firms that use a standard and consistent taxonomy of intangible assets could increase their

ability to identify and account for more intangible assets for measurement and valuation.

FIVA provides a framework to have command of and access to effective utilization of business resources and knowledge, to develop, sustain and enhance its mission effectiveness and/or competitive advantage.

9. Zwelef & Nour, (2005), conducted a study titled “**The Importance and Scope of Using Balanced Scorecard in Performance Evaluation: Applied Study in Jordanian Banks**”. The study aimed at highlighting the principles and applications of BSC and illustrating contribution in transferring the organization strategy to a common language that could be used by all employees. This is done through making performance measures according to the BSC perspectives, and knowing the potential use of the BSC in evaluating the strategic performance of the Jordanian bank sector. To demonstrate that, three hypotheses were found and a questionnaire was prepared to verify the hypotheses depending on SPSS packages.

The study was concluded with a number of recommendations such as: it is very necessary to apply the system of BSC as a package in the Jordanian banks; these banks apply the concepts of BSC while evaluating their performance, without applying the whole package of BSC as all, since the banks do not know how to apply it.

10. Ronchetti, (2006), conducted a study titled "**An Integrated Balanced Scorecard Strategic Planning Model for Nonprofit Organizations**". The study discussed what the Balanced Scorecard is, describes implementation guidelines, and proposes practical scenarios of how to implement the Balanced Scorecard for a new outreach

ministry within a nonprofit religious organization. Also, due to the widespread popularity of Rick Warren's (1995) Purpose-Driven Church model, a scenario is presented combining the Balanced Scorecard with the Purpose-Driven Church model to demonstrate the power and flexibility of the Balanced Scorecard as a strategic planning and performance measurement tool.

The study showed that the Balanced Scorecard model provides an innovative and alternative approach for many nonprofit organizations that do not find private sector strategic planning models applicable to their unique planning needs. The use of the Balanced Scorecard model or an alternative integrated solution where the Balanced Scored model supplements another strategic planning model already in use is an option for those nonprofits seeking to plan with the precision of a private sector firm, and committed to meeting the unique needs of their community-focused organizations.

11. Thakkar, et al (2007), conducted a study titled **“Development of a Balanced Scorecard: An Integrated Approach of Interpretive Structural Modeling (ISM) and Analytic Network Process (ANP)”**. The purpose of this study is to propose an integrated qualitative and quantitative approach to the development of a balanced scorecard (BSC) for a real life case company KVIC (Khadi and Village Industries Commission, organic food sector, India).

This study illustrates how the use of a mix approach of cause and effect diagram, Interpretive Structural Modeling (ISM) and Analytic Network Process (ANP) can address some of the shortcomings related to the development of BSC in the light of a real life case company KVIC (Khadi Village and Industry Commission, organic food sector India). The paper delivers a complete framework of BSC for the case company.

The study shows that present work demonstrates the use of an innovative approach to the development of performance measurement system at one end while to deliver a workable framework of balanced scorecard for a real life case company is the objective of the other end. The present work encapsulates the philosophy of strategy maps using a mix of quantitative and qualitative approach for a real life case.

12. Umashankar & Dutta, (2007), conducted a study titled “**Balanced Scorecards In Managing Higher Education Institutions: an Indian Perspective**”. The study aims to look at the balanced scorecard (BSC) concept and discuss in what way should be applied to higher education programs/institutions in the Indian context.

The BSC approach offers the institution an opportunity to formulate a cascade of measures to translate the mission of knowledge creation, sharing and utilization into a comprehensive, coherent, communicable and mobilizing framework – for external stakeholders and for one another.

In the absence of evidence of the application of BSC to the educational institutional domain in India, the current paper may be a starting-point for a debate and possible strategies to implement BSC methodology in this area.

The study shows that The BSC approach offers the institution an opportunity to formulate a cascade of measures to translate the mission of knowledge creation, sharing and utilization into a comprehensive, coherent, communicable and mobilizing framework – for external stakeholders and for one another.

13. Manville, (2007), conducted a study titled “**Implementing A Balanced Scorecard Framework in A Not For Profit Small And Medium Enterprise (SME)**”. The purpose of this study is to explore the implementation of a performance

management system using the balanced scorecard (BSC) within a not for profit small and medium sized enterprise (SME).

The findings of this research are that balanced scorecards can be implemented within a SME context. However, the motivations for the adoption of the scorecard were both internal and external due to the heavily regulated nature of the organization.

14. Chang, (2007), conducted a study titled in **“The National Health Services (NHS) Performance Assessment Framework As A Balanced Scorecard Approach: Limitations And Implications”**. The study stated that the use of the balanced scorecard has been subjected to increasing scrutiny and criticism in academic literature. The purpose of this study is to explore the limitations of, and implications for, the Performance Assessment Framework (PAF) as a balanced scorecard approach in the NHS. Although Kaplan and Norton suggested that the balanced scorecard can be adapted for strategic performance management purposes in the public sector, this study aims to argue that such claims fail to give sufficient weight to the political context in which a public sector organization operates.

This study agrees with institutional theorists' argument that the use of performance measurement systems should take into account politics and power faced by an organization. In the NHS, performance measurement might be used by local NHS organizations primarily as a ceremonial means of demonstrating their symbolic commitment for legitimacy seeking purposes.

15. Chen and Chen, (2007), conducted a study titled **“Data Envelopment Analysis (DEA) Performance Evaluation Based on BSC Indicators Incorporated: The Case Of Semiconductor Industry”**. The study attempted to evaluate the

performance of the semiconductor industry in Taiwan, which is the main economic life-line in Taiwan. Operational performance is normally deemed as a key factor in industry. The importance of this issue can be measured through performance indices to observe the operational performance of Taiwan's semiconductor industry.

This study finds that the efficiency of every domestic semiconductor manufacturer is generally good, and concerning the four perspectives of the balanced scorecard, the most important for the domestic firm is the financial perspective, second is the internal process perspective, third the learning and innovation perspective, and least importantly is customer perspective.

When implementing Data Envelopment Analysis (DEA), traditional financial indices cannot obtain an in-depth understanding of an enterprise; hence, this study considers the four major constructs of the balanced scorecard in index selection, and employed these four major contracts to expand the indices that can be available for selection and gain a deeper understanding not only of the financial aspects, but also of customers, the internal process, learning, and innovation. It should be noted that the balanced scorecard can develop the performance goal from the perspective of job fulfillment, and uses this view to assess management performance. These indicators can reflect different focuses regarding job fulfillment, and produce pluralism in the performance indices.

16. **Durgham & Abufaddah** (2009) conducted a study titled “**Effect of Implementing Balanced Scorecard (BSC) in Enhancing Strategic Financial Performance of National Palestinian Banks that are Actively Working in Gaza Strip**”. This study aimed to know the effect of applying Balanced Scorecard (BSC) measures, (which are specified in its four perspectives: financial, customer, internal

processes, and learning and growth), on enhancing the strategic financial performance of national Palestinian banks that are actively working in Gaza Strip.

The most important results of this study ensure that the national Palestinian banks actively working in Gaza Strip are: (1) possessing a good perception that their success needs promptly and seriously work to enhance their strategic financial performance, (2) owning a clear imagination concerning the basic dimensions of strategic financial performance, which enables them to realize a distinct strategic financial performance, (3) having the ability to use performance Balanced Scorecard (BSC) perspectives collectively and separately to enhance the strategic financial performance of banks.

The main recommendations of this study to national Palestinian banks, which are actively working in Gaza Strip, are: (1) the necessity to adopt (BSC) model through reshaping the institutional culture, and preparing the needed conditions to activate its implementation processes. (2) the necessity to use (BSC) model as a means to rationalize managers' decisions, to direct their behavior and to evaluate the performance.

