

**An-Najah National University**

**Faculty of Graduate Studies**

**Developing A Business Performance Management Model For  
Paltel Group - Palestine**

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**This Thesis is Submitted in Partial Fulfillment of the Requirements for  
the Degree of Master in Engineering Management, Faculty of  
Graduate Studies, An-Najah National University, Nablus-Palestine  
2014**

## Acknowledgement

First and foremost I offer my sincere gratitude to my supervisor, Dr. Yahya Saleh, who has supported me throughout my thesis with his patience and knowledge. I attribute the level of my Master degree to his encouragement and without him this thesis would not have been completed or written.

I would like to thank the thesis examiner committee members: Dr. Yahya Saleh, Dr. Abdelbaset Rabaiah, and Dr. Sameh Atout, for their time, insightful comments, and valuable questions which highly contribute thesis quality.

### **Developing A Business Performance Management Model For Paltel Group – Palestine**

By

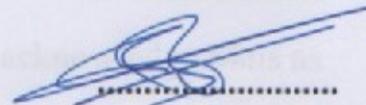
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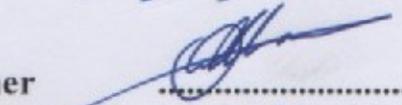
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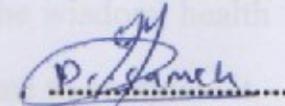
1. Dr. Yahya Saleh / Supervisor



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3. Dr. Sameh Atout / Internal Examiner



Respectfully,  
Ahmad Maharma

## **Acknowledgement**

First and foremost I offer my sincere gratitude to my supervisor, Dr. Yahya Saleh, who has supported me throughout my thesis with his patience and knowledge. I attribute the level of my Master degree to his encouragement and without him this thesis would not have been completed or written.

I would like to thank the thesis examiner committee members: Dr. Yahya Saleh, Dr. Abdelbaset Rabaiah, and Dr. Sameh Atout, for their time, insightful comments, and valuable questions which highly contribute thesis quality.

Also, I would like to thank the faculty at An-Najah National University in general and department of Engineering Management in specific for the full support and facilities I have needed to produce and complete my thesis. My greatest appreciation goes to Paltel Group for the outstanding support and amenities to accomplish this research.

The success of this study required the help of various individuals. Without them, the researcher might not be able to meet their objectives in this study. The researcher want to give gratitude to the following people for their invaluable help and support, my father and mother, brothers Mohammad, Khaled, Belal, my sisters, and my friends. I gratefully acknowledge Mais as she inspires me and bright my world.

Most importantly, thank Almighty God for granting me the wisdom, health and strength to undertake this research task and enabling me to complete it.

**Respectfully,**  
**Ahmad Maharma**

## الإقرار

أنا الموقع أدناه مقدم الرسالة التي تحمل العنوان:

### **Developing A Business Performance Management Model**

#### **For Paltel Group - Palestine**

أقر بأن ما اشتملت عليه هذه الرسالة إنما هو نتاج جهدي الخاص، باستثناء ما تمت الإشارة إليه حيثما ورد، وان هذه الرسالة ككل، أو أي جزء منها لم يقدم من قبل لنيل أية درجة علمية أو بحث علمي أو بحثي لدى أية مؤسسة تعليمية أو بحثية أخرى.

### **Declaration**

The work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification.

**Student Name:**

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التاريخ:

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## List of Abbreviations

Abbreviation	Meaning
<b>AHP</b>	Analytical Hierarchy Process
<b>ARPU</b>	Average Revenue Per User
<b>BPM</b>	Business Performance Management
<b>BSC</b>	Balanced Scorecard
<b>CEO</b>	Chief Executive Officer
<b>CPM</b>	Corporate Performance Management
<b>CR</b>	Current Ratio
<b>CRM</b>	Customer Relationship Management
<b>EBIT</b>	Earnings Before Interest and Taxes
<b>EBITDA</b>	Earnings before Interest, Taxes, Depreciation and Amortization
<b>EFE</b>	External Factor Evaluation
<b>EPM</b>	Enterprise Performance Management
<b>FTE</b>	Full Time Equivalent
<b>GDP</b>	Gross Domestic Product
<b>ICT</b>	Information and Communication Technology
<b>IFE</b>	Internal Factor Evaluation
<b>KPI</b>	Key Performance Indicator
<b>NPV</b>	Net Present Value
<b>Paltel Group</b>	Palestine Telecommunications Company
<b>PEST</b>	Political, Economic, Social, Technical
<b>PMC</b>	Performance Management Committee
<b>ROA</b>	Return On assets
<b>ROE</b>	Return On Equity
<b>SWOT</b>	Strengths, Weaknesses, Opportunities and Threats
<b>VOIP</b>	Voice Over Internet Processor

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**Abstract**

Dynamic environment of telecommunication industry, high-level of competition and increased customers' expectations have made necessity of getting awareness of attaining a comprehensive performance management model, confident, trustable and flexible.

Business Performance Management (BPM) is an incredible method as it helps organizations to plan, monitor, analyze, and manage business more effectively by providing a comprehensive view for enterprise.

This research contributes to providing decision makers with a systematic approach for establishing a visual strategy map with a consideration of the involved causal relationships among Key Performance Indicators (KPI's). Performance Management Committee (PMC) from Paltel Group in cooperation with the researchers reviewed and formulated Paltel Group strategy to identify business strategy and construct Balance Scorecard (BSC), also, build strategy map to measure financial and non-financial indicators.

A proposed framework in this research would be a useful and valuable reference to measure actual performance against target values, and

facilitate review and divide results to understand the post actions taken resulting in the current position.

This research proposes a model based on the Analytical Hierarchy Process (AHP) and BSC for evaluating the performance of Paltel Group. The analytic hierarchy is structured by the four major perspectives of the BSC including financial, customer, internal process, and learning and growth, followed by performance indicators.

# Chapter 1

## Introduction

### 1.1 Overview.

Business performance management (BPM) is a set of management and analytic processes, supported by technology, that enable businesses to define strategic goals, manage and measure performance towards achievement of those goals. Core BPM processes include financial and operational planning, consolidation and reporting, business modeling, analysis, and monitoring of key performance indicators (KPI's) linked to strategy. BPM include strategic planning, budgeting, forecasting, reporting, modeling, scenario planning, profitability analysis, KPI's monitoring, and consolidation. Both operational and financial performances are addressed by BPM to include the process of collecting the data and performing analysis and reporting in a collaborative way for executives, managers, and staff across all management levels of the organization. (Business Performance Management, Meets Business Intelligence July, 2005).

BPM is primarily practiced by the Chief Executive Officer (CEO), Chief Financial Officer (CFO), and other senior executives and managers in the organization. This part of performance management is about setting strategic objectives for the various entities that make up an organization (business units, departments, and product lines), measuring the entities against objectives and targets, reporting results, and using information to

determine how well the different parts of the organization are performing. (Creating the Performance-Driven Organization, Mark A. Stiffler, 2006),

BPM entails reviewing the overall business performance and determining how the business can better reach its goals. This requires the alignment of strategic and operational objectives and the business set of activities in order to manage performance. Because BPM seeks to aggregate available information, managers are more informed about the company position and are able to make better decisions. A BPM model is a critical function that provides strategic, tactical, and operational management with business intelligence in order to make better decisions. It can also help an organization to immediately find and address critical issues, moreover, vital business aspects. (Creating the Performance-Driven Organization, Mark A. Stiffler, 2006)

BPM helps streamline management processes, creating the smart, agile and aligned organization. It allows the close monitoring of performance enabling flexible planning and helps in re-establishing trust with stakeholders. At the same time, it drives insight in divestments and investments, and offers techniques that help in rethinking strategies. These are all items at the top of the executive agenda. (Smart Enterprise Performance, Management Strategies for Uncertain Times, An Oracle White Paper, August 2009).

## 1.2 Paltel Group.

Palestine Telecommunications Company (Paltel Group) is the telecommunications leader in Palestine; The Group launched its operations in 1997 as a public shareholding company. It provides fixed line, cellular and data services, making it the most integrated service provider and one of the largest companies operating in Palestine in terms of sales volume, market value and financial stability. The market capitalization of Paltel Group's Stock, the leading share among the listed companies on the Palestine Exchange, represents 33.2% of the total market cap on the Exchange as end of 2013.

Reliability and consistency in dividends' distribution over the past years with an upward trend to reach 50% dividends percentage of the par value distributed for 2013, As end of 2013, the Group's subscriber base in all telecom services reached 3.25 million customers with a 2.7% subscriber growth rate compared to end of 2012. Paltel Group is an integrated holding company consisting of

1. **PalTel:** the Palestine Telecommunications Company.
2. **Jawwal:** the Palestine Cellular Communications Company, the first mobile operator.
3. **Hadara:** an Internet Services Provider.
4. **Hulul:** the IT arm of the Group.
5. **Palmedia:** a multimedia services provider.
6. **Reach:** the first contact center in Palestine.

Since day one of operation, the company's mobile operator unit; Jawwal, faced fierce competition from 4 large scale Israeli mobile operators. The company was able to grow and further develop despite early competition, gaining market recognition for operating in highly adverse conditions and difficult business environment. As of March 2014, Jawwal has roughly 2.63 million subscribers; Paltel has 403,000 subscribers and 213,000 ADSL subscribers. (PALTEL annual report, 2008-2013).

### **1.3 Problem Statement.**

Over the last few decades, the telecommunication industry has proven itself not only as an emerging economic sector but as a rapidly growing sector with a huge chain of economic and social impact.

As a result, several telecommunications companies were introduced and started to compete within this current market. Such competition presents challenges that affect the business performance of the various telecommunication industries.

The lack of strategic and communication mechanisms among the company vertically and horizontally, excluding staff members from the decision-making processes, poor coordination among business units and functional groups, and an evident gap between strategy and execution, have put Paltel Group under pressure from shareholders, stakeholders, executives, and staff, to achieve standards of corporate governance.

Paltel group pursues for performance evaluation, confident, trustable and flexible, which take advantage of scientific methods with a shared purpose, a consistent data model, real-time information, easy-to-use tools, and streamlined processes, to align operational procedures with strategy. And through increased insight, make faster decisions and boost performance to achieve business goals.

### **1.4 Research Objectives.**

This research aims to achieve the following objectives:

1. Review of current performance management processes to identify gaps, then suggest more efficient and effective processes for performance management.
2. Conduct a comprehensive investigation on Balanced Scorecard and strategy map practices in telecom industry to map the strategy for Paltel Group.
3. Recommend a methodology to prioritize Paltel Group strategic objectives which achieve high level of consensus and consistency.
4. Determine how the proposed BPM model improves the group decision -making process and business outcomes.
5. Plan to develop a performance measurement model which can be applied in telecom industry in group level, estimate the group accomplishments, and discover the causal-effect relationship among objectives and perspectives.

## 1.5 Research Limitations.

The main limitations for this research can be summarized by the following points:

- **Sample size:** Statistical tests normally require a larger sample size to ensure a fairly complete representation of a population.
- **Lack of available and/or reliable data:** lack of data or of reliable data will likely restrict this research.
- **Access:** as the proposed research may contain confidential data, the access is denied or otherwise limited. It will be complicated to gain data from stakeholders, Paltel Group, or access to documents.

## 1.6 Research Impact.

This study will bridge the existing gaps between strategy and then execution that impair achieving strategic goals, by having a structured business performance model. This model is endeavoring to achieve the following:

- **Improved Communication** by providing executives an effective mechanism for communicating strategy and expectations to managers and staff at all levels of the organization via planning models and performance metrics joined to corporate goals and objectives.
- **Improved Collaboration** and exchange of ideas and information, both vertically between levels within an organization and horizontally among departments and groups which manage a shared activity.

- **Improved Control** by enabling staff to continuously adjust plans and fix or improve operations in a timely manner by providing them with up-to-date information about market conditions and the status of operational processes.
- **Improved Coordination** among business units and functional groups that otherwise might act as independent segments, conflicting rather than sharing resources and information.

Furthermore, this research has contributed to providing decision makers with a systematic approach for establishing a visual strategy map with a consideration of the involved causal relationships among KPIs. The BSC strategy map construction framework proposed in this research would be a useful and valuable reference for other organizations, as BSC vary from organization to organization. Strategic analysis is performed to create logical links between the KPIs based on the content of the BSC evaluation criteria that are most appropriate for telecom industry performance.

## **1.7 Research Assumptions.**

In this research, we assume the following assumptions for the current system:

- The sum total of good individual performance does not produce high organizational performance.

- ‘Best practice’ performance management systems do not tap into the culture of the organization, and are often incompatible with the way things are done.
- Performance systems are very complicated, very technical, and are not clear about how individual performance helps deliver corporate goals.
- Many ‘Performance Management’ systems focus on process and form-filling, not on delivering results that drive the organizations performance forward.

In accordance with the above, the proposed research must answer the following questions:

- What are the expected changes if a company implements business performance management (BPM)?
- How does BPM help organizations to align strategy with execution?
- How to identify and document the strategic KPIs, which ultimately determine the success of Paltel Group?
- Does Balance scorecard proper method to align measure financial and non-financial performance.

## **1.8 Thesis Structure.**

The thesis is organized on follows:

Chapter One is an introduction to the thesis. This will in having a background of the study, problem statement, research questions, objectives, and limitations.

Chapter Two reviews literature of relevant studies to provide a theoretical background for the research. The review presents and discusses issues on, Business Performance Management, Telecommunication, strategy management, and performance measurement models.

Chapter Three reviews Paltel Group vision, mission, challenges, analysis of the current situation, analyzing internal and external factors to formulate suitable strategies that drive Group's to shield them as a market leader in Palestine.

Chapter Four provides implementation for Balance Scorecard by describing four perspectives, involved in Key Performance Indicators, and proposed strategy map to link Paltel Group's BSC to its strategy.

Chapter Five presents the application of the AHP method in ranking the overall performance management and provides performance index for the group.

Chapter Six covers the final reflections of this thesis. The final result of the thesis analysis presented with respect to the data collected from the

company and proposed corrective actions. Also, conclusions and recommendations included in this chapter.

## **Chapter 2**

### **Literature Review**

This chapter reviews literature of relevant studies to provide a theoretical background for the research. The review presents and discusses issues on, Business Performance Management, Telecommunication, strategy management, and performance measurement models.

#### **2.1 Telecommunication.**

Telecommunication refers to the specific services that support the exchange of information over significant distances by electronic means. It includes the activities of providing telecommunications and related service activities (i.e. transmitting voice, data, text, sound and video). The transmission facilities that carry out these activities may be based on a single technology or a combination of technologies (International Telecommunication Union, 2010).

The term telecommunications was first used for wired telephony. Today, telecommunications are one of the most important contemporary Information and Communication Technology (ICT). They include wired and wireless telephony; different mobile services, such as cellular telephones and paging; voice and data transmission; and Integrated Services Digital Networks (ISDN), which provide a very high quality of voice as well as high data communication rates.

## **2.2 Defining Performance.**

Maila (2006) defined performance is the actual work that is done to ensure that an organization achieves its mission. In summary, performance cover inputs, conditions, processes elements, outputs, consequences and feedback. According to Maila (2006), the end product of performance should be measured against four elements which are: quantity, quality, cost or risk factors and time. The idea of measuring the end product is fully supported as it can be argued that a product can be in any form that is good or bad, hence the need to have it measured.

While the researcher acknowledges the above definition, they argue that application of the definitions should be treated with a provision that the output of that action is positive to the organization.

## **2.3 Performance Management.**

The aim of performance management is to achieve high performance by an organization and its people. High performance means that the organization reaches and exceeds its targets for productivity, quality, customer service, growth, profits and shareholder value. In other words, it means to do the superior share understanding about what is to be achieved, develop the capacity of people to achieve it, provide the required support and guidance to the people to help them to deliver high performance and achieve their full potential to benefit themselves and the organization as well, (Armstrong and Baron, 2005). Advanced performance management

systems are nowadays used as strategic weapons in order to achieve competitive advantages, (Dressler, 2004).

The concept of performance management is still young and has emerged in the last two decades (Sharif, 2002). Literature review showed that traditional systems, based on transparent financial measures, cannot integrate all factors that are affecting performance of enterprises and organizations (Freeman and Beale, 1992). Performance management is just part of a larger system of business improvement. For an effective system, managers need a balanced set of performance indicators (Kaplan and Norton, 2001). Performance indicators are compilations of information that are used to measure and assess performance (Edwards and Thomas, 2005).

Moreover, they indicate the final mark of a company's efficiency and effectiveness. Key Performance Indicators (KPIs) represent the basis for measuring business and project success. Their purpose is to enable the measurement of performance within companies and the industry, and to initiate benchmarking. Besides direct advantages, KPIs are used as means of communication within stakeholders to inform them about constant improvement endeavors (Vukomanovic et al., 2010).

## **2.4 Business Performance Management.**

Business Performance Management (BPM), coincides with the concept of Corporate Performance Management (CPM) and Enterprise Performance Management (EPM). These concepts provide a system perspective for

optimizing the execution of business strategy, (Ballard, White, McDonald, Myllymaki, McDowell, Goerlich, and Neroda, 2005; Clark, Jones, and Armstrong, 2007). The concept of BPM was introduced to business in the 1990s by information technology research firms and software vendors (Cokins, 2009; Pritchard, 2008). BPM is misunderstood by many companies as being a new category to describe multiple applications including planning, budgeting, financial consolidation and reporting, forecasting and scenario modeling, score carding or dashboards, business intelligence, and key performance indicators (KPIs) reports. Eckerson (2004) argues that BPM is a common strategic and technical framework that pulls these applications together in a cohesive and concerted manner with a view to drive the whole organization toward achievement of strategic goals. Therefore, BPM is a much broader and bigger concept than planning, budgeting, forecasting, reporting, score carding, or business intelligence. These latter concepts are all tools underlying the business performance management concept.

BPM defines and refines strategies, and manages them in order to enhance performance. It bridges the gap between strategy and execution by means of improved communication, collaboration, control, and coordination (Eckerson, 2004; Ballard et al., 2005). BPM enables organizations to enhance the capabilities of business intelligence systems for better monitoring, measurement, and management of business performance (Clark et al., 2007). Eckerson posits that BPM improves (1) communication of strategy and expectations to all levels of the organization through

planning models and performance metrics that are tied to strategic goals, (2) collaboration across organization through two-way exchange of ideas and information, (3) control to continuously adjust plans and improve operations through dissemination of up-to-date information about market conditions and operational processes, and (4) coordination among business units and functional groups. Eckerson also suggests that BPM helps organizations better exploit opportunities as well as detect and rectify operational problems before they grow out of control.

## **2.5 Advantages and Disadvantages of BPM.**

The following are main advantages and disadvantages of BPM. (Ballard et al., 2005:24-25).

### **Advantages:**

- BPM gives the business the ability to reduce costs, increase revenue and ultimately provides a competitive advantage.
- Recognizes proactive monitoring, measuring and attaining performance targets.
- Creates the opportunity to improve and manage processes.
- Business performance can compare, monitor and align business strategies, goals and objectives when integration with business intelligence is done.

**Disadvantages.**

- A common threat is information availability for business performance management.
- Feed storage effect of decentralized information hubs within the business.
- Lack of transparency on enterprise level, only departmental or functional area views are available.
- Timely activities in aggregating information for higher levels within the business.

To enhance the understanding of BPM, the framework will be exploded.

Figure (2-1) depicts the framework which covers the four phases.



**Figure (2-1):** Business Performance Management Framework

Source: Adapted from Frolick and Ariyachandra, (2006:43)

**Strategize:** defining the way to identify business strategy, the discovery of key value drivers to accomplish strategy and create metrics to monitor the performance, (Ariyachandra and Frolick, 2008:114). To be competitive, one needs to stay competitive. This is accomplished to challenge the boundaries of performance. To strategize, owners or executive management of the business, review the past performance of the business and decide on future intent or direction for the business. This is also supported by a SWOT analysis.

**Plan:** defining a road map that is followed with specific projects, budgets and activities to fulfill the strategy. Planning to build a bridge from the current status of the business to the to-be state. If the goals were defined as part of the strategy process, planning will include the formulation of required key indicators to measure the progress towards the goals. Identification of gaps on measuring points is normally done in this process.

**Monitor and analyze:** actual performance against target values are reviewed and divided to understand the post actions taken resulting in the current position. Monitoring is continuously measuring how we are moving towards the target. Think of the GPS in your car, continuously tracking your move on the road, any deviations, you'll get the word. The same with businesses, progress need tracking and alerts to indicate to decision makers the course taken is not delivering the required results or we are on track.

**Take corrective actions:** by understanding the status, modification with identifiable reactions to re-align the actions to achieve the desired performance levels. Adjusting the driving direction will result in reaching your destination. Available information will give insight to what happened. Part of corrective actions is also tracking the status of the action.

## **2.6 Performance Measurement .**

To achieve desired performance goals in an organization, the ability to measure this performance is so important (Harbour, 1997). Harbour (2009) emphasizes the importance of performance measurement as “You can’t understand, manage, or improve what you don’t measure”. According to Harbour (1997) most companies collect performance measures, but many of these companies rarely or never use these measures. The key in performance measurement is to collect only those measures that can and will actually be used. Furthermore, Harbour (1997) mentions it as “Don’t measure what you can’t or won’t use”. The concept of performance measurement, according to Franceschini (2007), is formulated as “you get

what you measure, and you cannot manage a system unless you measure it". Performance measures are tools to understand, manage and improve organizations activities, (Franceschini et al., 2007).

There are different methods for the measuring business performance. The first method is through objective (quantify) and subjective (judgmental) methods, the second method is through criteria such as financial (e.g. profit, sales) and operational (e.g. customer satisfaction, quality), and the third one is through primary (from organization) and secondary (from databases), (Venkatraman and Ramanujam, 1986; Sang, 2004). In objective measurement, quantitative data (i.e. absolute performance data) is measured while in subjective method what is measured is perceptive opinions about performance according to the competitors or company expectations (Dess and Robinson, 1984). The same performance criteria are measured both objectively and subjectively. What matters is to determine those criteria. Your criteria can be qualitative (e.g. customer satisfaction, overall business performance) or quantitative (e.g. profit, sales).

The quantitative criteria are measured with an objective or subjective measurement but the qualitative criteria can be measured subjectively (Venkatraman and Ramanujam, 1986).

The fact that the objective criteria in the financial statements of a business can be defective, the lack of relevant objective data, and the difficulty in reaching objective data to measure the performance of businesses make it necessary to rely on subjective data obtained from the participators (Zehir

and Acar,2005). It is usually difficult to get information about objective performance data because the companies generally do not wish to release such information. In an effort to measure qualitative and quantitative performance, a subjective measurement method is used by asking to what extent the managers of businesses find their companies successful compared with other businesses in the sector in the context of varied performance criteria (Alpkan et al., 2005). Putting forward the view that subjective (perceptive) measurement may change depending on the different personality traits or various organizational position and such a measurement would cause confusion and worries in drawing comparison with competitors. (Lin et al, 2009).

Dess and Robinson (1984) indicated the relation between the objective and subjective data about business performance, and showed that subjective performance data (assets-return and sales growth) could be used in place of objective data in cases where it is not possible to get relevant objective performance data. Particularly, subjective business performance can be fruitful in performance evaluation by making comparisons with similar businesses in an industrial branch. However, Chakravarty (1986) showed that a measurement of a business performance is not enough just by examining financial indicators such as investment return, profitability and productivity, that financial performance is short-term. Business performance was measured in the study conducted by Singh (1986) both by the personal evaluations of high level managers about business

performance (subjective) and by accounting-based criteria (objective). After-tax total assets return was used as a criterion based on accounting.

There are seven reasons why performance measurement is used in the management world: the changing nature of work; increasing competition; specific improvement initiatives; national and international quality awards; changing organizational roles; changing external demands; and the power of information technology (Neely,1998). Other reasons –under the umbrella of aligning business activities to the strategy of the organization performance against strategic goals, are: increase focus on strategy and results, measure what matters and improve performance, align strategy with what human resource can do, improve communication, and put in priority projects. (Maskel,1991) suggests that performance measurement systems must have the following characteristics:

- 1) They are directly linked to overall business strategy and the company's critical success factors.
- 2) They combine both financial and non-financial measures.
- 3) They use different measurements for different areas of the company.
- 4) They are changed over time to reflect changes in strategy and operation.
- 5) They are simple and easy to use.
- 6) They give fast feedback to operators and managers.
- 7) They are intended to teach rather than monitor and control.

- 8) They use benchmarking to set target characteristics of performance measurement systems found in world class companies.

## **2.7 Performance Measurement Systems in Practice.**

During the performance measurement revolution, many performance measurement systems have been developed to overcome the weaknesses of traditional performance measurements systems, according to Frigo and Krumwiede (1999), survey data suggest that between 40 and 60 percent of companies significantly changed their measurement systems between 1995 and 2000. In this research, we review five influential Performance Management Systems: the Balanced Scorecard (Kaplan, Norton, 1992), the Tableau de Bord (a French approach developed in the 1930s), the Performance Prism (Neely, Adams, 2000), the Performance Pyramid (Lynch, Cross, 1991), and the Productivity Measurement and Enhancement System (Pritchard, 1990).

### **The Balanced Scorecard (BSC) .**

The best known performance measurement system is undoubtedly the balanced scorecard (BSC), developed by Kaplan and Norton (1992; 1996a; 1996b). Kaplan and Norton (1996b) define the BSC as “a multidimensional framework for describing, implementing and managing strategy at all levels of an enterprise by linking, through a logical structure, objectives, initiatives, and measures to an organization’s strategy”. The BSC provides an enterprise view of an organization’s overall performance: it

complements the traditional financial performance measures with key performance indicators (KPIs). The four building blocks of the BSC are financial perspective, customer perspective, internal processes, and learning and growth.

Having these four perspectives in mind, managers can translate strategies into specific measures that can monitor the overall impact of the strategy on the enterprise. The four perspectives also help in avoiding focusing on short-term financial results. If an enterprise execution was short term biased, the BSC will show weak performance in other perspectives such as internal processes and/ or learning and growth perspective.

Kaplan and Norton (1992) outline the following advantages of following the balanced scorecard approach:

1. Provides a comprehensive picture of the enterprise's performance at a glance. A single report includes multiple measures that are tied to desired core competencies such as cycle time, return on investment and customer satisfaction.
2. The balanced score card protects from local optimization. Since managers can view all important aspects of the business, the tendency of improving one area at the expense of the other is minimized. Balancing the objective promotes positive improvement in processes, e.g. improving set up times by reducing process set up rather than increasing batch size. The balanced score card provides insight

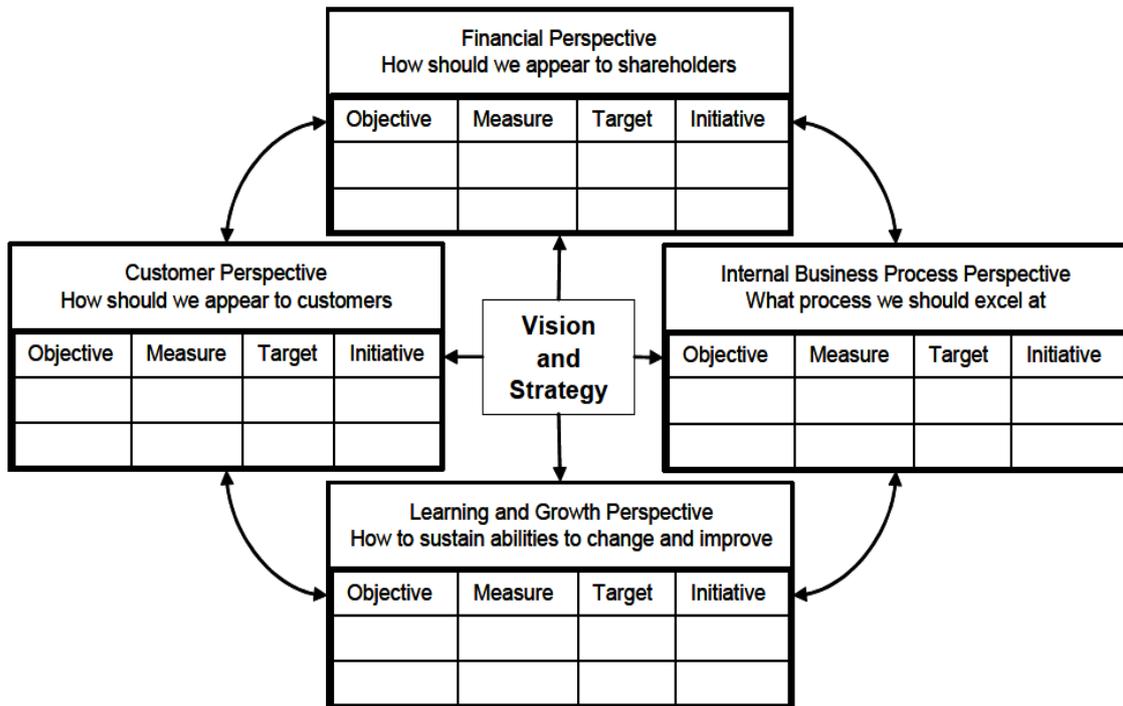
whether an improvement is based on actual process improvement or by reducing the performance of other processes.

3. Helps avoiding information overload by keeping only measures that are tied to strategy.

At the center of the balanced scorecard is the enterprise vision and strategy.

Each perspective includes the following components:

1. Objectives: Niven (2005) describes objectives as the link between measures and strategy. Describes what aspects and activities must be performed well in order to execute strategy. Therefore, objectives are more detailed than the vision and mission statements; however, they are more abstract than specific measures and key performance indicators (KPI)
2. Measures: Measures are the means to assess the execution of objectives.
3. Targets: Targets are numerical values that represent the effectiveness of achieving the specified objective.
4. Initiatives: Initiatives are strategic level programs that are introduced to achieve the target objectives within the specified perspective.