2-3 Distinguishing Features of the Study over the Previous Studies

After reading and through examining previous studies that related to the subject of this study, which can be achieved by the researcher, the researcher found that the most important characteristics which distinguish this study from the other pervious studies can be stated as follows:

- The other pervious studies were concentrating on how to use and implement BSC in different regions and establishments, and it is suggested methods on that. However, this study is discussing the BSC perspectives and how it can be used more

effectively and efficiently by suggesting a mathematical model studying the potential relation between the perspectives of BSC.

- This study (suggested mathematical model), discussing the measuring of the intangibles and tangibles by using BSC measurement check lists, and calculate the efficiency of the management process and it's gap (if consists) between intangibles and tangibles.
- Implementing the proposed mathematical model by using BSC evaluations and tabulating sheets, and calculating management process efficiency and the gap (shortages in the intangibles perspectives), we can integrate BSC into change management and strategic planning.

Chapter Three

Research Model and Methodology

3-1 Chapter Overview

3-2 Data and Research Methodology

3-3 Population of the Study

3-4 Sample of the Study

3-5 Instrument of the Study

3-6 Validity of the Instrument

3-7 Reliability of the Instrument

3-8 Model Variables

3-9 Data and Information Instruments

3-10 Statistical Methods

3-11 Scoring Method

3-1 Chapter Overview

The purpose of this study is to address the developing of the mathematical model to integrate BSC into the change management and strategic planning. In this chapter, research methodology is addressed. Similarly to existing research studies, the methodology of this research based on a multiple quantitative method research by using a questionnaire. The research methodology adopted for this study consists of research instruments in which a questionnaire survey, research tasks, and analyzing data were implemented.

To enhance the reliability of the primary collected data and addressing this research study, relevant secondary data is available and considered undertaken. Consideration of the advantage of secondary data to be incorporated with primary collected data helped to facilitate the validity of data.

3-2 Data and Research Methodology

This section describes the population and the sample of the study, a description of the research variables and the related model, and statistical analysis.

3-3 Population of the Study

The researcher selected available-purposive sample, including five local banks in the Jordanian Society which are (Arab Bank, Jordan- Kuwait Bank, Al-Ahli Bank, Housing Bank and Jordan Bank), by using its evaluation systems and measurements data for the intangible and tangible variables (sources) in organization.

3-4 Sample of the Study

The Sample represented by its measurements and evaluation reports related to the research and the proposed model for studying, implementing and testing the model.

In each sample, measurements and evaluation's scores tabulated and weighted in a manner suitable to serve the implementation of the model.

The sample of the study was chosen after a careful study of financial statements for the five banks (Arab Bank, Jordan- Kuwaiti Bank, Al-Ahli Bank, Housing Bank and Jordan Bank), for the following reasons:

1. The five banks have the largest budget in contrast with other commercial banks.
2. The five banks have high reputation in contrast with other commercial banks.

The sample study consists of (100) employee, every (20) from the sample was selected from different bank, the first one from Arab Bank, the second one from Jordan- Kuwaiti Bank, the third one from Al-Ahli Bank, the fourth one from Housing Bank and the final one from Jordan Bank.

The researcher distributed 110 questionnaires, 100 of them returned to the researcher and were valid to start data analysis, while the others did not.

Table (1)
The Sample

		Frequency	Percentage
Gender	Male	82	82.0%
	Female	18	18.0%
Specialist	Management	19	19.0%
	Economic	7	7.0%
	Accounting	33	33.0%
	Other	41	41.0%
Experience	3 years and less	5	5.0%
	4-6 years	10	10.0%
	more than 6 years	85	85.0%
Qualifications	Bachelor	51	51.0%
	higher diploma	1	1.0%
	Master	42	42.0%
	PhD	6	6.0%

3-5 Instrument of the Study

The researcher built questionnaire consists of five areas and each one consists of (5-6) items. The questionnaire aimed to measure the integration of the BSC four perspectives in between, and mainly the relation between tangibles and intangibles.

3-6 Validity of the Instrument

To establish the validity of the questionnaire, the researcher asked academics to judge the accuracy, the content, and appropriateness of the four levels of questions. Their comments and recommendations were taken into consideration.

3-7 Reliability of the Instrument

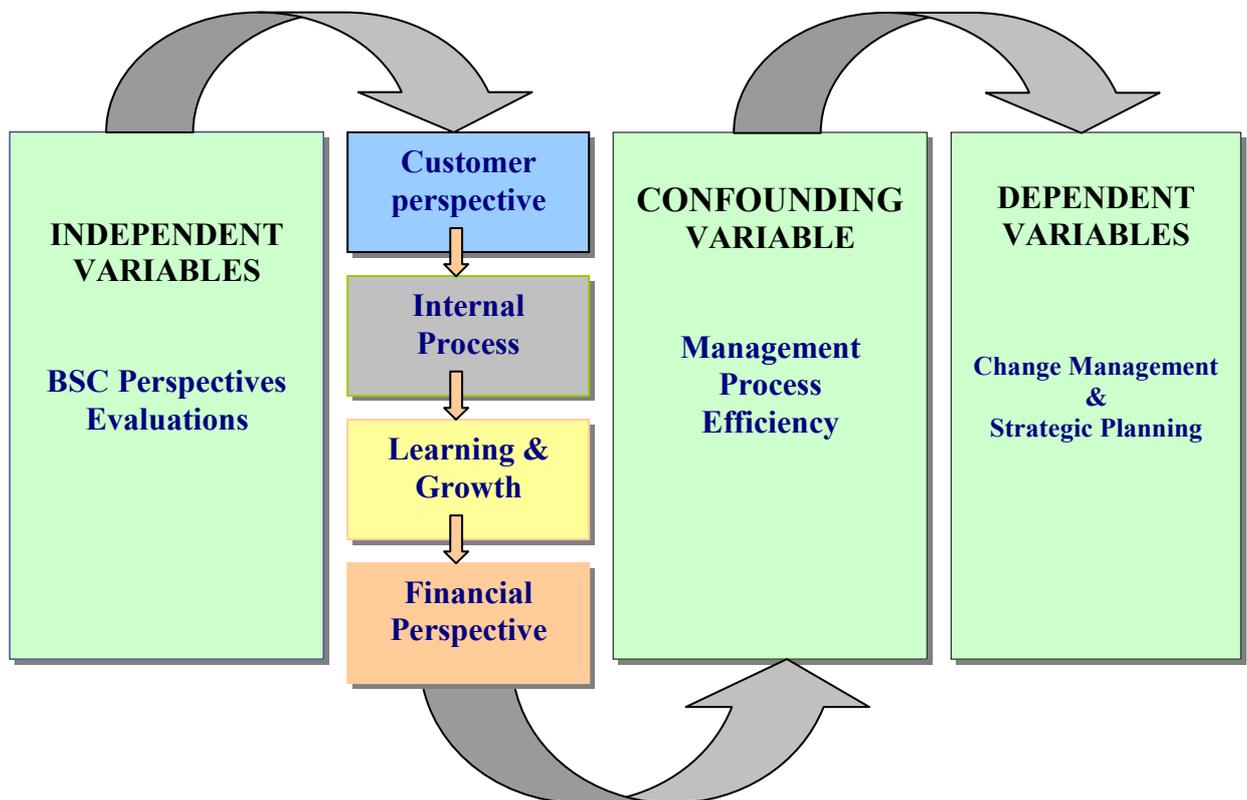
As for the questionnaire, the researcher calculated Cronbach's Alpha for all the areas to test the reliability for each area, Cronbach's Alpha values ranged between (0.699- 0.815).

Table (2)
The Reliability Statistics

No.	Area	Cronbach's Alpha
1	Financial Perspective	0.815
2	Agent	0.601
3	Internal Processes	0.699
4	Human Resources Innovation and Renewal	0.724
5	BSC four perspectives and the correspondence relation in between	0.714

3-8 Model Variables

Figure 6. Model Variables



There are several variables that will be used for studying and formulating the model, and these will be required to the concepts of input and output.

- **Input variables** will refer to the resources which are consumed or expended in taking a course of action. (source is any thing of value), these resources will

be used in a very general sense which is not restricted to monetary considerations.

- **Output variables** will be measured in terms of either the resources or the psychological or sociological characteristics of the resulting state. Thus, output refers to the "return" or "pay-off" resulting from a course of action.
- *Outcomes*- and hence objectives (i.e., desired outcomes) will be defined in terms of either inputs or outputs, or both.

The Researcher proposed a model which is depending on the BSC four perspectives and the correspondence relation in between. He treated as it independent variables. Dependent variables will be the change management and strategic planning.

Tangible measurements, intangible evaluations treated as inputs to the model.

- **Efficiency** and the relation between tangible and intangible measurements will be the output of the model, and considered dependent variable.

3-9 Data and Information Instruments

The researcher used the following instruments for gathering the data:

1. Books, Journals, related studies and other literary materials.
2. Distributed Questionnaire.
3. Financial statements of the related sample.
4. Internal evaluation sheets of the related sample.

3-10 Statistical Methods

The researcher applied (SPSS) program for analyzing data and testing hypothesis by using

1. One- sample test for hypothesis.
2. Arithmetic means and standard deviations.
3. T- Test.
4. Regression and correlation analysis.

3-11 Scoring Method

Each item in the questionnaire was divided into 5-points according to Likert-type scale, and was determined in five levels as the following: strongly agree given (5) degrees, agree given (4) degrees, neutral given (3) degrees, disagree given (2) degrees, and strongly disagree given (1) one degree. In addition, to use judge scale for the responses, which divided to (high, medium, low), depending on questionnaire four classes (1-1.99), (2-2.99), (3-3.99) and (4-5). By dividing judge scale classes on the five alternatives (strongly agree, agree, neutral, disagree, strongly disagree) like the following calculation method:

$$5-1 \div 3 = 1.33$$

And the three levels consist of the low degree (1-2.33), the medium degree (2.34-3.66) and the high degree (3.67-5). As the following:

The low degree less than 2.33

The medium degree 2.34-3.66

The high degree more than 3.67

Chapter Four

Hypotheses Testing and Analysis of Statistical Results

4-1 Overview

4-2 Means and Standard Deviation for the Areas

4-2.1 First Area: Financial Perspective

4-2.2 Second Area: Agent

4-2.3 Third area: Internal Processes

4-2.4 Fourth Area: Human Resources Innovation and Renewal

4-2.5 Fifth Area: BSC Four Perspectives and the Correspondence Relation In
Between.

4-4 Model Approach

4-1 Overview:

This chapter shows and discusses the analysis of statistical methods, and tests the studied hypothesis, by calculating means and standard deviations for each item of the areas of BSC.

It also discusses T- Value results for the sample, which shows significant relationship on the level ($\alpha \leq 0.05$) between the two means for the sample answer. Therefore, depending on the results that the researcher achieved it by using the T- Value, the regression analysis also applied to the sample to ensure the relationship and the results.

In this chapter, the researcher is discussing the results for every area through tables and comments, and finally shows the model approach.

4-2 Means and Standard Deviations for the Areas

The researcher calculated the means and standard deviation of the five areas.

Table (3) shows that, agent perspective and internal process perspective have the highest mean (3.77), followed by Financial Perspective with means up to (3.58), and then Human Resources Innovation and Renewal Perspective with means up to (3.42). Moreover, at the end BSC four perspectives and the correspondence relation in between Perspective in the lowest mean (2.95).

Table (3)**The means and standard deviations for areas**

Area	mean	Standard deviation.
Financial Perspective	3.58	0.38
Agent Perspective	3.77	0.31
Internal Processes Perspective	3.77	0.38
Human Resources Innovation and Renewal Perspective	3.42	0.48
BSC Four Perspectives and the Correspondence Relation in Between Perspective	2.59	0.56

4-2.1 First Area: Financial Perspective

Means and standard deviation were calculated for each item of the first area, the mean for the first area is **(3.58)** with a standard deviation **(0.38)**.

In the first area, all the agreement degrees were high. The item, "The bank has relative growth in lending to customers", comes in the first rank in a mean **(3.87)** and in a standard deviation **(0.42)**, while the item "there is increase in cash and bank balances with central banks" comes in the second rank in a mean **(3.78)** and in a standard deviation **(0.70)**. Moreover, the item "there is a clear decrease in operational cost comparing with the profits that the bank achieved" comes in the last rank in a mean **(3.23)** and in a standard deviation **(0.66)**.

Table (4)**The means and standard deviation to the First Area: Financial Perspective**

No.	Area	Mean	Std. Deviation	rank	agreement degree
2	The bank has relative growth in lending to customers	3.87	0.42	1	high
6	There is increase in cash and bank balances with central banks	3.78	0.70	2	high
1	The Bank uses measurement tools to detect the development of the financial performance	3.71	0.69	3	high
10	The Bank uses measurement tools to detect the development of the financial performance	3.71	0.69	3	high
4	There are financial cash flow indicate to the bank growth	3.69	0.72	5	high
5	The bank achieves a noticeable growth in profits	3.67	0.70	6	high
7	There is increase in bank deposit in the banks and banking institutions	3.56	0.54	7	high
5	The bank has an extra share in Jordan banks marketing	3.5	0.73	8	high
8	There is a noticeable increase in user net cash flow in investment operations	3.41	0.51	9	high
9	There is increase in user net cash flow in financial operations	3.41	0.49	9	high
3	There is a clear decrease in operational cost comparing with the profits that the bank achieved	3.23	0.66	11	medium
Total Mean		3.58	0.38		high

The means, standard deviations, T- value were calculated, also we used T-value for one sample T-Test and the next table shows that.

The results show that there is a significant relationship on the level ($\alpha \leq 0.05$) between the two means for the sample answer, because significant level was less than ($\alpha=0.05$) which is statically significant. This disagrees with the hypotheses (Ho1: there is no relation between the financial perspective evaluations and the evaluations of the rest three perspectives of the BSC).

Table (5)

Means, standard deviation and T- value for the study sample

area	means	S.D	T- value	Significant
Financial Perspective	3.58	0.38	25.632	0.000
	2.6	-		

4-2.2 Second Area: Agent Perspective

Means and standard deviations were calculated for each item of the second area, the mean for the second area (3.77) in standard deviation (0.31). In the second area all the agreement degrees were high. The item "The Bank uses measurement tools to detect the evolution in customer service" comes in the first rank in mean (4.01) and in standard deviation (0.69). While " The bank has continuous newly agents" comes in the second rank in mean (3.99) and standard deviation (0.59), while the item " There is increase in bank deposits and banking institutions " comes in the last rank in a mean(3.42) and in standard deviation (0.54).

Table (6)**The means and standard deviations for the Second Area: Agent Perspective**

No.	Area	Mean	Std. Deviation	rank	agreement degree
1	The Bank uses measurement tools to detect the evolution in customer service.	4.01	0.69	1	High
3	The bank has continuous newly agents	3.99	0.59	2	High
4	The bank provides suitable financial services to the agents	3.91	0.53	3	High
2	The agents satisfy with doing different transactions	3.76	0.45	4	High
6	There is increase in agents' deposits	3.74	0.54	5	High
5	The bank provides financial services with lower interest rate to the agents comparing with other banks	3.55	0.66	6	High
7	There is increase in bank deposits and banking institutions	3.42	0.54	7	High
Total Mean		3.77	0.31		High

The means, standard deviation, T- value were calculated for the sample answer, also we used T- value for one sample T-Test as shown in the next table (table 7).

The results show that there is a significant relationship on the level($\alpha \leq 0.05$) between the two means for the sample answer, because significant level was less than ($\alpha=0.05$) which is statically significant. This disagrees with the hypotheses (Ho2: there is no relation between the agent evaluations and the evaluations of the rest three perspectives of the BSC).