**Figure (2-2):** The Balance Scorecard

Source: Adopted from Kaplan and Norton 1996

### **The Tableau de Bord (TdB).**

The Tableau de Bord (TdB) has gained widespread acceptance throughout the French business community. The TdB was introduced in France in the 1930s and was described as “being similar to a “dashboard” (i.e. the literal translation of “tableau de bord”) used by “pilots” (i.e. managers) to guide organizations to their destinations” (Bessire, Baker, 2004). It was first developed by process engineers who were looking for ways to improve their production process by better understanding cause-and-effect relationships (the relationships between actions and process performance). The same principle was then applied at the top management level, to give senior managers a set of indicators allowing them to monitor the progress

of business, compare it to the goals that had been set, and take corrective actions.

### **The Performance Prism (PPR).**

The Performance Prism (PPR), developed by Neely and Adams (2000), is a PMS organized around five distinct but linked perspectives of performance: stakeholder satisfaction, strategies, processes, capabilities, and stakeholder contributions.

### **Performance Pyramid System (PPS).**

The Performance Pyramid System (PPS) was one of the first “new” PMSs, developed by Lynch and Cross (1991) during the performance measurement revolution. In short, it is an interrelated system of different performance variables, which are controlled at different organizational levels. Strategic objectives flow down through the organization with a reverse flow of information flowing upwards. Lynch and Cross use a pyramid-shaped “map” for understanding and defining the relevant objectives and measures for each level of the business organization. The four levels of the PPS embody the corporate vision, accountability of the business units, competitive dimensions for business operating systems, and specific operational criteria.

## **Productivity Measurement and Enhancement System (ProMES).**

The productivity measurement and enhancement system (ProMES) was originally developed by Pritchard (1990). ProMES is a participative development method for performance management systems, designed to be a practical method of measuring organizational productivity. In essence, ProMES is a formal, step-by-step process that identifies organizational objectives, develops a measurement system to assess how well the unit is meeting those objectives, and develops a feedback system which gives unit personnel and managers information on how well the unit is performing (Pritchard et al., 2002).

### **2.8 The Analytic Hierarchy Process and its Foundation.**

The Analytic Hierarchy Process (AHP) is a methodology for structuring, measurement and synthesis. The AHP has been applied to a wide range of problem situations: selecting among competing alternatives in a multi-objective environment, the allocation of scarce resources, and forecasting. Although it has wide applicability, the axiomatic foundation of the AHP carefully delimits the scope of the problem environment (Saaty 1986). It is based on the well-defined mathematical structure of consistent matrices and their associated right-eigenvector's ability to generate true or approximate weights, Mirkin (1979), Saaty (1980, 1994).

The prime use of the AHP is the resolution of choice problems in a multi-criteria environment. In that mode, its methodology includes comparisons

of objectives and alternatives in a natural, pairwise manner. The AHP converts individual preferences into ratio-scale weights that are combined into linear additive weights for the associated alternatives. These resultant weights are used to rank the alternatives and, thus, assist the decision maker (DM) in making a choice or forecasting an outcome. The AHP employs three commonly agreed to decision making steps: (1) Given  $i = 1, \dots, m$  objectives, determine their respective weights  $w_i$ , (2) For each objective  $i$ , compare the  $j = 1, \dots, n$  alternatives and determine their weights  $w_{ij}$  with respect to objective  $i$ , and (3) Determine the final (global) alternative weights (priorities)  $W_j$  with respect to all the objectives by  $W_j = w_{1j}w_1 + w_{2j}w_2 + \dots + w_{mj}w_m$ . The alternatives are then ordered by the  $W_j$ , with the most preferred alternative having the largest  $W_j$ . The various decision methodologies (AHP, Electre, Multi-Attribute Utility Theory) are differentiated by the way they determine the objective and alternative weights, as prescribed by each one's axiomatic or rule-based structure. The general validity of the AHP, and the confidence placed in its ability to resolve multi-objective decision situations, is based on the many thousands of diverse applications in which the AHP results were accepted and used by the cognizant decision makers, Saaty (1994b).

It is our belief that the real essence of the AHP is not generally understood. The AHP is more than just a methodology for choice situations. It is not just another analysis tool. The best way we can explain the AHP is to describe its three basic functions: (1) structuring complexity, (2) measuring on a ratio scale, and (3) synthesizing. We also discuss some of the

controversy about the AHP that has appeared in the academic literature. Saaty (1980) and Forman and Selly (1999).

In the late 1960's, Thomas L. Saaty, an operational research pioneer, was directing research projects for the Arms Control and Disarmament Agency at the U.S. Department of State. Saaty's research agenda, and very generous budget, enabled him to recruit some of the world's leading game and utility theorists and economists. In spite of the talents of the people recruited (three members of the team, Gerard Debreu, John Harsanyi, and Reinhard Selten, have since won the Nobel Prize), Saaty was disappointed in the results of the team's efforts. Saaty (1996).

Years later, while teaching at the Wharton School, Saaty was still troubled by the apparent lack of a practical systematic approach for priority setting and decision making. He was thus motivated to develop a simple way to help DMs to make complex decisions. The result was the Analytic Hierarchy Process. There is ample evidence that the power and simplicity of the AHP has led to its widespread usage throughout the world. In addition to the popular Expert Choice software, there have been several other commercial implementations of the AHP.

The American Society for Testing and Materials (ASTM) has adopted the AHP as standard practice for multi-attribute decision analysis of investments related to buildings and building systems (ASTM Designation E: 1765-95 "Standard Practice for Applying Analytical Hierarchy Process (AHP) to Multi-attribute Decision Analysis of Investments Related to

Buildings and Building Systems). It is used extensively in organizations that have carefully investigated the AHP's theoretical underpinnings, such as the Central Intelligence Agency.

An understanding of the AHP's three primary functions, structuring complexity, measurement, and synthesis -- helps one to understand why the AHP should be considered as a general methodology that can be applied to a wide variety of applications.

### **Structuring Complexity**

Saaty sought a simple way to deal with complexity. He found one common theme in the way humans deal with complexity, that is, the hierarchical structuring of complexity into homogeneous clusters of factors. Others have also observed the importance of hierarchical structuring.

AHP is a multi-criteria decision method that uses hierarchical structures to solve complicated, unstructured decision problems, especially in situations where there are important qualitative aspects that must be considered in conjunction with various measurable quantitative factors. Applications of AHP include:

1. Developing a business performance evaluation system (Lee, Kwak, and Han 1995).
2. Making strategic decision about equipment replacement (Oeltjenbruns, Lolarik, and Schandi-Kirschner 1995)

3. Choosing manufacturing plant layout (Abdul-Hamid, Kochhar , and Khan 1999).
4. Making management decision about continuous improvement processes (Labib and Shah, 2001).
5. Determining key capabilities of a firm (Hafeez, Zahng, and Malak 2002).
6. Selecting next-generation manufacturing (Alvi and Labib 2003).
7. Developing a design strategy for a re-configurable manufacturing system (Abide and Labib 2003).

AHP has been demonstrated as a powerful and useful method for assisting managers with complicated and difficult decisions. AHP is founded on the following set of axioms for deriving a scale from fundamental measurements and for hierarchical composition (Saaty 1986).

#### Axiom 1: Reciprocal

If element A is  $x$  times more important than element B, then element B is  $1/x$  times as important then elements A.

#### Axiom 2: Homogeneity

Only comparable elements are compared. Homogeneity is essential for comparing similar things, as errors in judgment become large when comparing widely disparate elements.

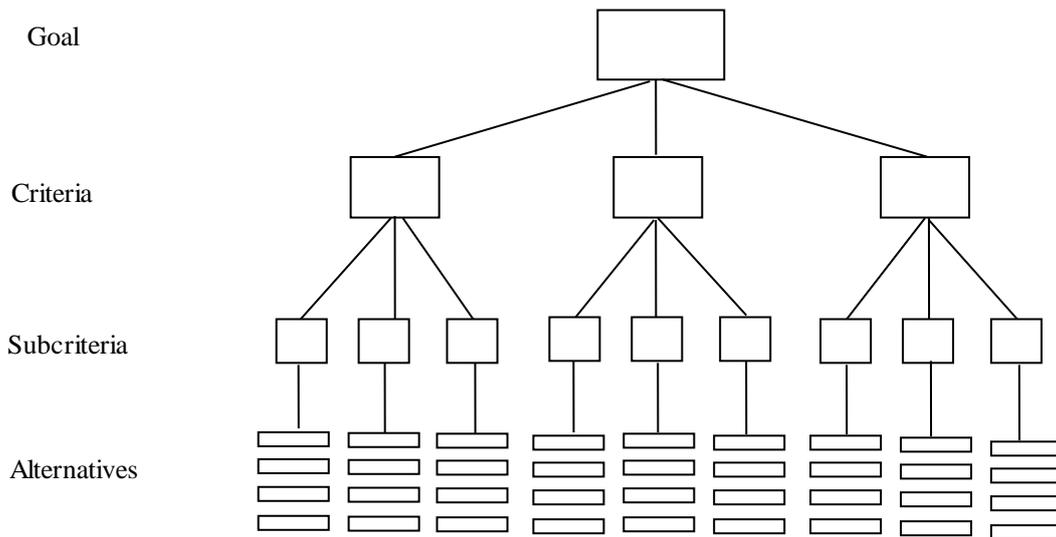
**Axiom 3: Independence**

The relative importance of elements at any level does not depend on what elements are included at a lower level.

**Axiom 4: Expectation**

The hierarchy must be complete and include all the criteria and alternatives in the subject being studied. No criteria and alternatives are left out and no excess criteria and alternatives are included.

The AHP method consists of three levels of hierarchy. The first hierarchy level is the goal of the decision making, the second level of hierarchy is how each of the existing criteria contributes to the goal achievement, and the last level of hierarchy is to find out how each of the alternatives contributes to each of the criteria.



**Figure (2-3):** AHP hierarchy Levels.

Source: (s.scribd.com/doc/2908406/Modul-6-Analytic-Hierarchy-Process/21 Juni 2009).

Taylor (2002: 379) explains that the steps in decision making by using the AHP method are as follows:

- 1) Establishing *Pairwise Comparison Matrix* for each decision alternative to each criteria.
- 2) *Synthesization*.
- 3) Establishing *Pairwise Comparison Matrix* for each criteria.
- 4) Establishing *the Normalized Matrix*.
- 5) Establishing *the Preference Vector*.
- 6) Calculating overall value for each decision alternative
- 7) Determining the rank of alternatives according to the value acquired in the previous step.

### **Measurement on a Ratio Scale**

According to Stevens (1946), there are four scales of measurement. The scales, ranging from lowest to highest in terms of properties, are nominal, ordinal, interval, and ratio. Each scale has all of the properties (both meaning and statistical) of the levels above, plus additional ones. For example, a ratio measure has ratio, interval, ordinal and nominal properties. An interval measure does not have ratio properties, but does have interval, ordinal and nominal properties. Ratio measure is necessary to represent proportion and is fundamental to physical measurement. This recognition,

plus a need to have a mathematically correct, axiomatic-based methodology, caused Saaty to use paired comparisons of the hierarchical factors to derive (rather than assign) ratio-scale measures that can be interpreted as final ranking priorities (weights).

Any hierarchical-based methodology must use ratio-scale priorities for elements above the lowest level of the hierarchy. This is necessary because the priorities (or weights) of the elements at any level of the hierarchy are determined by multiplying the priorities of the elements in that level by the priorities of the parent element. Since the product of two interval-level measures is mathematically meaningless, ratio scales are required for this multiplication. Since, the AHP utilizes ratio scales for even the lowest level of the hierarchy (the alternatives in a choice model), the resulting priorities for alternatives in an AHP model will be ratio-scale measures. This is particularly important if the priorities are to be used not only in choice applications, but for other types of applications such as forecasting and resource allocation.

The decision maker can express his preference between each pair of elements verbally as equally important, moderately more important, strongly more important, very strongly more important, and extremely more important.

These descriptive preferences would then be translated into numerical values 1,3,5,7,9 respectively with 2,4,6, and 8 as intermediate values for comparisons between two successive qualitative judgments. Reciprocals of

these values are used for the corresponding transposed judgments. Table (2-2) shows the comparison scale used by AHP.

**Table (2-1): AHP fundamental scale**

<b>Intensity of Importance</b>	<b>Definition</b>	<b>Explanation</b>
1	Equal Importance	Two activities contribute equally to the objective
3	Moderate Importance	Experience and judgment slightly favor one activity over another
5	Strong Importance	Experience and judgment strongly favor one activity over another
7	Very Strong Importance	An activity is favored very strongly over another; its dominance demonstrated in practice.
9	Extreme Importance	The evidence favoring one activity over another is of the highest possible order of affirmation
2, 4, 6, 8	For compromise between the above values	Sometimes one needs to interpolate a compromise judgment numerically because there is no good word to describe it.

Finally, all the comparisons are synthesized to rank the alternatives. The output of AHP is a prioritized ranking of the decision alternatives based on the overall preferences expressed by the decision maker. Sensitivity analysis is used to investigate the impact of changing the priorities of the criteria on the final outcome.

**Synthesis.**

Analytic, the first word in AHP's name, means separating a material or abstract entity into its constituent elements. In contrast, synthesis involves putting together or combining parts into a whole. Complex decisions or forecasts or resource allocations often involve too many elements for humans to synthesize intuitively. Needed is a way to synthesize over many dimensions. Although the AHP's hierarchical structure does facilitate analysis, an equally important function is the AHP's ability to measure and *synthesize* the multitude of factors in a hierarchy. We know of no other methodology that facilitates synthesis as does the AHP.

**Decision Making in Groups.**

According to Taylor III (2002: 378), besides being able to be used for the purpose of personal decision making, the AHP method can also be used for group decision making. The first way to make group decision making is by making consensually among the group members to acquire a single agreement. The second way is by filling the questionnaire. The result of the questionnaire is analysed by using the AHP method, and then the Consistency Ratio is calculated in order to get the final result.

## **Chapter 3**

### **Strategy Formulation**

This chapter reviews Paltel Group vision, mission, challenges, analysis of the current situation, analyzing internal and external factors to formulate suitable strategies that drive Group's to shield them as a market leader in Palestine.

#### **3.1 Paltel Group Current Situation.**

Paltel Group started its operations in Palestine in 1997 with Paltel, the public shareholding company. The group provides state of the art services to the Palestinian end user. Its variety of services include: local and international fixed telephony services, internet, data communications, mobile services and next generation services. Paltel Group has proved positive performance indicators all through its previous years of operation. This reality has enabled the Group to implement its management plans and operational guidelines in line with the best practices and industry trends among its global peers, in an increasing competitive landscape such as the Palestinian market. The accumulating positive operational results have been accompanied by a significant reduction in operational expenses in favor of an increase in operating profits and revenues. The consolidated net revenues of Palestine Telecommunications Company (Paltel) have increased by 2.6% to reach US\$ 529 million during 2013 compared with US\$ 516 million the same period of last year. Additionally, gross profit increased by 7.1% to reach US\$ 428 million as end of 2013. Moreover, the

consolidated net profit reached US\$ 129 million by the end of 2013 compared with US\$ 116 million by the end of 2012, increasing by 11.8%. Accordingly, earnings per share increased to reach US\$ 0.98 by end of 2013 compared to US\$ 0.88 end of 2012.