Table (7)**Means, standard deviations and T- value for the study sample**

area	means	S.D	T- value	Significant
Agent	3.77	0.31	37.322	0.000
	2.6	-		

4-2.3 Third area: Internal Processes Perspective

Means and standard deviations were calculated for each item, the mean is **(3.77)** with a standard deviation **(0.38)**

In the third area all the agreement degrees were high. The item " The bank provides a developing unit of credit relationship that can activate and develop the bank credit relationship." comes in the first rank in mean **(3.86)** and in standard deviation **(0.38)**, while " The Bank uses modern methods, which are in line with the policy change to keep pace with global developments in the various internal processes", and " "The internal processes under continuous auditing in the bank" comes in the second rank in mean **(3.84)**, while the item " The Bank uses measurement tools to detect the development of the internal processes (internal procedures)" comes in the last rank in a mean**(3.48)** and in standard deviation **(0.66)**.

Table (8)**The means and standard deviations for the Third area: Internal Processes****Perspective**

No.	Area	Mean	Std. Deviation	rank	agreement degree
5	The bank provides a developing unit of credit relationship that can activate and develop the bank credit relationship.	3.86	0.38	1	High
3	The Bank uses modern methods, which are in line with the policy change to keep pace with global developments in the various internal processes.	3.84	0.61	2	High
6	The internal processes under continuous auditing in the bank	3.84	0.76	2	High
4	The bank follows specific procedures for the promoting of bank's capital demands	3.81	0.56	4	High
2	Bank system has the ability to sort and determine the agents' renewable needs.	3.77	0.58	5	High
1	The Bank uses measurement tools to detect the development of the internal processes (internal procedures).	3.48	0.66	6	High
Total Mean		3.77	0.38		High

The means, standard deviation, T- values were calculated for the sample answer, also we used T- value for one sample T-Test and the next table shows that.

The results show that there is a significant relationship on the level($\alpha \leq 0.05$) between the two means for the sample answer, because significant level was less than ($\alpha=0.05$) which is statically significant. This disagrees with the hypotheses (Ho3:

there is no relation between the internal processes evaluations and the evaluations of the rest three perspectives of the BSC).

Table (9)

Means, standard deviations and T- value for the study sample

area	means	S.D	T- value	Significant
internal processes	3.77	0.38	30.543	0.000
	2.6	-		

4-2. 4 Fourth Area: Human Resources Innovation and Renewal Perspective

Means and standard deviation were calculated for each item of the fourth area, the mean for the third area (**3.42**) in standard deviation (**0.48**).

In the fourth area, all the agreement degrees were high. The item "The bank conducts training courses that help in increasing the efficiency of workers" comes in the first rank in mean (**3.74**) and in standard deviation (**0.66**). While "The employee gets a satisfying salary" comes in the second rank in mean (**3.44**) and standard deviation (**0.73**), while the item " In The bank provides innovative culture and renewable among workers" comes in the last rank in a mean (**3.22**) and in standard deviation (**0.75**).

Table (10)**The means and standard deviations for the Fourth Area: Human Resources****Innovation and Renewal Perspective**

No.	Area	Mean	Std. Deviation	rank	agreement degree
3	The bank conducts training courses that help in increasing the efficiency of workers	3.74	0.66	1	High
2	The employee gets a satisfying salary	3.44	0.73	2	High
1	The Bank uses measurement tools to detect the development resulting from the training of staff.	3.40	0.59	3	High
4	The bank administration explain the appropriate practices as a tool of promoting the operational experience for the workers	3.40	0.78	3	High
6	The bank administration follows the Recent developments in the work of international banks	3.31	0.93	5	Medium
5	The bank provides innovative culture and renewable among workers	3.22	0.75	6	Medium
Total Mean		3.42	0.48		High

The means, standard deviation, T- value were calculated for the sample answer, also we used T- value for one sample T-Test and the next table shows that.

The results show that there is significant relationship on the level($\alpha \leq 0.05$) between the two means for the sample answer, because significant level was less than ($\alpha=0.05$) which is statically significant. This disagrees with the hypotheses (Ho4: there is no relation between the human resources innovation and renewal evaluations and the evaluations of the rest three perspectives of the BSC).

Table (11)**Means, standard deviations and T- value for the study sample**

Area	means	S.D	T- value	Significant
Human Resources Innovation and Renewal	3.42	.48	16.927	0.000
	2.6	-		

4-2.5 Fifth Area: BSC Four Perspectives and the Correspondence Relation in Between Perspective

Means and standard deviation were calculated for each item of the fifth area, the mean for the third area (**2.59**) in standard deviation (**0.56**)

In the fifth area all the agreement degrees were high. The item "In developing the strategic plan of the bank is taken into account the performance indicators at various levels" comes in the first rank in mean (**2.92**) and in standard deviation (**0.80**). While "Indicates the development of the performance of employees in the bank to improve the level of customer satisfaction" comes in the second rank in mean (**2.65**) and standard deviation (**0.81**), while the item "Financial performance developing indicator of the development of workers, the growth of renewal and training" comes in the last rank in a mean (**2.42**) and in standard deviation (**0.74**).

Table (12)

**The Means and Standard Deviations for the Fifth Area: BSC Four Perspectives
and the Correspondence Relation in between**

No.	Area	Mean	Std. Deviation	rank	agreement degree
5	In developing the strategic plan of the bank is taken into account the performance indicators at various levels.	2.92	0.80	1	Medium
4	Indicates the development of the performance of employees in the bank to improve the level of customer satisfaction.	2.65	0.81	2	Medium
3	Reflected the development of skills of workers to carry out various measures in the bank less time and cost.	2.49	0.86	3	Low
1	There is a complementarily in the development of the Bank's performance at the financial, customer service, internal processes, and processes of renewal and innovation.	2.46	0.91	4	Low
2	Financial performance developing indicator of the development of workers, the growth of renewal and training.	2.42	0.74	5	Low
Total Mean		2.59	0.56		Low

The next table shows the relation between the tangibles (financial perspective) and intangibles (rest of perspectives) factors by using regression. The results show that there is a significant on the level ($\alpha \leq 0.05$) between the two means for the sample answer. This disagrees with the hypotheses (Ho5: Mathematical Model does

not Integrate BSC in the Change Management and Strategic Planning in all the four areas).

Table (13)

The Relation between the Intangibles and Tangibles

	R	R²	F	β	df	Sig
The relation between the intangibles and tangibles	.788	.621	218.129	.966	1	.000
					133	
					143	

Because there is a significant on the level ($\alpha \leq 0.05$), the researcher proposed the following model:

4-3 Model Approach

As we have seen in the pervious pages of this chapter, there is a relation between the tangibles (financial perspective of BSC) and intangibles (the rest three perspectives of BSC), this relation should be studied and figured, and there should be a frame that we can study this relation through it in order to be able to control it.

This frame will be shown and discussed through the proposed model in this section. The model idea is associated with mathematical method which is a derivation from the algebra of complex numbers and their geometry.

- The efficiency of the management process and how to calculate it by using BSC perspectives (tangibles and intangibles)
- The management process gap (shortages in the intangibles), and how we can achieve it, compensate (retuning) the process in order to increase the efficiency of the process itself.

The researcher follows and adopts six phases in discussing research problem (proposed model).

1. Formulating the problem.
2. Constructing the model.
3. Testing the model.
4. Deriving a solution from the model.
5. Testing and controlling the solution.
6. Implementing the solution.

The type of measure of the required efficiency depends on whether the amounts of input and/or output are specified in the definition of the relevant outcome, or not.

The Four Possibilities are as Follows:

- (1) Specified (or irrelevant) outputs and inputs, where the measure of efficiency is simply the probability that the outcome will occur.
- (2) Specified outputs and variable inputs, where alternative courses of action are evaluated with respect to the inputs required to obtain a specified output.
- (3) Variable outputs and specified inputs are evaluated relative to the amount of output they yield.
- (4) Variable inputs and outputs, where neither input nor output is specified, and their differences or ratio is used as a measure of efficiency.

The course of action which yields the greatest difference between output and input can be considered to be the most efficient.

As already indicated, profit is measured by such a difference. Return on investment, on the other hand, is a ratio of output to input. Model of problem situations will take the following special mathematical form:

The model has two essential characteristics. *First*, at least one of the "input" variables is subject to the control by the person confronted by the problem. *Second*, the "output" variable must be a measure or index of the value of the alternative choices to the decision maker.

4-3 -1 Efficiency Measurement

The researcher constructs and implements a model using the mathematical equation (b) (c), to measure the efficiency of the management process. Supposing that "for every management process there is an apparent power", this process can be measured and evaluated by this power.

The apparent power will be considered as the performance of the management process, and evaluating and calculating of this power will lead to the process efficiency itself. Apparent power consists of two parts which they will be considered as inputs to the equation; first the active power (tangible/ real part of the equation), and the reactive power (intangible / imaginary part of the equation), represented by the following.

$$\text{Management process} = \text{management process} + \text{management process} \text{ ----- (a)}$$

Apparent power	real power	idle power
-----------------------	-------------------	-------------------

Consequently, the relation between the active power (tangibles) and the reactive power (intangibles), can be represented as efficiency and performance measurement of the management process, as shown in figure 7

Figure (7) Management Efficiency

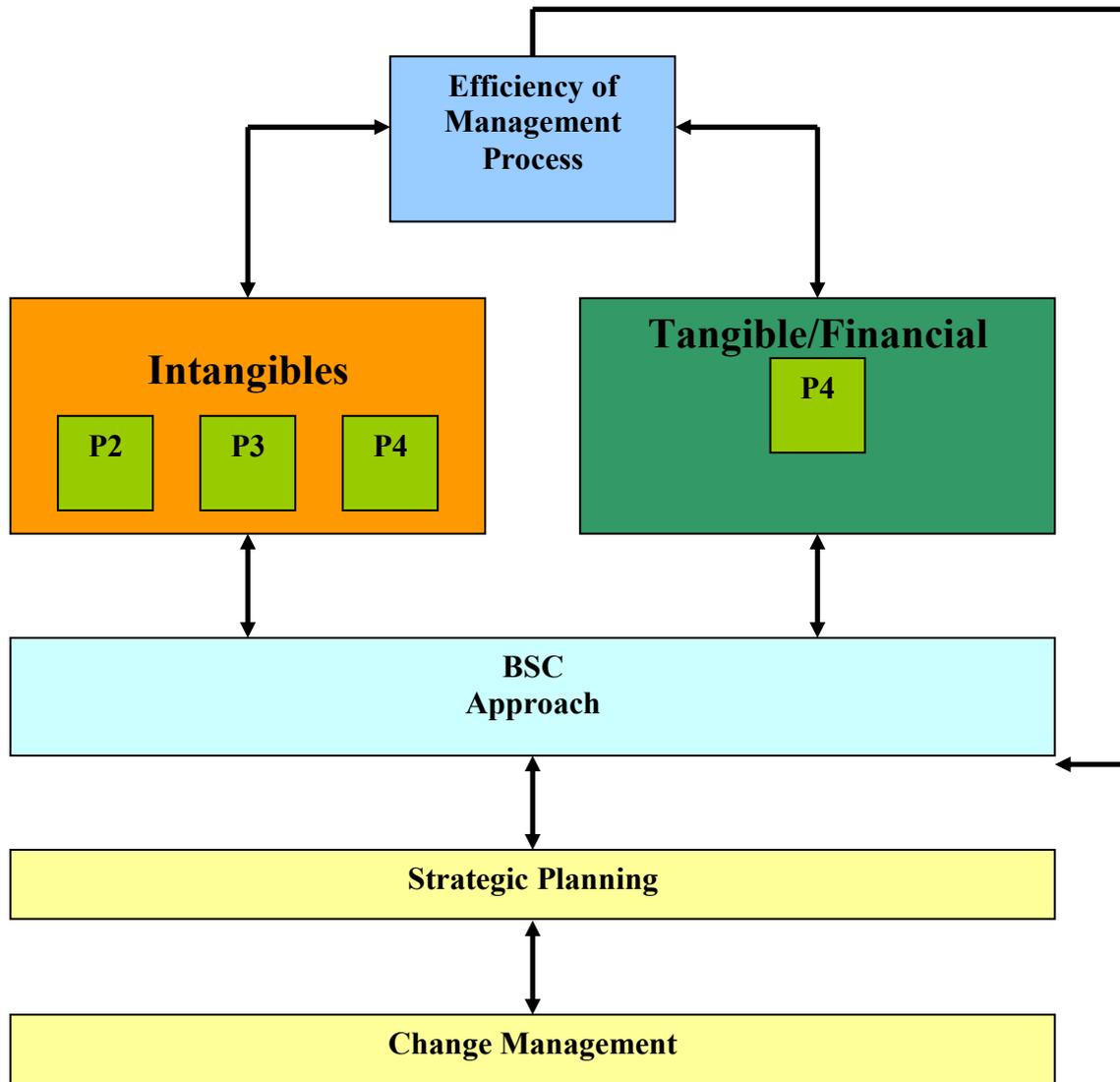
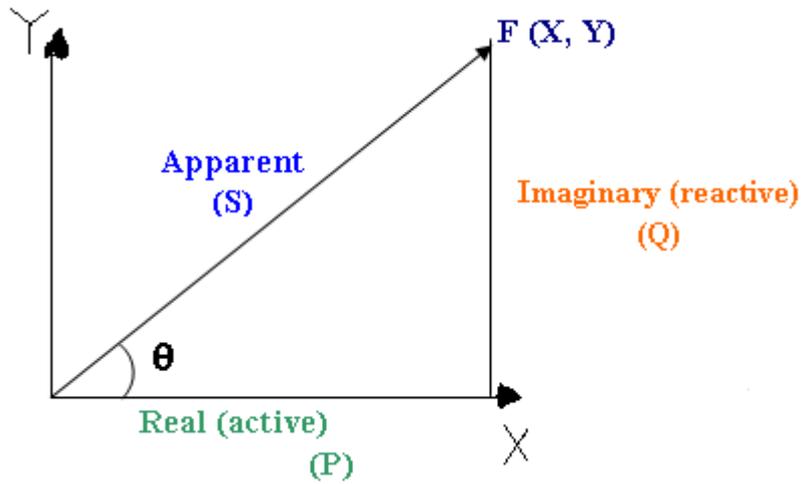


Figure by researcher

By using BSC approach and its four perspectives evaluation, we can measure the efficiency of the management process itself by evaluating and tabulating the tangibles (p1), and the intangibles (p2,p3,p4) then feedback the results to BSC evaluating sheets to retune the evolutions according to the standards selected by decision makers. Concentrating on and communicating the readings with the strategic plane will make it easy to make the change management required, as shown in figure 7.

Therefore, efficiency can be represented mathematically as shown in figure 8

Figure (8) Efficiency



Where

$$F (X_i, Y_j) = S = \text{Management Process} \text{----- (b)}$$

Supposing that the management process has apparent power and from (b), the next equations represent the complex apparent of the system.

$$S = P + jQ \text{----- (c)}$$

Where:

S: is the complex apparent power of the management process

P: is the real power of the management process (tangible)

Q: is the reactive power (idle component) of the management process (intangible)

j: is the complex operator

$$S = | \text{Real} | \cos \theta | + | \text{imaginary} | \sin \theta \text{----- (d)}$$

$$S = \sqrt{P^2 + Q^2} \angle \theta \text{----- (e)}$$

The magnitude of the complex power S , is often referred to as apparent power magnitude.

Where

$\sqrt{P^2 + Q^2}$ is the total magnitude of the process

$\theta =$ is the angle between the real and imaginary axes.