The consolidated operating income reached US\$ 171 million by the end of 2013 compared with US\$ 158 million by the end of 2012, increasing by 8.0%. Concerning the different operating segments, the Data and fixed segments have recorded an increase in revenues by 41.1% and 7.9%, respectively, compared to 2012; whereas the revenues generated by Mobile and Media segments have decreased compared to 2012. Additionally, Earnings before Interest, Tax, Depreciation & Amortization - EBITDA increased by 7.1% compared to end of 2012 to reach US\$ 231 million by end of 2013. (PALTEL annual report, 2008-2013).

### **Group Companies.**

- Palestine Telecommunications Company (Paltel) which provides fixed line, internet access via BSA and other value-added services.
- Palestine Cellular Communications Company (Jawwal) the first mobile operator in Palestine.
- Hadara Technology Investment Company the biggest internet service provider in Palestine.

- Reach for Communications Services Company the first contact center in Palestine.
- Palmedia for Multimedia Services Company the media arm of Paltel Group.
- Hulul IT Company the IT arm of Paltel Group.

Paltel Group maintained its leadership among providers of telecommunications and digital services in the Palestinian market, as evidenced by the positive growth indicators across all service lines: Growth of active Lines in the fixed line operations of Paltel to be 403 thousand at the end of 2013 growing by 1.7%. This growth was induced by a series of concerted and intensive commercial campaigns aimed at driving demand for fixed line services. Average revenue per user (ARPU) decreased from JOD13.6 at the end of 2012 to JOD13.4 at the end of 2013, as a result of the intensive campaigns.

Growth in ADSL Lines in the data services grew from 185 thousand customers at the end of 2012 to 213 thousand customers at the end of 2013 achieving a 14.9% growth rate in yet another competitive landscape.

Growth in the number of subscribers in mobile operator Jawwal from 2.58 M customers at the end of 2012 to 2.63 M customers at the end of 2013 achieving a 1.9% growth rate despite the illegal competition in the Palestinian market. ARPU dropped from JD 9.2 per month at the end of

2012 to JD 8.8 at the end of 2013 due to the growth in subscribers' base and the socioeconomic pressures. (PALTEL annual report, 2008-2013).

### **3.2 Current Performance Management in Paltel Group.**

Paltel Group has implemented business scorecard approach to manage both financial and non-financial perspectives due to the increase in complexity of systems and organizational structures and continuously changing external factors while rapidly expanding its business globally through acquisitions, joint-ventures, and partnerships. Its key four strategies are clearly developed in line with the vision and its own environments, and they are definitely decomposed into each of strategic objectives. Relevant KPIs have been subsequently defined and reported both internally and externally. However, most of measures are associated with the financial perspective and also the absolute values and some other KPIs like ratios not measure in appropriate way. In addition, most of strategic not communicated and aligned with strategies and the absentees for monitoring and controlling for the KPIs and set the suitable weight for each strategy and KPI, Paltel Group does not define clearly the level of local stakeholder involvement in the performance measurement. Moreover, Paltel Group has many documents describing business processes and procedures on a detailed level but processes are not centralized and distributed that affect missing company-wide management of business processes that combined with a structured approach for updates and continuous improvement is missing.

### **3.3 Strategic Analysis for External and Internal Factors Vision.**

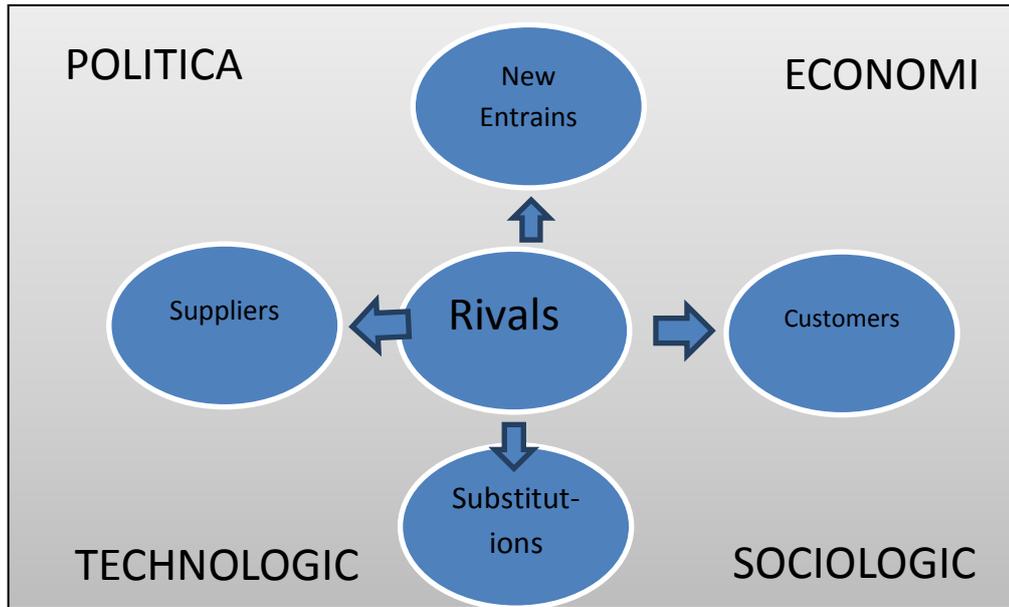
As a market leader in Palestine, we are committed to being the customers' choice provider for state-of-the-art communication services while staying true to our core values, adopting pioneering business practices, and progressing towards becoming a distinguished player in the region.

#### **Mission.**

To enhance and inspire the innovative environment of our society by building a modern digital Palestine connected to the World.

#### **3.3.1 External Environment.**

The external environments significantly have an impact on the company strategic management model. According to Pearce and Robinson (2009), the external environment is divided into Economical, Technological, Social, Political (PEST) and Porter five forces model as shown in Figure (3-1), Paltel Group is facing these factors as discussed in the following discussion.



**Figure (3-1):** External Environment Assessment

Source: Adopted by researcher According to Pearce and Robinson 2009

## **A. PEST Analysis.**

### **1. Economic:**

Telecommunication industry is booming and the world wide economy is growing, but the economic situation in Palestine is terrible due to the occupation and the political division between West Bank and Gaza. The incomes and salaries are low in Palestine; unemployment is high, and no spending available for non-necessary goods and services. Inflation rate is high and the average household income is also stable, this leads people not to draw attention to luxury goods and services, and to be more aware about their spending. The unemployment rate is high and the discretionary income is stable, this lead the Palestinians to be hesitated to search for new services in order to save their money for a more valuable and necessary goods and services. Possibility of increase in foreign investments in the

Palestinian market is diminishing. The immigration of highly-skilled employees and expertise out of Palestine increases. The obstacles of the Israeli governments regarding importing new equipment and new technologies licenses also worsen the economic situation in Palestine.

## **2. Technological:**

There was no government spending for R&D in telecommunication filed. Paltel Group uses and implements new technologies that guarantee safety and high quality services for its customers. ERP systems were purchased and implemented in the group such as integrated Billing/CRM solutions. The group call center systems were expanded to satisfy customer's needs 24 hour a day with high security standards. Computer and communications technologies enabled Paltel Group to compete effectively against larger rivals (Israeli illegal companies), as well the new entrant to the Palestinian mobile sector market. Telecommunication industry is essential and very important in all fields in the Palestinian market. Frequencies for cellular networks are highly-related to political and legal power. Improving and supporting Paltel Group channels and quality control on services provided through these channel network. Paltel Group is making huge investments in systems and cellular network.

## **3. Political/Legal:**

The political situation was and is still terrible and there was no stability for the government. Lack of governmental power allows many Israeli

companies to operate in the Palestinian market illegally. Israeli forces forbid Paltel Group from expanding its network in the areas out of Palestinian National Authorities control such as C areas. This affects Paltel Group's capacity and quality of services out of C areas. But Paltel Group is still struggling to do its best to satisfy customers' needs where ever they are. Israeli forces forbid the group from inserting BSCs and MSCs (switches) to expand its network.

#### **4. Socio-Cultural:**

The lifestyle has been changed where it is a necessity for people to hold cellular mobile to facilitate life, and to use mobile services to do their work effectively and efficiently. The variety of services provided through mobile network increases the importance of mobiles in the society. The strong social relationships among the Palestinians expands the use of mobiles. The Israeli occupation and the unsafe environment Palestinians in live increase the use of mobile services. The increasing concern of health and environmental issues from the government, NGO's, communities, and every citizen, makes it a vital goal for every company working in telecommunication industry. Paltel Group like any other company believes in societal responsibility worked and is still working to raise the awareness of the Palestinian community concerning health hazards resulting from wrong environmental practices. In this field, Paltel Group organize and finance several campaigns, workshops, and TV programs.

## **B. Industry Analysis: Analyzing the Task Environment.**

### **1. Threat of New Entrants:**

Product differentiation: Paltel Group has variety of services and packages offers which satisfy all customer needs, and has its large and loyal customer base during its operation life. The capital requirement in Telecommunication industry needs high capital requirements. In addition to that the Palestinian market is not attractive since it is small compared to other markets with small population. After the entrant of the second operator (Al Wataniya Mobile), the Palestinian cellular market seems to be less attractive for a third operator, especially after the huge difficulties faced (Al Wataniya Mobile) to start its works in the West Bank, and it is still not able to work in Gaza. The switching cost: the switching cost from one mobile operator to another seems to be a high one, and since the mobile usage penetration in the Palestinian society is already high, the second operator will face a lot of difficulties to acquire customers.

### **2. Rivalry among Existing Firms:**

The second operator started its work in the Palestinian market since the beginning of 2009. There are four Israeli illegal competitors in the Palestinian market. Paltel Company is the sole license holder and it is providing fixed line service. There is competition in Internet Service Provider's (ISP's) between Hadara and four main providers in ADSL services. Amount of fixed Cost: it will be difficult for third operator to

enter the market due to the large cost, and the existing competitor suffers from high cost of license and fixed cost, and here is no encouragement from the government for investment in ICT industry. The competition between Jawwal and the competitor is fierce; the Wataniya mobile's market share in 2012 is 27%. Product and Service Characteristics: Paltel Group is keeping a distance between its position and the competitor position, through the marketing campaigns, the network infrastructure, served area of Palestine which made its service a unique one.

### **3. Threat of Substitute Products:**

The emergence of the smart phones makes it possible for customers to use Voice over IP (VoIP) services to make national and international calls. Customers may switch to Al Wataniya Mobile services if the later starts to deliver superior services as Jawwal's services in terms of quality or costs. In a business like telecommunication industry, competitors have to compete based on the service and prices they offer. The operation of the WiFi companies in the West Bank like the Global Come Company affect 3G technology investment as it is expected to enter the Palestinian market in the close future. Paltel Group tries to make long-term contracts and commitments with its customers, especially with its corporate customers, through strong promotions and loyalty programs and free handsets as well as free air time promotions.

#### **4. Bargaining Power of Buyers:**

Most of Paltel Group customers are committed and loyal for Paltel Group as a result of the promotion systems offers, and free services and handsets related to customers different segmentations and packages. Paltel Group's prices are prospected to be lower than the competitor's prices because of its existing strong financial position which makes it hard for its customers to switch to the other competitor. The number of customers of Paltel Group is larger than any other existing competitors, they are estimated to 3,250,000 customers and this enabled them to conform a bargaining power.

#### **5. Bargaining Power of Suppliers:**

Paltel Group has its unique and committed chain of suppliers through long-term agreements with them and deals with high-positioned national and international suppliers. The telecommunication industry watches huge competition between strong vendors, which gives Paltel Group the option to choose from them. Since most of Paltel Group equipment and software are provided by Ericsson, some of them are not compatible with other company's equipment and software, which gives Ericsson bargaining power in some of the deals.

Table (3-1) shows External Factor Evaluation (EFE) Matrix which allows researcher to summarize and evaluate economic, social, political, technological, and competitive information. EFE results is done by obtaining opinions from Performance Management committee (PMC) in

order to evaluate the opportunities and threats affecting Patel Group. We gathered economic, social, political, technological, and competitive information to develop our key external factors. These factors include 5 key external opportunities and 5 key external threats, all of which were assigned a weight and rating in order to develop a weighted score which are accumulated to determine Paltel Group external position in the industry. A weight is given to indicate the relative importance of each factor to being successful in the ICT industry. A rate is assigned to each factor to indicate how effectively Paltel Group current strategies respond to the factor. The rates are evaluated on scale of 1 through 4, where 4 = their response is superior, 3 = their response is above average, 2 = their response is average, 1 = their response is poor. The rates are based by the company whereas the weights are based on the industry. Strategic management: concepts and cases / Fred R. David.—13th ed, (2011).

**Table (3-1): External Factors Evaluation (EFE) Matrix**

<b>External Strategic Factors</b>	<b>Weights</b>	<b>Rating</b>	<b>Weighted</b>
<b>Opportunities</b>			
The new technology and facilities that can be supported to enhance broadband and network	0.15	3	<b>0.45</b>
The increasing number of youth segment in the Palestinian market, and the passion for technology	0.05	4	<b>0.20</b>
The trend towards use data services through different segments	0.10	3	<b>0.30</b>
Increase customers' knowledge in new technologies	0.03	2	<b>0.06</b>
Strangulation the illegal competition from the Israeli operators in the Palestinian market.	0.05	3	<b>0.15</b>
<b>Threats</b>			
Smartphones penetration and applications supported VOIP services	0.25	4	<b>1.00</b>
Forces from over-the-to to launch mobile services	0.06	4	<b>0.24</b>
Customers purchasing power	0.13	3	<b>0.39</b>
Lack of security in the Palestinian market	0.08	2	<b>0.16</b>
The continuous bad economic and political situations	0.10	3	<b>0.3</b>
<b>Total Score</b>	<b><u>1.00</u></b>		<b><u>3.25</u></b>

### 3.3.2 Internal Environment.

#### A. Corporate Structure:

A significant milestone in Paltel Group history is re-structuring of the company and launching of diversification integrated service lines, the

company today is made up of three core business areas that cover, fixed telephony mobile and data services. The goal is to create an economic entity that would be competitive locally, regionally and internationally. In its current situation Paltel Group leverages its strength in the sector of communication and information technology in Palestine in partnership and cooperation with other stakeholders in a sector that is regarded as one of fastest growing sectors on the national scale. Paltel Group has taken upon itself as part of community development to create incentive for companies operating in the IT sector to encourage them to understand projects that are important for sector growth.

### **B. Corporate Culture:**

There is a well-defined or emerging culture composed of shared beliefs, expectations, and values among Paltel Group environment and employees. They are committed to ethical standards in operations. Inspired by the value system of our society; constituting the basis for conducting work and future direction. They strive to preserve trust between shareholders and company by employing integrity and honesty in all operations, a reality that helps them in supporting their business plans, while moving forward in confidence to preserve shareholders value. Paltel Group has its own culture and strategy toward society to make people consistent with its culture and values so increasing customer's loyalty and commitment, for example, Paltel Group employees maintain the formal dresses to show professional picture in serving customers, however it keeps Thursday as a casual day.