And which will be considered later as the gap of the process.

$$\text{Efficiency} = \cos \theta = \text{real power} / \text{apparent power}$$

Consequently; 100% efficiency (pf=1), which means excellent management process means that:

Tangible part of the process (financial perspective) should equal in magnitude the intangible part (the rest three perspectives of BSC), and having the same direction, (with zero angle, $\theta=0$)

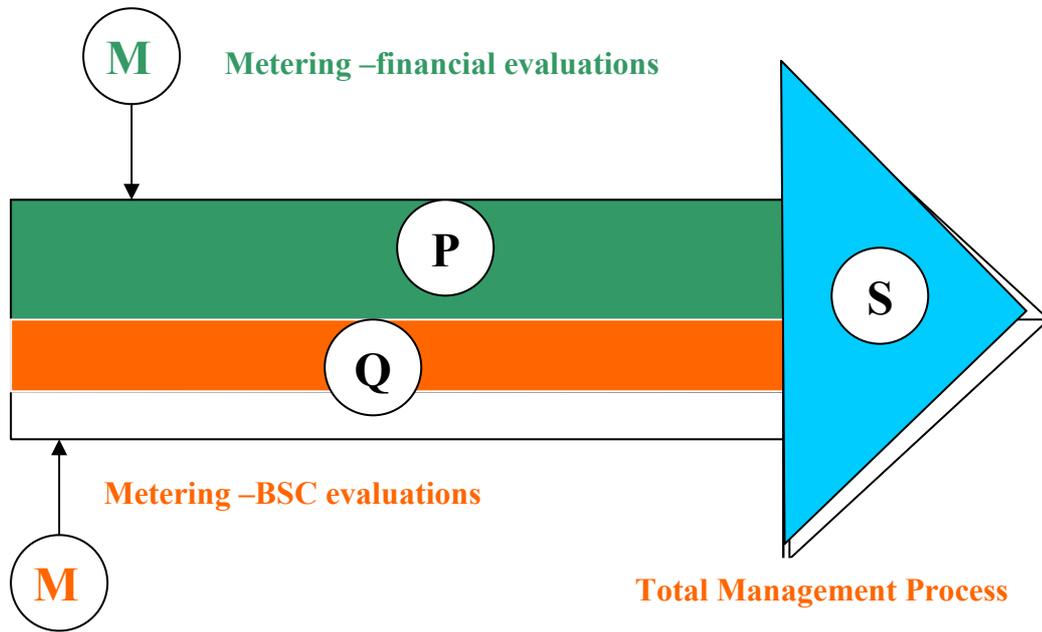
4-3 -2 Gap Measurement

As a managerial request, the angle (θ) will be considered the gap between the tangible and the intangible measurements of the company. This gap will be treated as a mirror for the process that will be controlled and evaluated by decision makers inside the company.

Knowing and measuring the gap of the process, will lead us to know the shortages and mistakes through the process. This is sustaining the decision makers to take an action that is supporting and compensating the process, as shown in figure 9

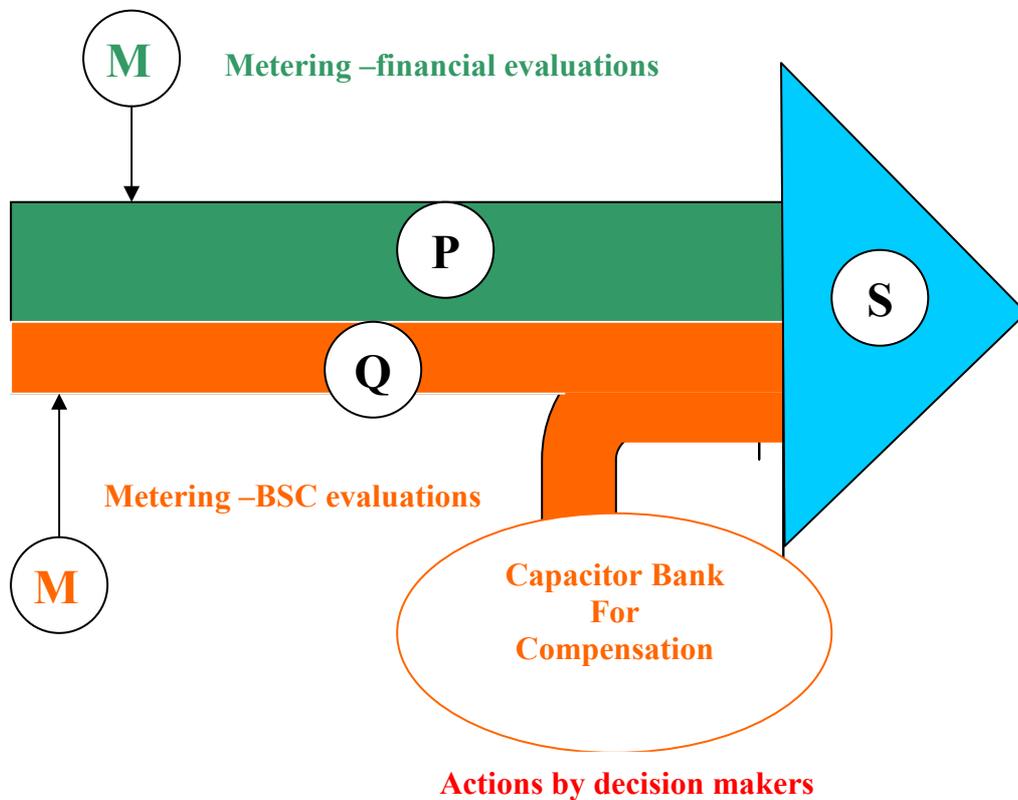
Figure (9) Gap treatment for shortages in the management process efficiency

Management Process before Gap Treatment



Management Process after Gap Treatment

Figure by researcher



The gap treatment and compensation through a math equation as follows:

$$Q_c = Q_1 - Q_2$$

Where,

$$Q_c = P \times (\tan \theta_1 - \tan \theta_2)$$

Where,

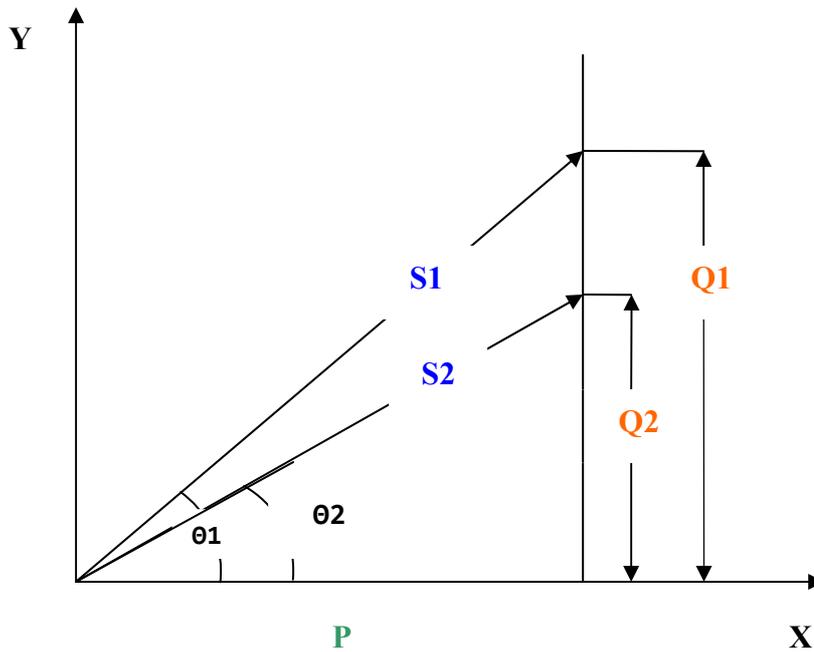
Q_c: compensation (shortage) magnitude to be added to the process by decision makers.

θ₁: the angle to be always corrected.

θ₂: the measured angle from equation (1)

A specified calculated magnitude of Q_c means additional power of |x| to be supplied and transferred via the existing process. See **figure 10**

Figure (10) Process Gap-Mathematical Representation



Where

S1: Is the apparent power of existed and calculated management process

S2: Is the reforested power after compensating and remodeling the power perspectives evaluations.