Paltel Group has its organized work and planning process. Paltel Group's culture is seen from other companies in Palestine as a leader in the Palestinian market. Paltel Group has an environmental culture towards health and clean environment, at the environmental level, Jawwal attained the ISO 14001 certificate, being the first in the Middle East and the fourth in the world to attain such international certificate. This is an important indicator of keen commitment to global environmental policies and demonstrates that applies the best technical standards throughout its operations. They always strive to learn, benefiting from local and international experiences in order to provide high quality services, while innovating creative solutions and services based on solid reading of the future of technology around the globe. Work in earnest to develop the internal skills of all employees in order to contribute collectively in their efforts to build the future of technology in Palestine while servicing their subscribers, shareholders and the community at large. They do this by constantly investing in Palestinian youth.

### **C. Corporate Resources:**

#### **1. Marketing.**

Current marketing objectives are: To increase customer base in fixed, mobile and data using special bundles that achieve customer needs. Bundling sales (multiple products and promotions at the same time). Increase penetration rate to extend its sales to rural and upscale areas, where Paltel Group coverage is not available. Retain customers using

customized programs, incentives to decrease churn rate. Enhance customer segmentation methodology to attain all customer needs. Remain average revenue per subscriber ARPU. Clear marketing analysis and feedback about the results. The Paltel Group brand is perceived as one of the most recognizable local telecommunications brands and the company has capitalized on the brand recognition to enter into new markets. Intensive and continuous marketing campaigns to increase the subscribers base to exceed the 3,250,000.

## **2. Finance.**

Paltel Group's financial performances are analyzed by utilizing the liquidity, profitability and debt management ratios for the last six years (2008-2013), compared to the industry standard and benchmarking with telecommunication industry in the region.

### **Consolidated Revenue.**

The consolidated net revenues of the Group has growth by 2.6% to reach JOD 375.3 million for the year of 2013 compared with JOD 365.9 million the same period of last year. In 2010, consolidated operational revenues for Paltel Group increased by 7.88% to reach JD 339.9 million by year end 2010 in comparison with JD 315.1 million in 2009. This comes as a direct result of the company's growth in operational revenues. In 2008, Net revenue has grown by 28.7% to reach JOD291.1M compared with JOD226.2M in 2007 which is greatly attributable to the growth in all

operating segments of business. Grown by 28.7% to reach JOD291.1M compared with JOD226.2M in 2007 which is greatly attributable to the growth in all operating segments of business. (PALTEL annual report, 2008-2013)

### **Consolidated EBITDA.**

The consolidated EBITDA of the Company Increased by 7.1% reaching JOD 163.9 million at the end of 2013 compared with JOD 153 million at the end of 2012. EBITDA had increased by 6.08% reaching JD 143.3 million at the end of 2010 where it reached JD 135.1 million at the end of 2009. This increase is credited to improvements in operational performance of the company triggered by the start of implementation of the new strategy which is focused on consolidating the company's various activities while outsourcing secondary services to vendors.

The consolidated EBITDA of the Company grew by 5.36% to reach JD 135.11 million at the end of 2009 compared with JD 128.24 million at the end of 2008. This growth is attributable to the growth rate in Company's consolidated revenues as well as the decrease in the operating expenses by 1.36%. (PALTEL annual report, 2008-2013).

### **Consolidated Operating Profit (EBIT).**

The consolidated operating profit amounted to JOD 121 million by the end of 2013 compared with JOD 112.1 million (31% operating profit margin) by the end of 2012 compared with JOD 127.4 million (34% operating profit

margin) by the end of 2011. EBIT decreased by 12.1% mainly due to the decline in operating revenues by 1.3% and the growth in operating expenses by 6.6%. The latter was affected by the increase in depreciation, advertising and Gaza generators' fuel expenses.

Operational profits for the company reached value of JD 111.8 million by year end 2010 in comparison with JD104.4 million at end of 2009 with an increase of 7.09%. This increase comes as a result of the increase in gross profit in an absolute value higher than the increase in operational and administrative expenses; where gross income has increased by JD 21.8 million in comparison with an increase in expenses of JD 14.4 million. (PALTEL annual report, 2008-2013).

### **Consolidated Net Income, EPS and Dividends.**

The consolidated net income increased by 11.8% to stand at JOD 91.8 million at the end of 2013 compared with JOD 82.1 million at the end of 2012, compared with JOD 90.7 million at the end of 2011. The decline is mainly attributable to the devaluation of the Israeli Shekel and as a direct result to the company's decision to postpone the 50% tax exemption for two years; Paltel is entitled for this exemption as part of the Investment Encouragement Law in Palestine. Consequently, the company started paying 20% income tax this year compared to 7.5% the year before. More on the latter, the tax authorities in Palestine have declared a new tax schema and raised the corporate tax rate from 15% to 20% starting January 2012. Excluding tax rate/regime difference between the two periods, the

consolidated net income before tax increased by 4.6% which better reflects the operational advancement and achievement of the Group.

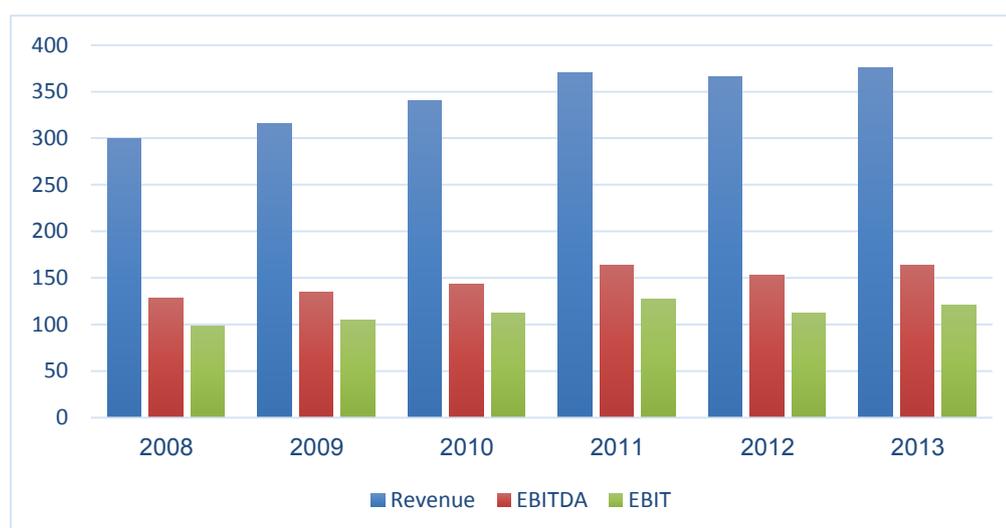
The earnings per share increased by 7.4% to reach JOD 0.698 by the end of 2013 compared to JOD 0.624 by the end of 2012, also earnings per share decreased to reach JOD 0.624 by the end of 2012 compared to JOD 0.689 by the end of 2011. In 2010, net profit has reached JD 86.3 million up by 22.75% compared to 2009, where it was JD70.3 million.

Net income witnessed a growth rate of 36% to reach JOD89.2m compared with JOD65.5m in 2007. Owners' equity grew by 20% to reach JOD332.8m compared with JOD277.3m in 2007 as a result of impressive operating performance, which reflected itself positively on the growing asset base of the company, which grew by 9.5% to reach JOD461.9m compared with JOD421.6m in 2007, at the same time total liabilities decreased by 10% to reach JOD129.2m compared with JOD144.3m in 2007. (PALTEL annual report, 2008-2013).

Table (3-2) and Figure (3-2) shows Consolidated Revenue, EBITDA, EPIT and Net Income in the period of 2008-2013.

**Table (3-2): Consolidated Revenue, EBITDA, EPIT and Net Income (JOD).**

<b>Consolidated</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Revenue	299.06	315.09	339.9	370	365.9	375.3
EBITDA	128.24	135.11	143	164	153	163.9
EBIT	98.44	104.36	111.8	127.4	112.1	121
Net Income	89.2	70.34	86.3	90.7	82.1	91.8



**Figure (3-2): Consolidated Revenue, EBITDA, EPIT and Net Income (JOD).**

### **Total Assets.**

Total assets of the Company grew by 7.4% from JOD 617 million at the end of 2012 to JOD 666 million at the end of 2013, and grew by 7.3% from JOD 575 million at the end of 2011 to JOD 617 million at the end of 2012. The growth was driven by the increase in non-current assets balance by

13.6% reaching JOD 434 million by end of 2012 compared to JOD 382 million at the end of 2011. The growth in the noncurrent part of the assets is mainly attributed to the increase in the balances of “Available for Sale Investments” and “Other Financial Assets” accounts by a total of JOD 65.5 million during the year. On the other hand, current assets declined by 5.4% to reach JOD 182 million. (PALTEL annual report, 2008-2013).

### **Total Liabilities.**

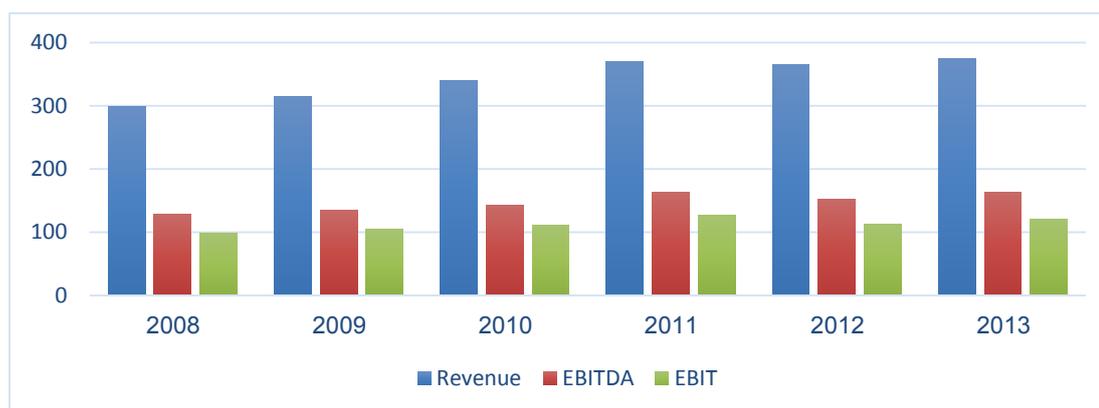
The Company’s total liabilities grew by 3.4% as of end of 2013 reaching JOD 163.5 million compared with JOD 158 million on December 31, 2012, and grew by 8.1% as of end of 2012 reaching JOD 158 million compared with JOD 146 million on December 31, 2011. This is attributed to the increase of the short-term liabilities by JOD 23.0M (23.3% more than the balance of 2011). This is influenced by the increase in “Accounts Payables” and ”Other Current Liabilities” by a total of JOD 21.0 M, or an increase of 25.2% compared to their balances as end of 2011. The increase in accounts payables resulted from the increase in the license fees payables’ account as a result of the completion of the clearing process of the license fees against the advance payments made to the Palestinian Authority in previous periods. On the other hand, the company’s long-term liabilities have declined by JOD 11.1 million; a decrease of 23.5% compared to end of 2011 due to the decline of long-term loans by JOD 14.2 million at the end of 2012. (PALTEL annual report, 2008-2013).

### **Shareholders' Equity.**

The shareholders' equity witnessed a growth by 8.6% to reach JOD 502.5 million at the end of 2013 compared with JOD 459 million as on December 31, 2012, also achieve witnessed a growth by 7.0% to reach JOD 459 million at the end of 2012 compared with JOD 429 million as on December 31, 2011. This growth is attributed to the increase in retained earnings by 12% to reach JOD 280 million by end of 2012 compared with JOD 250 million at the end of 2011. (PALTEL annual report, 2008-2013)Table (3-3) and Figure (3-3) shows Consolidated Total Assets, Total Liabilities and Shareholder's Equity in the period of 2008-2013.

**Table (3-3): Consolidated Total Assets, Total Liabilities and Shareholder's Equity (JOD).**

	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Total Assets	299	315	551	575	617	666
Total Liabilities	129	180	160	146	158	163.5
Shareholders' Equity	170	135	391	429	459	502.5



**Figure (3-3):** Consolidated Total Assets, Total Liabilities and Shareholder's Equity (JOD).

### **Cash Flow.**

The net cash flows from operating activities increased by 13.2% for the year of 2013 to reach JOD 171.6 million compared with JOD 149 million the same period in 2012, also the net cash flows from operating activities decreased by 11.2% for the year of 2012 to reach JOD 149 million compared with JOD 168 million the same period in 2011. This decline is attributed to the drop in operating revenues and profit as well as the increase in the change in working capital, where the change was JOD 4.9 million in 2011, versus a change of JOD 16.6 million in the year 2012. It should be noted that the change in tax policies had a major effect on this item, as mentioned earlier. The net cash flows from investing activities reached (JOD 101 million) in 2012 compared to (JOD 106 million) in 2011; this decrease is mainly attributed to the drop in the value of capital expenditures "PPandE" and "Investments in Associates" by JOD 29.4 million and JOD 15.0 million respectively during the year of 2012 in comparison with the previous year, besides lending associate companies a

total of JOD 30.5 million during 2012.. (PALTEL annual report, 2008-2013).

Table (3-4) shows Consolidated Cash Flow in the period of 2008-2013.

**Table (3-4): Consolidated Cash Flow (JOD).**

	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Cash Flow	137	112	143	168	149	171.6

### **3. Research and Development (R&D).**

R&D in Paltel Groups taken several forms including continuous researches in the Palestinian market to identify customers' needs, continuous investment in R&D through various techniques, Also, continuous internal and external training programs for Group employees. Moreover, providing employees of access to various consulting reports, as use innovation programs to encourage staff to create new services.

### **4. Operations and Logistics.**

Paltel Group is able to continuously adapt advanced ICT which ensures that its customers are able to stay connected to the people and the information that are central to their lives – via voice, text, instant messaging, e-mail, music, communities, news, and applications both social and work related – whenever, wherever. Paltel Group has the largest geographic footprint in Palestine, its cover 98% of areas that offer service. It has extremely gained

economies of scale and scope to maximize cost efficiency and effectiveness. In addition, it can diversify business risks in response to the volatile and rapidly changing environments globally. Paltel Group working on develop operational capabilities to be align with international standards, identify outsourcing functions to enhance quality and effectiveness of services, extends sales to rural and upscale outlets areas where Paltel Group coverage is not available, manage and operate day to day activities effectively, and contract with international consultancy firms to assure cutting edge operation standards.

#### **5. Human Resources Management (HRM).**

Human Resources policies try to place the right men in the right place, Paltel Group's succeed to achieve high rates of employees' satisfaction, and use the advice of large specialized senior consultant companies in HR fields to implement retention plans for employees. Also, Paltel Group's provides competitive annual bonus plans and rewards based on objectives achievement.

#### **6. Information System.**

Paltel Group has driven the Group Technology initiative to achieve time-to-market and maintain cost efficiency. The company has managed and controlled group-wide projects to orchestrate the move toward significant coordination and identify and disseminate best practices to focus on expansion of service capacity while replicating business models across a

number of cities. The purpose of Group Technology will be to lead the implementation of standardized architecture for business process, information technology and network systems. The initiative has supported the third generation (3G) network rollout.