As a conclusion for this section, we can see the importance of the proposed model lies in the following:

- Every management process has a power, which we called it the apparent power, and using the model which can calculate this power.
- Calculating the management process power leads to know the real power (tangibles) magnitude and idle power (intangibles) magnitude, and consequently the efficiency of our management process.
- Knowing the efficiency of our management process leads us to know the gap or weaknesses in our process which we called the gap of the process.

Chapter Five

Conclusion and Recommendations

5-1 Overview

5-2 Areas Discussion

5-2.1 Discussion First Area: Financial Perspective

5-2.2 Second Area: Agent

5-2.3 Third Area: Internal Processes

5-2.4 Fourth Area: Human Resources Innovation and Renewal

5-2.5 Fifth Area: BSC Four Perspectives and the Correspondence Relation in
Between

5-3 Recommendations

5-1 Overview

The results show that the area of Financial Perspective has the highest mean, which refers to the financial objectives of the entire organization. As such, the financial objectives serve as the focus for the decision makers' objectives and measures of the other three perspectives. While the area of BSC four perspectives and the correspondence relation in between have, the lowest mean, the Jordanian banks have to apply BSC checklist, and then apply the proposed model to achieve integration in the four perspectives of BSC with change management and strategic planning.

5-2 Areas Discussion

5-2.1 Discussion First Area: Financial Perspective

The results showed that the item " The bank has relative growth in lending to customers" with mean up to (3.87) has the highest mean because of the Jordanian banks used lending strategies to help the customers to have more options and to help the bank to rise its reputation. The next higher item was for "There is an increase in cash and bank balances with central banks" with mean up to (3.78) because of the direct relations between Jordanian banks and the central bank.

While the item "There is an increase in net cash flow that used in financial operations" and the item "There is a noticeable increase in user net cash flow in that used investment operations" with mean up to (3.41) came in the ninth rank because there is slow movement in making strategies that concern in facilitating the procedures of taking cash flow from banks to make investments and financial operations.

Finally the item "There is a clear decrease in operational cost comparing with the profits that the bank achieved" with mean up to (3.23) came in the final rank

because of the lack of bank understanding for the necessary strategies that concerned in reducing the gap between the operational cost comparing and with the profits that the bank achieved.

5-2.2 Second Area: Agent Perspective

The results showed that the item "The Bank uses measurement tools to detect the evolution in customer service" with mean up to (4.01) has the highest mean. This refers to the most important advantage for the banks, which is to introduce a good services to the customers continuously, and in this way some banks are less popularity than other banks. The next higher item was for " The bank has continuous newly agents " with mean up to (3.99) because of the bank strategies that concerned in satisfying the customer that they already have to present a clear evidence for the other people for the successful of this bank to encourage them to be one of its new customers.

While the item "The bank provides financial services with lower interest rate to the agents comparing with other banks" with mean up to (3.55) came in the sixth rank. This may relate to the Jordanian banks plans which still effective for taking lower interest from its agent, which considered as default, and is still suffering from Jordanian banks.

Finally the item "There is an increase in bank deposits and banking institutions" with mean up to (3.42) came in the final rank. This may return that Jordan is a poor country and its population doesn't have much to deposit it in banks because of the cost which become more and more expensive.

5-2.3 Third Area: Internal Processes Perspective

The results showed that the item "The bank provides a developing unit of credit relationship that can activate and develop the bank credit relationship" with

mean up to (3.86) has the highest mean because of the importance of bank credit in economic progress because it tries to disable the funds or frozen it. The next higher item was for "The Bank uses modern methods, which are in line with the policy change to keep pace with global developments in the various internal processes" with mean up to (3.84) because of the importance of applying modern method at banking and identifying Jordanian banks in the rules that help in developing banking industry and help them to prove their qualitative performance.

While the item "Bank system has the ability to sort and determine the agents' renewable needs" with mean up to (3.58) came in the fifth rank. This may relate to the Jordanian banks policy that still has a default in making plans to sort the customers according to their needs and requires. Finally, the item "The Bank uses measurement tools to detect the development of the internal processes (internal procedures)" with mean up to (3.48) came in the final rank because of Jordanian bank lack in developing the process that it has to evaluate and audit its procedures.

5-2.4 Fourth Area: Human Resources Innovation and Renewal Perspective

The results showed that the item "The bank conducts training courses that help in increasing the efficiency of workers" with mean up to (3.74) has the highest mean. This may relate to Jordanian bank concerns to introduce the best service to its customers to keep them satisfied, and increase the bank reputation between the other banks. The next higher item was for "The employee gets a satisfying salary" with mean up to (3.44) because if the employees are satisfied with their salaries, they will complete their work in a good way and prove their skills.

While the item "The bank administration follows the recent developments in the work of international banks" with mean up to (3.31) came in the fifth rank because the Jordanian banks don't follow the recent developments that always concerns, and not all the development can be applied in the Jordanian banks. Finally, the item "The bank provides innovative culture and renewable among workers" with mean up to (3.42) came in the final rank because of the problems that the Jordanian banks have in providing the appropriate innovate culture to the employees.

5-2.5 Fifth Area: BSC Four Perspectives and the Correspondence Relation in Between Perspective

This area is the only area that the agreement degrees ranged by medium and low degree. This may be related to Jordanian banks which do not activate its practicing to the balanced scorecard model. The results showed that the item "In developing the strategic plan of the bank is taken into account the performance indicators, at various levels" with mean up to (2.92) has the highest mean because the performance indicators such as financial level, customer services, internal process and training process, are so important for developing bank performance gradually to ensure the success of these strategies.

The next higher item was for "Indicates the development of the performance of employees in the bank to improve the level of customer satisfaction" with mean up to (2.65). It may refer to the close and direct relationship between employees' performance and customer satisfaction. While the item "There is a complementarily in the development of the Bank's performance at the financial, customer service, internal processes, and processes of renewal and innovation" with mean up to (2.46) came in

the fifth rank because Jordanian banks do not coordinate between all the levels, it concerned in each one alone.

Finally the item "Financial performance developing indicator of the development of workers, the growth of renewal and training" with mean up to (2.59) came in the final rank because there is no noticeable development in bank procedures.

5-3 Recommendations

1. The Jordanian banks have to focus on improving their balanced scorecard practices, which will lead to enhance their firm's value.
2. The importance of balanced scorecard integrates the corporate management with the corporate strategy and makes it explicit.
3. Conducting further studies and taking into consideration other sectors and variables haven't been taken by this study.
4. The importance of applying the mathematical model in the Jordanian banks can be summarized as the following: facilitating organization, identifying the operational factors that drive future success, aligning their strategic objectives and actions, accumulating the resources that can create a long-term competitive advantage and returning the intangibles continuously to be integrated with the tangibles.
5. The importance of taking into consideration the policy of the Jordanian banks in the light of the balanced scorecard.

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Appendixes

Appendix 1

Questionnaire in English Language

The Bank.....

Dear reader,

Best greeting,

The Researcher is conducting a study on **"DEVELOPING MEASUREMENT MATHEMATICAL MODEL IN MANAGEMENT CHANGE AND STRATEGIC PLANNING USING BSC PERSPECTIVES"**, in order to have an M.A degree in science and financial administration. Please answer all the attached paragraph of the questionnaire by putting (√) beside the answer which might be appropriate for you, and please fill out the general information mentioned below, Note that the study for research purposes only.