Table (3-5) shows summary step in conducting an internal strategic-management audit is to construct an Internal Factor Evaluation (IFE) Matrix. This strategy-formulation tool summarizes and evaluates the major strengths and weaknesses in the functional areas of Paltel Group, and it also provides a basis for identifying and evaluating relationships among those areas. A rate is assigned to each factor to indicate how effectively Paltel Group current strategies respond to the factor. The rates are evaluated on scale of 1 through 4, where 4 = their response is superior, 3 = their response is above average, 2 = their response is average, 1 = their response is poor. The rates are based by the company whereas the weights are based on the industry. Strategic management: concepts and cases / Fred R. David.— 13th ed, (2011).

**Table (3-5): Internal Factor Evaluation (IFE) Matrix.**

<b>Internal Strategic Factors</b>	<b>Weights</b>	<b>Rating</b>	<b>Weighted</b>
<b>Strengths</b>			
Developed, high-quality infrastructure and quality of service	0.13	4	<b>0.52</b>
High skilled and expertise team	0.12	4	<b>0.48</b>
Good rewards system include various packages and programs	0.09	3.5	<b>0.31</b>
Dominant and leader in the market.	0.11	3.8	<b>0.42</b>
Interest towards environment and health	0.05	3	<b>0.15</b>
<b>Weaknesses</b>			
Company Image as perceived by customers	0.15	3	<b>0.45</b>
Stressed relations with authorities.	0.10	3	<b>0.30</b>
Complex bureaucracy in logistics	0.05	2	<b>0.10</b>
High employees' turnover rate	0.10	2.5	<b>0.25</b>
Standardization of process and procedures	0.10	2.5	<b>0.25</b>
<b>Total Score</b>	<b><u>1.00</u></b>		<b><u>3.23</u></b>

### **3.4 Paltel Group Strategy Formulation.**

The information derived from EFE and IFE matrices provides basic input information for the matching and decision stage matrices, then by using Strengths-Weaknesses-Opportunities-Threats (SWOT) Matrix as it is an important matching tool that helps managers develop four types of strategies: SO (strengths-opportunities) Strategies, WO (weaknesses-opportunities) Strategies, ST (strengths-threats) Strategies, and WT (weaknesses-threats) Strategies. (Heinz Wehrich, 1982). Note in Table

(3-6) that the first, second, third, and fourth strategies are SO, WO, ST, and WT strategies, respectively.

SO Strategies use internal strengths to take advantage of external opportunities. Also, WO Strategies aim at improving internal weaknesses by taking advantage of external opportunities. Moreover, ST Strategies use strengths to avoid or reduce the impact of external threats. Furthermore, WT Strategies are defensive tactics directed at reducing internal weakness and avoiding external threats.

**Table (3-6): The Strengths-Weaknesses-Opportunities-Threats (SWOT) Matrix for Paltel Group.**

<p><b>Internal Factors</b></p> <p><b>External Factor</b></p>	<p><b>Strength (S)</b></p> <p><b>S1</b> Developed, high-quality infrastructure and quality of service</p> <p><b>S2</b> Experts employees</p> <p><b>S3</b> Various packages and programs</p> <p><b>S4</b> Dominant and leader in the market</p> <p><b>S5</b> Interest towards environment and health</p>	<p><b>Weaknesses (W)</b></p> <p><b>W1</b> Company Image as perceived by customers</p> <p><b>W2</b> Stressed relations with authorities</p> <p><b>W3</b> Complex bureaucracy in logistics</p> <p><b>W4</b> High employees' turnover rate</p>
<p><b>Opportunities (O)</b></p> <p><b>O1</b> The new technology and facilities that can be supported through mobiles network</p> <p><b>O2</b> The increasing number of youth segment in the Palestinian market</p> <p><b>O3</b> The trend towards use wireless and data services through mobiles</p> <p><b>O4</b> Increase customers' knowledge in new technologies</p> <p><b>O5</b> Strangulation the illegal competition from the Israeli operators in the Palestinian market.</p>	<p><b>SO Strategies</b></p> <ul style="list-style-type: none"> <li>• <b>(S2 O1)</b> Product development</li> <li>• <b>(S3 O4)</b> Market Penetration</li> <li>• <b>(S4 O5)</b> Capacity expansion</li> </ul>	<p><b>WO Strategies</b></p> <ul style="list-style-type: none"> <li>• <b>(W2 O5)</b> Exploit its available resources, and secure a niche in the industry.</li> <li>• <b>(W3 O1)</b> Maintain the highest levels of efficiency and productivity with optimum utilization of resources.</li> </ul>

<b>Threats (T)</b>	<b>ST Strategies</b>	<b>WT Strategies</b>
<p><b>T1</b> 2<sup>nd</sup> operator: Wataniya Mobile</p> <p><b>T2</b> The perception that mobile network causes Cancer</p> <p><b>T3</b> Customers Low Income</p> <p><b>T4</b> Lack of security in the Palestinian market</p> <p><b>T5</b> The continuous bad economic and political situations</p>	<ul style="list-style-type: none"> <li>• <b>(S4 T1)</b> Increase diversity in value added services</li> <li>• <b>(S5 T2)</b> Focus on the needs of various segments of society in line with the global technological development requirements in order to meet their expectations and interests.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>(W2 T1)</b> Keep benchmarking with operators in the region.</li> <li>• <b>(W4 T1)</b> provide high quality working environment</li> </ul>

Based on intensive analysis for internal, external and Porter five forces, Paltel Group sought to achieve its objectives by leading the telecommunications and Information Technology (IT) sector. In addition, the Group's commitment to develop its IT infrastructure and introduce the latest global technologies in the service lines; mobile, fixed, and ADSL services. The Group also worked on the development of value added services in order to satisfy all the subscribers' needs and desires. It also worked through its special offers to commensurate with the nature of its subscribers in order to maintain the subscribers base and increase their loyalty on one hand and attract new subscribers and to fulfill their needs on the other. The Group maintains core investment in the IT sector by enriching it with world-class experiences and expertise to remain the leader of this sector. Moreover, Paltel Group remains committed to building the future of technology in Palestine in an effort to place Palestine on the global digital map. Thus, the Group worked hard to enhance its technical

performance and broadband services and to provide the latest applications while maintaining the highest levels of security and privacy. In the same context, the Group continued its devotion towards the community and public sector by launching creative initiatives and sustainable development programs ranging from more widespread environmental technology and Internet access to computer literacy. In addition to its social responsibility, the Group has empowered marginalized groups in an aim to have them look ahead for a future filled with all the needed resources to sustain a decent life.

Accordingly, we can formulate the following strategies goals for Paltel Group:

- Continue leading the market of telecommunications and technology in Palestine, achieve growth in profitability and financial performance.
- Maintain the highest levels of efficiency and productivity with optimum utilization of resources and capabilities to achieve excellence in all services lines: Mobile, fixed, and internet/ADSL services.
- Increase diversity in value added services, keep up with the latest technological applications as well as foster local innovations and initiatives in the field of technology and its applications. Offer 3G services when acquiring the necessary frequencies.

- Focus on the needs of various segments of society in line with the global technological development requirements in order to meet their expectations and interests.
- Continue to develop and modernize the network to provide modern services and broadband services with the fastest and highest quality of service.
- Increase staff productivity and efficiency through attract and retain employees and provide high quality working environment.

## **Chapter 4**

### **Balance Scorecard and Strategy Mapping**

This chapter provides implementation for Balance Scorecard by describing four perspectives, involved in Key Performance Indicators, and proposed strategy map to link Paltel Group's BSC to its strategy.

#### **4.1 Balance Scorecard.**

Kaplan and Norton (1992) proposed the concept of the BSC. The BSC has been widely adopted in the evaluation of organizational performance from four perspectives: finance, customer, internal process, and learning and growth. Respectively, the essential principle of the BSC is that standard financial measures must be balanced with nonfinancial measures (Norton et al., 1997). Since the introduction of the BSC by Kaplan and Norton, a combination of financial and nonfinancial measures in a performance measurement system has been favorable for both profit and nonprofit organizations (Ballou, Heitger, and Tabor, 2003; Sinclair and Zairi, 2001). Likewise, Telecommunication industry can save a vast amount of time and money if they understand which measures are best suited to their needs (Davis and Albright, 2004; Littler et al., 2000). Intangible, nonfinancial measures can help lead organizations to administer performance effectively and forecast their future profitability. Norton et al. (1997) classified the advantages of the BSC into three aspects: communication and teamwork, commitment, and feedback and learning. The BSC enables senior

management to clarify vision, develop strategy, foster teamwork, and foster the commitment to a customer focus across the organization.

The benefits of using the BSC for telecommunication companies are as follows: (1) it provides a framework to assess and develop strategy, (2) it develops strategic objectives and performance measures to translate the group strategies into actions, (3) it provides a way to measure and monitor the performance of key performance drivers that can lead to the successful execution for the strategies, and (4) it is an effective tool to ensure continuous improvement in the systems and processes of the group (Frigo et al., 2000).

In summary, the BSC has been employed by many businesses to assess their performance across various aspects. It provides insight into business performance not only for managers who seek ways to improve performance but also for investors who want to gauge an organization's ongoing performance. However, studies of how to analyze causal relationships between evaluation criteria, distinguish influential factors, and create an effective mechanism for the establishment of a strategic implementation of evaluation criteria are scarce (Malina et al., 2007; Nørreklit, 2000, 2003).

## **4.2 Balance Scorecard in Paltel Group.**

Kaplan and Norton (1996) identified four steps in implementing a balanced scorecard. These are 1) clarifying and translating the vision and strategy, 2) communicating and linking, 3) planning and target setting, and 4) strategic

feedback and learning. The first step, clarifying and translating the vision and strategy, is generally accomplished in Strategy Formulation Chapter by analyze internal, external and porter five forces and proposed appropriate strategies. Communicating and linking done through formulating Performance Management Committee (PMC) to analyze four perspectives and proposed proper KPI's involved in each perspective and develop strategic map that visualizes overall strategy and this is described in this section. Strategic business unit determines measures for its own scorecard as part of the communicating and linking step. Unit managers consider both the overall group objectives and strategy and focus on the most important ones. Care should be taken, however, not to reduce lower-level data into meaningless ratios, all of these indicators submitted to PMC in order to set targets for each KPI, then feedback process will be through measurement system using Analytical Hierarchy Process (AHP) as illustrated in Chapter Five.

Performance Management Committee (PMC) in cooperation with consultancy firm and the researcher studied the current situation and select significant KPI's that affect overall performance and can be measured through information system in the group, and distribute these KPI's into each perspective of BSC. The following section describes each perspective and the KPI's:

### 4.2.1 Finance Perspective.

Financial metrics are very effective and critical measures to monitor business performance. It illustrates how the strategy, implementation and execution contribute to the “bottom line”, it summarizes the results of actions taken from the economic point of view. In our case, and based on relative research, benchmarking and consultation from leading firms in this field, we choose five main indicators that affect overall business performance from financial perspective, Paltel Group has a preference of the following performance measures over others:

#### **Average Revenue Per User (ARPU).**

ARPU is commonly calculated in standard mathematical fashion, by dividing the aggregate amount of revenue by the total number of users who provide that revenue. The group tracks ARPU to know its profit potential in broad terms. However, mobile phone companies also track ARPU by examining revenues brought in by customers’ incoming calls as compared to revenues generated by monthly or annual fees.

The formula for ARPU:

$$ARPU = \frac{\text{Aggregate Amount of Revenue}}{\text{Total Number of Subscribers}} \quad (1)$$

**Return On assets (ROA).**

An indicator of how profitable of a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets, ROA is displayed as a percentage. ROA tells PMC what earnings were generated from invested capital (assets).

The formula for Return on Assets is:

$$ROA = \frac{\textit{Net Income}}{\textit{Total assets}} \quad (2)$$

**Return On Equity (ROE).**

The amount of net income returned as a percentage of shareholders equity. ROE measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

Net income is for the full fiscal year (before dividends paid to common stock holders but after dividends to preferred stock.) Shareholder's equity does not include preferred shares.

ROE is expressed as a percentage and calculated as:

$$ROE = \frac{\textit{Net Income}}{\textit{Shareholder's Equity}} \quad (3)$$

**Net Profit Margin (NPM).**

The net profit margin formula looks at how much of a company's revenues are kept as net income. The net profit margin is generally expressed as a percentage. Both net income and revenues can be found on a company's income statement.

The formula for Net Profit Margin is:

$$NPM = \frac{\text{Net Income}}{\text{Sales Revenue}} \quad (4)$$

**Current Ratio (CR).**

A liquidity ratio that measures a company's ability to pay short-term obligations. The higher the current ratio, the more capable the company is of paying its obligations. A ratio under 1 suggests that the company would be unable to pay off its obligations if they came due at that point. While this shows the company is not in good financial health, it does not necessarily mean that it will go bankrupt - as there are many ways to access financing - but it is definitely not a good sign. The current ratio can give a sense of the efficiency of a company's operating cycle or its ability to turn its product into cash. The Current Ratio formula is

$$CR = \frac{\text{Currents Assets}}{\text{Current Liabilities}} \quad (5)$$

#### **4.2.2 Customer Perspective.**

Since nowadays being customer oriented is becoming more and more important for business success, the purpose of defining customer-related KPIs is to get information about business performance from customers' point of view in order to improve their business. From a well-formulated and implemented strategy, the generic measures include customer satisfaction, customer churn, number of subscribers, penetration rate and minutes of use. These indicators are the most important to measure overall customer perspective. Telecommunication industry has evolved and its customers use their mobile phones not only to call but also to access the internet, watch television, play music and take pictures. Paltel Group has focused on customer value enhancement to maintain their loyalty and trust. The following indicators are significant for Paltel Group's customer perspective:

##### **Customers' Churn Rate.**

Churn rate is the proportion of customers that leaves the Group during a certain period of time (usually one year). This indicates the ability of the Group to retain the customers, and reflects the customer satisfaction to the Group. Churn rate is an important consideration in the telecommunication industry as several companies are competing for customers, making it easy for people to transfer from one operator to another. The Customer Churn formula is:

$$\text{Customer Churn} = \frac{\text{Number of Customers Leave}}{\text{Time (usually one year)}} \quad (6)$$

### **Customer Satisfaction Index .**

This indicator indicates the overall satisfaction of the customers, measure of how services supplied by Paltel Group meet or exceed customer expectation. The number is acquired by either Paltel Group own market investigation or surveys from a third party. The Customer Satisfaction Index is:

$$\text{Customer Satisfaction Index} = \frac{\text{Percentage of Total Customers}}{\text{Services Parameters}} \quad (7)$$

### **Number of Subscribers.**

Number of subscribers can not only show market share and growth in market share, but also can show the customer satisfaction. Because nowadays there are two telecommunication companies launched the service in Palestine. If the customers do not satisfy the service which was offered by the company, they can easily change to another. So in this way the number of subscribers also shows the capability that the group can keep or attract the customers by offering better products and services.