Researcher

Ala'a Al Mtour

1. Gender

Female Male

2. Specialist

Management Economic Accounting Other, _____

3. Experience

3 years -6 years more than 6 years

4. Qualifications

Bachelor higher diploma master PhD

No.	Paragraphs	Strongly agree	agree	Not sure	Disagree	Strongly disagree
First Area: Financial Perspective						
1	The Bank uses measurement tools to detect the development of the financial performance					
2	The bank has relative growth in lending to customers					
3	the bank achieves a noticeable growth in profits					
4	There is a clear decrease in operational cost comparing with the profits that the bank achieved					
5	There are financial cash flow indicate to the bank growth					
6	The bank has an extra share in Jordan banks marketing					
7	There is an increase in cash and bank balances with central banks					
8	There is an increase in bank deposit in the banks and banking institutions					
9	There is a noticeable increase in net cash flow that used in investment operations					
10	There is increase in net cash flow that used in financial operations					
Second Area: Agent						
1	The Bank uses measurement tools to detect the evolution in customer service.					
2	The bank has continuous newly agents					
3	The agents are satisfied with doing different transactions					
4	The bank provides suitable financial services to the agents					

No.	Paragraphs	Strongly agree	agree	Not sure	Disagree	Strongly disagree
5	The bank provides financial services with lower interest rate to the agents comparing with other banks					
6	There is an increase in agents' deposits					
7	There is an increase in bank deposits and banking institutions					
Third area: internal processes						
1	The Bank uses measurement tools to detect the development of the internal processes (internal procedures).					
2	Bank system has the ability to sort and determine the agents' renewable needs.					
3	The Bank uses modern methods, which are in line with the policy change to keep pace with global developments in the various internal processes.					
4	The bank follows specific procedures for the promotion of bank's capital demands					
5	The bank provides a developing unit of credit relationship that can activate and develop the bank credit relationship.					
6	The internal processes under continuous auditing in the bank					
Fourth Area: Human Resources Innovation and Renewal						
1	The Bank uses measurement tools to detect the development resulting from the training of staff.					
2	The employee gets a satisfying salary					
3	The bank conducts training courses that help in increasing the efficiency of workers					

No.	Paragraphs	Strongly agree	agree	Not sure	Disagree	Strongly disagree
4	The bank administration explains the appropriate practices as a tool of promoting the operational experience for the workers					
5	The bank provides innovative culture and renewable among workers					
6	The bank administration follows the Recent developments in the work of international banks					
Fifth Area: BSC four perspectives and the correspondence relation in between						
1	There is a complementarily in the development of the Bank's performance at the financial, customer service, internal processes, and processes of renewal and innovation.					
2	Financial performance developing indicator of the development of workers, the growth of renewal and training.					
3	Reflected the development of skills of workers to carry out various measures in the bank less time and cost.					
4	Indicates the development of the performance of employees in the bank to improve the level of customer satisfaction.					
5	In developing the strategic plan of the bank is taken into account the performance indicators at various levels.					

Appendix 2

Questionnaire in Arabic Language

المصرف.....

عزيزي القارئ

تحية طيبة وبعد.....

يقوم الباحث بإجراء دراسة بعنوان " تطوير نموذج رياضي في إدارة التغيير والتخطيط الاستراتيجي " بهدف الحصول على درجة الماجستير في العلوم الإدارية والمالية. أرجو التفضل بالإجابة على جميع فقرات الاستبانة المرفقة وذلك بوضع إشارة (√) عند الإجابة التي ترونها مناسبة، كما أرجو تعبئة المعلومات العامة المذكورة أدناه؛ علماً بأن الدراسة تجرى لأغراض البحث العلمي فقط.

ا

الباحث

علاء المطور

1. الجنس:

ذكر أنثى

2. التخصص

إدارة اقتصاد محاسبة أخرى، أرجو كتابة التخصص.....

2. الخبرة:

3 سنوات 4-6 سنوات أكثر من 6 سنوات

3. المؤهل العلمي

بكالوريوس دبلوم عالي ماجستير دكتوراه

الدرجة					الفقرات	الرقم
غير موافق بشدة	غير موافق	غير متأكد	موافق	موافق بشدة		
المجال الأول: المنظور المالي						
					يستخدم المصرف أدوات قياس للكشف عن التطور في الأداء المالي.	1
					يحقق المصرف نمو نسبي في القروض التي يقدمها للعملاء.	2
					يحقق المصرف نمواً ملحوظاً في الأرباح	3
					هناك انخفاض واضح في الكلفة التشغيلية مقارنة بالربح الذي يحققه المصرف.	4
					التدفقات المالية تشير إلى ازدهار المصرف.	5
					حصل المصرف على حصة متزايدة في سوق المصارف الأردني.	7
					هناك زيادة في النقد وأرصدة المصرف لدى مصارف مركزية	8
					هناك زيادة في إيداعات المصرف لدى مصارف ومؤسسات مصرفية.	9
					هناك ارتفاع ملحوظ في صافي التدفق النقدي المستخدم في عمليات الاستثمار.	10
					هناك زيادة في صافي التدفق النقدي المستخدم في عمليات التمويل	11
المجال الثاني: العملاء						
					يستخدم المصرف أدوات قياس للكشف عن التطور في خدمة العملاء.	1
					يحصل المصرف على عملاء جدد باستمرار	2
					يظهر عملاء المصرف رضا عند إجراء المعاملات المختلفة.	3
					تقدم المؤسسة خدمات تتناسب واحتياجات العملاء.	4
					يقدم المصرف خدمات مالية بسعر فائدة أقل من المصارف الأخرى.	5
					توجد زيادة في ودائع العملاء.	6

الرقم	الفقرات	الدرجة			
		موافق بشدة	موافق	غير متأكد	غير موافق بشدة
7	توجد زيادة في ودائع المصارف والمؤسسات المصرفية الأخرى.				
المجال الثالث: العمليات الداخلية					
1	يستخدم المصرف أدوات قياس للكشف عن التطور في العمليات الداخلية (الإجراءات الداخلية).				
2	يملك المصرف القدرة على فرز وتحديد احتياجات العملاء المتجددة.				
3	يستخدم المصرف الأساليب الحديثة والتي تتماشى مع سياسة التغيير لمواكبة المستجدات العالمية في العمليات الداخلية المختلفة.				
4	يتبع المصرف إجراءات محددة للارتقاء بمتطلبات رأس المال المعتمد في المصرف.				
5	يوفر المصرف وحدة تطوير العلاقة الائتمانية ومهمتها تفعيل وتطوير إدارة الائتمان في المصرف.				
6	تخضع العمليات الداخلية في المصرف للمراجعة المستمرة.				
المجال الرابع: الموارد البشرية والابتكار والتعلم					
1	يستخدم المصرف أدوات قياس للكشف عن التطور الناتج عن تدريب الموظفين.				
2	يحصل الموظف على مستحقات مالية تجعله يشعر بالرضا.				
3	يعقد المصرف دورات تدريبية تساهم في تطوير كفاءة العاملين.				
4	توضح إدارة المصرف الممارسات الملائمة كوسيلة لتطوير الخبرة العملية للعاملين.				
5	ينشر المصرف ثقافة الإبداع والتجدد لدى العاملين.				
6	تتابع إدارة المصرف المستجدات الحديثة في القطاع المصرفي.				

الدرجة					الفقرات	الرقم
غير موافق بشدة	غير موافق	غير متأكد	موافق	موافق بشدة		
المجال الخامس: العلاقة التكاملية بين محاور الأتمودج المتوازن لقياس الأداء						
					هناك تكامل في تطور أداء المصرف على المستويات: المالية، وخدمة العملاء، والعمليات الداخلية، وعمليات التجدد والتدريب.	1
					يشكل التطور في الأداء المالي مؤشراً لتطور العاملين، ونمو عمليات التجدد والتدريب.	2
					ينعكس تطور مهارات العاملين على القيام بالإجراءات المختلفة في المصرف على الوقت والكلفة.	3
					يشير تطور أداء العاملين في المصرف إلى تحسن مستوى رضى العملاء.	4
					عند وضع الخطة الإستراتيجية للمصرف يؤخذ بعين الاعتبار مؤشرات الأداء في المستويات: المالية، وخدمة العملاء، والعمليات الداخلية، وعمليات التجدد والتدريب.	5