**Penetration Rate.**

Penetration rate is a measurement that indicates the company's occupancy of the market. The larger penetration rate, the larger company shares in the market. However, from another point of view, it also indicates the market development potential. The smaller penetration rate indicates the larger development space in the market.

**Average Minutes of Usage per User per Month (MOU).**

MOU indicates the average length of time that the subscriber uses the voice service. Voice service is the basic service that a telecom provides, and long MOU indicates the high quality of voice service network, and subscriber's high satisfaction to the voice service. This indicator also indirectly shows the loyalty of customers.

**4.2.3 Internal Process Perspective.**

Internal process enables Paltel Group to meet two objectives, deliver value propositions of customers in targeted market segments and satisfy stockholders expectations of excellent financial returns. The measures should focus on critical processes to achieve customer satisfaction and organizational financial objectives. Measures include cost per subscriber, marketing expense per customer, time to market, service coverage and complaint ratio as illustrated below:

### **Cost per Subscriber.**

This indicator indicates the average operating expense per subscriber. It reflects the ability of Paltel Group to utilize the innovations in either technology or management to decrease the expenses. The Cost per subscriber formula is:

$$\text{Cost Per Subscriber} = \frac{\text{Operating Expense}}{\text{Number of Subscribers}} \quad (8)$$

### **Marketing Expense per Subscriber .**

Is a total expenditure on marketing activities. This typically includes advertising and non-price promotion. It includes sales force spending and may also include price promotions. Marketing spending metric is very useful to predict how selling costs change with sales. The Marketing expenses per subscriber formula is:

$$\text{Marketing Expenses per Subscriber} = \frac{\text{Total Marketing Expenditure}}{\text{Number of Subscribers}} \quad (9)$$

### **Time to Market (TTM).**

Is the length of time take from a service being considered until it is being available for sale. TTM is important in telecommunication industry where services are outmoded quickly. The measurement for TTM based on E-

TOM standard from TM FORUM, which Paltel Group implements last year to measure time for each process until reaching the market.

### **Service Coverage .**

The coverage of a radio station is the geographic area where the station can communicate. Coverage depends on several factors, such as orography (i.e. mountains) and buildings, technology and radio frequency. Some frequencies provide better regional coverage, while other frequencies penetrate better through obstacles, such as buildings in cities. In the Palestinian case there are difficulties in coverage as some areas are called “C” that prevent Paltel Group from reaching these areas because of Israeli occupation. The Service Coverage formula is:

$$\text{Service Coverage} = \frac{\text{Number of Sites}}{\text{Geographic Area}} \quad (10)$$

### **Subscriber’s Complaint Ratio.**

It is an expression of dissatisfaction with a product or service, either orally or in writing, from an internal or external customer. A customer may have a genuine cause for complaint, although some complaints may be made as a result of a misunderstanding or an unreasonable expectation of a product or service. This will help Paltel Group improve the service quality according to the complaints in different fields. The subscriber’s complaint ratio formula is:

$$\text{Subscriber's Compliant Ratio} = \frac{\text{Number of Complaints}}{\text{Number of Subscribers}} \quad (11)$$

#### **4.2.4 Learning and Growth Perspective.**

This perspective is concerned with identifying the infrastructure that Paltel Group needs for a long-term business improvement and growth, and to achieve appropriate combination of skills and required tools for active atmosphere for sustainable improvements to meet demands of customers and attaining the desired financial efficiencies. Learning and growth is aiming to fill the gap between the existing capabilities of people, information systems and organizational procedures, and what will be required to achieve the further objectives; the gap is identified through financial, customer and business process perspectives. Therefore, the measures are focused on the investment in people training, full time equivalent, turnover, and employees rewards and compensation. The following are the illustration of each indicator:

##### **Training Expense per Employee.**

The role of employee training and development is becoming more important in Patel Group, by increasing relying on the knowledge, skills and abilities of their human resources to drive firm performance. Since training is a major component in enhancing employee competencies, tracking the training-cost-per-employee metric helps determine the investment in training at an individual level. This metric can be computed

by dividing the total training cost for an organization by its headcount. The training expense per employee formula is:

$$\text{Training Expense per employee} = \frac{\text{Total Training cost}}{\text{Headcount}} \quad (12)$$

### **Full Time Equivalent (FTE).**

Full-time equivalent (FTE) is a unit that indicates the workload of an employed person in a way that makes workloads comparable across various contexts. FTE is often used to measure a worker's involvement in a project, or to track cost reductions in an organization. An FTE of 1.0 means that the person is equivalent to a full-time worker, while an FTE of 0.5 signals that the worker is only half-time. The ratio of the total number of paid hours during a period (part time, full time, contracted) by the number of working hours in that period. The ratio units are FTE units or equivalent employees working full-time. In other words, one FTE is equivalent to one employee working full-time. The Full-time equivalent formula is:

$$\text{FTE} = \frac{\text{Total Number of Paid Hours during a Period}}{\text{Number of Working Hours}} \quad (13)$$

### **Turnover Rate.**

Turnover is an area heavily studied by all organizations to determine movement out of an organization (separations). Turnover is further categorized as either voluntary or involuntary. Voluntary turnover (resignations) is most often studied, as voluntary turnover is typically greater than involuntary turnover (discharges) and management's desire to reduce or maintain turnover at an acceptable level. Turnover is calculated by dividing the number of terminated employees in a calendar, fiscal year or other 12 month reporting period by the average number of employees that calendar, fiscal year or other 12 month reporting period. The Full-Turnover Rate formula is:

$$\text{Turnover Rate} = \frac{\text{Total Number of Employees who terminated During the Period}}{\text{Number of Active Employees during the Period}} \quad (14)$$

### **Reward per Employee.**

Rewards serve many purposes in organization, build a better employment deal, hold on good employees and to reduce turnover. The principal goal is to increase people willingness to work in one's company, to enhance their productivity. There are two kinds of rewards: Extrinsic rewards: concrete rewards that employee receive and Intrinsic rewards: tend to give personal satisfaction to individual Intrinsic rewards makes the employee feel better in the organization, while Extrinsic rewards focus on the performance and

activities of the employee in order to attain a certain outcome. The reward per employee formula is:

$$\text{Reward per employees} = \frac{\text{Extrinsic Cost}}{\text{Number of employees}} \quad (15)$$

Table (4-1) shows proposed balance scorecard and KPI's for each perspective.

**Table (4-1): Proposed BSC for Paltel Group.**

<b>BSC</b>	<b>OBJECTIVES</b>	<b>KPI'S</b>
Finance Perspective	<ul style="list-style-type: none"> <li>• Continue leading the market of telecommunications and technology in Palestine, achieve growth in profitability and financial performance.</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Revenue Per User (ARPU)</li> <li>• Return On assets (ROA)</li> <li>• Return On Equity (ROE)</li> <li>• Net Profit Margin (NPM)</li> <li>• Current Ratio (CR)</li> </ul>
Customer Perspective	<ul style="list-style-type: none"> <li>• Increase diversity in value added services, keep up with the latest technological applications as well as foster local innovations and initiatives in the field of technology and its applications. Offer 3G services when acquiring the necessary frequencies</li> <li>• Focus on the needs of various segments of society in line with the global technological development requirements in order to meet their expectations and interests.</li> <li>• Continue to develop and modernize the network to provide modern services and</li> </ul>	<ul style="list-style-type: none"> <li>• Customer Churn</li> <li>• Satisfied Customer Index</li> <li>• Minutes Of Usage (MOU)</li> <li>• Penetration Rate</li> <li>• Number of subscribers</li> </ul>

	<p>broadband services with the fastest and highest quality of service.</p>	
<p>Internal Process Perspective</p>	<ul style="list-style-type: none"> <li>• Maintain the highest levels of efficiency and productivity with optimum utilization of resources and capabilities to achieve excellence in all services lines: Mobile, fixed, and internet/ADSL services</li> </ul>	<ul style="list-style-type: none"> <li>• Time to Market</li> <li>• Cost Per Customer</li> <li>• Marketing Expense Per Customer</li> <li>• Service coverage</li> <li>• Customer Complaint Ratio</li> </ul>
<p>Learning and Growth Perspective</p>	<ul style="list-style-type: none"> <li>• Increase staff productivity and efficiency through attract and retain employees and provide high quality working environment.</li> </ul>	<ul style="list-style-type: none"> <li>• Employees turnover</li> <li>• Full Time Equivalent</li> <li>• Training expense per employee</li> <li>• rewards per employee</li> </ul>

### **4.3 Strategy Mapping.**

Kaplan and Norton (1992a, 1994b, 1996c) introduced three principles that link an organization's BSC to its strategy: (1) cause and effect relationships, (2) performance drivers, and (3) linkage to financial goals. Strategy maps express causal relationships in a sequence. The chains of cause-and-effect connect all the factors (i.e., performance indicators) through the four perspectives of BSC, which reflect dynamically the change of strategies and indicate how an organization creates its value (Kaplan and Norton, 2004a, 2004b). Strategy maps are built according to the four perspectives of the BSC, and they interface between strategy and the BSC. Strategy maps interpret all causal relationships so that effective strategies can be developed and deployed and then fulfilled optimally over time. Hence, strategy maps (the concrete expressions of the causal relationships of an organization's strategies) are employed to provide organizations with ways to create value (Kaplan and Norton, 2004a). Strategy maps provide a visual framework and a concise description of an organization's strategy, and they can convert intangible assets into tangible outcomes (Banker et al., 2004).

Strategy maps can enhance the ability to define, evaluate, manage, and implement the desired strategy. Strategic management is to manage and maintain strategies by tracing execution and explanation of the strategies. Therefore, a BSC must be adapted to strategy changes. A strategy map proves that strategies are devised on the basis of dynamic changes over

time. Strategy maps are also models for articulating interconnected strategies before and after strategy implementation.

#### **4.3.1 Principles of Strategy Map.**

The strategy map should be based on five principles:

1. Strategy balances contradictory forces. Long-term goals usually conflict with some short-term goals. Short-term goals can always be achieved by sacrificing long-term investments. The strategy has to balance and articulate the short-term financial objectives like reducing cost with the long-term goals like sustainable income.
2. Strategy is based on a differentiated customer value proposition. Customers' satisfaction is the source of sustainable value creation. Strategy should be based on targeted customer. Strategy is required to attract and retain targeted customers.
3. Value is created through internal business processes. Internal processes were classified into clusters: Operations management: producing and delivering products and services to customers. Customer management: establishing and leveraging relationships with customers Innovation: developing new products, services, and relationships Regulatory and social: meeting or exceeding regulatory and societal expectations, and building stronger communities. All of targets in financial and customers perspective described in strategy map were outcomes which the organization hopes to achieve: improve productivity and revenue growth, increase shareholder

value; increase customers' acquisition, satisfaction, loyalty, retention and growth. Internal processes and learning and growth drive the strategy, and they will facilitate organization to achieve its targets.

4. Strategy consists of simultaneous, complementary themes. Not all clusters of internal processes deliver value in the same time, actually every cluster has different points in time. For instance, cost reduction or quality enhancement can result in improvements in operational processes in a short time, but an enhanced customer relationship influences the outcomes in about half year or one year after the initial investment. The benefits from enhanced regulatory and social processes come out even further in the future. Strategies should incorporate one strategic theme with each of the four clusters, and strategies should be balanced.
5. Strategic alignment determines the value of intangible assets. In a strategy map, intangible assets are classified into three categories: Human capital: generally it means people. As with any investment, people are assets whose value can be enhanced by investment. The availability of skills, talent, and know-how to perform activities can contribute to organizations benefit, which also required by the strategy. Information capital: information systems and knowledge applications and infrastructure are required to support the strategy. Organization capital: culture; leadership; alignment and teamwork. (Kaplan and Norton, 2004, 11-13).

### 4.3.2 Design Strategy Map.

The first generation of BSC broken new ground by combining financial and non-financial performance measures classified into four perspectives, but it was not reliable or sufficient to design the organizations strategies due to its limitations. The strategy map focuses on strategy and vision, and offers managers an internal insight of organization. By a strategy map, managers can easily know how to achieve organizations mission and goals by causal-effect chains of continuous improvements.

Before we design a strategy map, we need to think about what is a good strategy map. In another words, what are the criteria for a good strategy map. Hereby, Nounou (2005) pointed out three elementary criteria for a good strategy map.

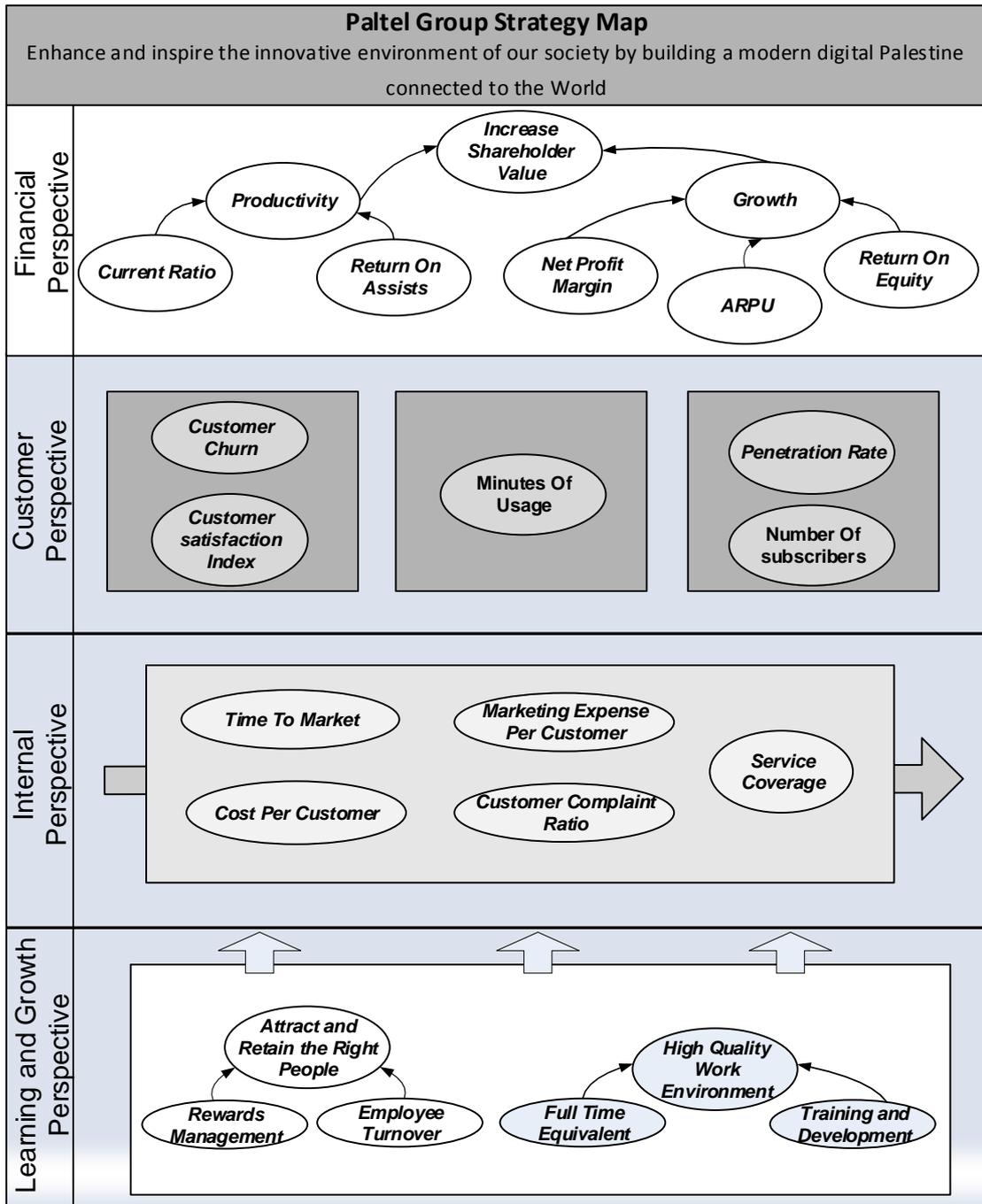
**Criteria One:** right set of objectives. Objectives or KPIs should match with selected strategy time frame, approved budget, and assigned set of measures, the level which organization focuses on.

**Criteria Two:** primary cause and effect relationship should be distinguished from second degree relationships. The strength of primary cause-and-effect relationship can be validated during performance monitoring.

**Criteria Three:** keep evolving. Cause-and-effect relationship should be easily tracked and adjusted on time, which makes strategy maps dynamic by validation and refinement.

Based on the factors above, and the analysis in the previous chapter, the KPIs and their interactions can be visualized as the Figure (4-1).

In this map, we give a rather broad view instead of very detailed linkage for instance learning and growth specific KPI like increase FTE has a direct proportion with time to market in internal process and it is reflect directly to MOU in customer perspective which is return to ARPU. This strategy map developed by PMC through analyze business process and its interactions.



**Figure (4-1):** Paltel Group Proposed Strategy Map

## **Chapter 5**

### **Methodology**

This chapter presents the application of the AHP method in ranking the overall performance management and provides performance index for the group.

#### **5.1 Research Methodology.**

##### **5.1.1 Data Collection.**

Considering the number of stakeholders in Paltel Group, performance management committee was formulated heading by CEO, to analyze the current situation and to cooperate with researcher to develop the proposed model. The researcher worked with the committee to identify strategic goals through BSC to measure the overall performance. The committee consisted of 15 employees, three general managers, six directors, four managers and two officers. The committee met to prioritize each perspective of BSC, and KPI's using AHP methodology.

The study makes an extensive use of both primary and secondary sources of information from the committee of Paltel Group. The primary sources of data include information which were gathered from the field. The secondary sources of data include Paltel Group's annual reports and brochures. Data on the profile and operations of the Paltel Group, resource base of the company, technological advancement as well as operational challenges and administrative responses of the company were gathered

from management and staff of Paltel Group. The proposed methodological framework for conducting the study could be summarized as follows:

### **Literature review.**

The literature review consists of surveying literature from different types of sources such as books, articles and journals. Books usually provide compiled knowledge in a known area and present fully developed theories and models (Patel and Davidson, 1994). Articles, reports and conference papers, on the other hand, provide the latest information in an area, since it takes a long time to publish a book (Patel and Davidson, 1994).

### **Data Collection Techniques.**

This research uses several data collection tools and techniques as illustrated below:

#### **a) Interviews.**

Interviews discover information from stakeholders by talking with them directly (i.e. CEO's, Directors, Managers, and Key Staff). Interviews are performed by asking prepared and natural questions and recording the responses.

#### **b) Observations .**

Observations are collected in different ways and the versatility of observation makes it a central method for collecting primary data and a supplement for other data collection methods (Blumberg et al., 2005). An

observation, is systematically planned and executed with the use of proper controls that provides a reliable and valid account of what happened (Blumberg et al., 2005).

**c) Focus groups.**

Focus groups bring together key stakeholders and subject matter experts which is consultant from international consultancy firm and researcher to determine the BSC indicators of four perspectives and distribute KPI's.

**d) Empirical Survey (Questionnaires).**

A questionnaire is designed with a conventional AHP questionnaire format (nine-point scale and pairwise comparison) based on the hierarchy. Fifteen questionnaires were distributed to performance management committee of Paltel Group.

**5.1.2 Data Analysis.**

**Analytical Hierarchy Process.**

Data analysis was done by using AHP method using Excel sheet developed by Klaus D. Goepel, <http://bpmsg.com>. The weight for calculation in AHP method is attained from the questionnaires that have been filled by respondents.

The procedures of AHP to measure business performance involve six essential steps Cheng, 1999; Lee, Kang, and Wang, 2006; Lee, in press; Murtaza, 2003; Zahedi, 1986):

- Step1: Define the unstructured problem and state clearly the objectives and outcomes.
- Step2: Decompose the problem into a hierarchical structure with decision elements (e.g., criteria and alternatives).
- Step3: Employ pairwise comparisons among decision elements and form comparison matrices.
- Step4: Use the eigenvalue method to estimate the relative weights of the decision elements.
- Step5: Check the consistency property of matrices to ensure that the judgments of decision makers are consistent.
- Step6: Aggregate the relative weights of decision elements to obtain an overall rating for the alternatives.

## **5.2 AHP Implementation.**

**Step1: Define the unstructured problem and state clearly the objectives and outcomes.**

The goal is to measure Paltel Group business performance. So, this goal is placed at the top of the hierarchy. The hierarchy descends from the more general criteria in the second level which are the four perspective of balance scorecard which are finance, customer, internal process, and learning. It is important to identify those criteria that are absolutely necessary to adequately define all relevant and important aspects of the

goal. Then, we define KPI's for each cluster based on its inherit perspective, as described in the Table (5-1):

**Table (5-1): BSC Perspectives and KPI's.**

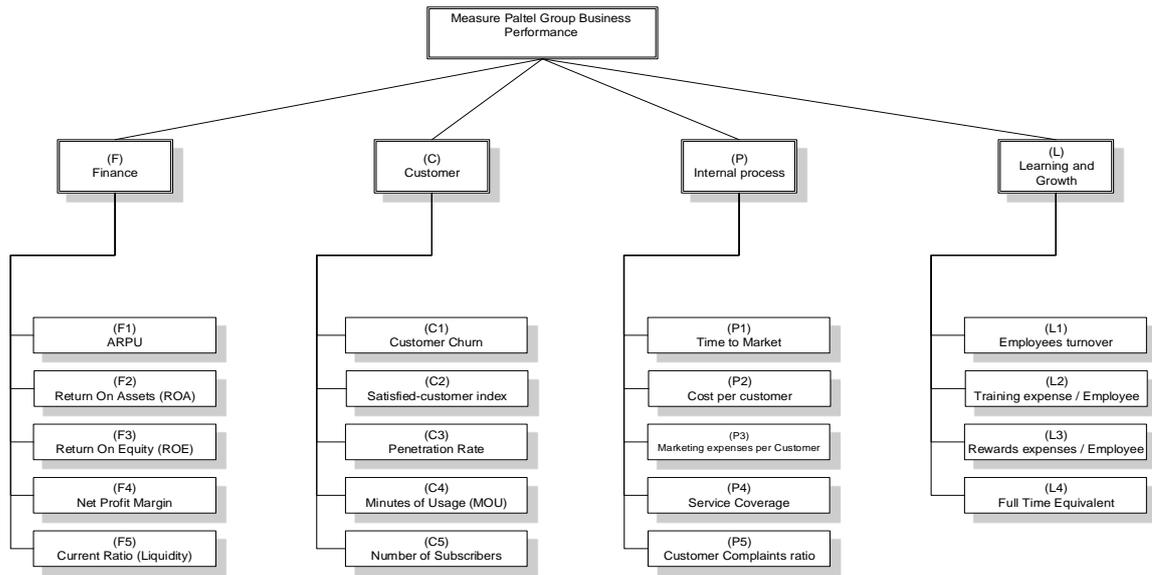
<b>Goal: Measure Paltel Group business performance</b>			
<b>F</b>	<b>Financial perspective</b>	<b>F1</b>	Annual Revenue Per User (ARPU)
		<b>F2</b>	Return On assets (ROA)
		<b>F3</b>	Return On Equity (ROE)
		<b>F4</b>	Net Profit Margin (NPM)
		<b>F5</b>	Current Ratio (CR)
<b>C</b>	<b>Customer Perspective</b>	<b>C1</b>	Customer Churn
		<b>C2</b>	Satisfied Customer Index
		<b>C3</b>	Penetration Rate
		<b>C4</b>	Minutes of Usage
		<b>C5</b>	Number of Subscribers
<b>P</b>	<b>Internal Process Perspective</b>	<b>P1</b>	Time to Market
		<b>P2</b>	Cost per customer
		<b>P3</b>	Market expense per customer
		<b>P4</b>	Service coverage
		<b>P5</b>	Customer complaint ratio
<b>L</b>	<b>Learning and Growth Perspective</b>	<b>L1</b>	Employees turnover
		<b>L2</b>	Training expense per employee
		<b>L3</b>	Rewards expense per employee
		<b>L4</b>	Full Time Equivalent

**Step2: Decompose the problem into a hierarchical structure with decision elements (e.g., criteria and alternatives).**

When relationships become too numerous or complex for the human mind to intuitively grasp, it may become necessary to organize the relationships into a graphical representation (Saaty, Thomas 2008). For these reasons, construction of the hierarchy is the most critical aspect in the AHP.

With the hierarchy of the problem, appropriately decomposed into actionable elements linked to the highest level goals, it is necessary to gather information as to the impact of the relationships between the various levels. This action performed by PMC through focus groups with the researcher which aims of prioritization matrix which represent the importance values of organization drivers and relationship matrix that gives the mapping between the actionable items in different levels of the decomposition hierarchy.

Figure (5-1) reflects the designed hierarchy process and the relation for each other.



**Figure (5-1):** AHP levels for Paltel Group

**Step3: Employ pairwise comparisons among decision elements and form comparison matrices.**

One of the crucial steps in decision-making is the accurate estimation of the data. This is crucial because there is the need to extract qualitative information from the decision-maker. It is very difficult to quantify data in terms of absolute values correctly. AHP method attempt to determine the relative importance, or weight, of the alternatives in terms of the importance criterion. Pairwise comparisons are used to determine the relative importance. In this approach, the decision-maker has to express his/her opinion about the value of one single pairwise comparisons at a time.

The judgement in AHP is to define which element is more important in each pair of criteria. The committee using scale for pairwise comparisons shown in Table (5-2).

For instance, comparing element A against element B, this is the judgement: “How strongly important is element A than element B?”.

The ratio assessment is the activity conducted in the second stage, which is done by acquiring opinions from PMC to compare each key performance indicator that has been measured by giving the score 1–9, Table (5-2). The result from respondents’ opinion is then analyse by using the AHP method.

**Table (5-2): Scale for pairwise comparisons**

<b>Intensity of Importance</b>	<b>Definition</b>	<b>Explanation</b>
1	Equal Importance	Two activities contribute equally to the objective
3	Moderate Importance	Experience and judgment slightly favor one activity over another
5	Strong Importance	Experience and judgment strongly favor one activity over another
7	Very Strong Importance	An activity is favored very strongly over another; its dominance demonstrated in practice.
9	Extreme Importance	The evidence favoring one activity over another is of the highest possible order of affirmation
2, 4, 6, 8	For compromise between the above values	Sometimes one needs to interpolate a compromise judgment numerically because there is no good word to describe it.

The relative values are inserted in an  $(n \times n)$  matrix, where  $n$  is the number of the criteria. By convention, the comparison is always done with the element in the column, on the left, against an element in the row, on top. For instance, in Table (5-3), the comparisons are done as the pairs: Criteria. 1 with Criteria. 2, Criteria.1 with Criteria. 3, Criteria. 1 with Criteria. 4, until the end of the first row. After that, the second row is evaluated and so on. This is a recommendation to the execution of the comparisons to make it easier and ordered. The number of comparisons is defined by:  $\frac{n(n-1)}{2} \cdot (n$  is the number of elements).

For instance, if there are 5 criteria to be compared:  $\frac{5(5-1)}{2} = 10$ , which means that 10 comparisons are necessary.

**Table (5-3): Pairwise comparisons example.**

	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5
Criteria 1		3	3	5	1
Criteria 2	1/3		5	3	1/3
Criteria 3	1/3	1/5		3	1/3
Criteria 4	1/5	1/3	1/3		1/3
Criteria 5	1	3	3	3	

### Pairwise comparison for Balance Scorecard perspective:

The committee met to prioritize each perspective of BSC and KPI's, and the result were as shown in Table (5-4).

The consolidated decision matrix combines all  $k$  participants' inputs to get the aggregated group result. We use the weighted geometric mean of the decision matrices elements  $a_{ij,k}$  using the individual decision maker's weight  $w_k$  as given in equation (16):

$$c_{ij} = \exp \frac{\sum_{k=1}^N w_k \ln a_{ij(k)}}{\sum_{k=1}^N w_k} \quad (16)$$

**Table (5-4): Consolidated Pairwise comparison for Balance scorecard**

		Finance	Customer	Internal Process	Learning and Growth
		1	2	3	4
Finance	1		1.09	1.4	1.69
Customer	2	0.91		1.14	1.81
Internal Process	3	0.72	0.88		1.6
Learning and Growth	4	0.59	0.55	0.63	

**Table (5-5): Consolidated Pairwise comparison for Financial Perspective KPI's.**

		ARPU	Return On Assets	Return On Equity	Net Profit Margin	Current Ratio
		1	2	3	4	5
ARPU	1		1.24	0.71	1.25	1.73
Return On Assets	2	0.81		0.81	1.02	1.8
Return On Equity	3	1.41	1.24		1	1.53
Net Profit Margin	4	0.8	0.98	1		1.9
Current Ratio	5	0.58	0.56	0.65	0.53	

**Table (5-6): Consolidated Pairwise comparison for customer Perspective KPI's .**

		Customer churn	Satisfied Customer Index	Penetration Rate	Minutes Of Usage	Number of Subscribers
		1	2	3	4	5
Customer churn	1		0.98	0.64	1.4	0.94
Satisfied Customer Index	2	1.02		1.02	1.89	1.09
Penetration Rate	3	1.56	0.98		2.18	1.27
Minutes Of Usage	4	0.71	0.53	0.46		0.73
Number of Subscribers	5	1.06	0.92	0.79	1.37	

**Table (5-7): Consolidated Pairwise comparison for Internal Process Perspective KPI's.**

		<b>Time To Market</b>	<b>Cost per customer</b>	<b>Market expense per customer</b>	<b>Service coverage</b>	<b>Customer complaint ratio</b>
		1	2	3	4	5
<b>Time to Market</b>	1		1.2	1.77	1.7	1.17
<b>Cost per customer</b>	2	0.83		1.14	1.12	1.39
<b>Market expense per customer</b>	3	0.57	0.88		1.28	1.15
<b>Service coverage</b>	4	0.59	0.89	0.78		0.86
<b>Customer complaint ratio</b>	5	0.85	0.72	0.87	1.16	

**Table (5-8): Consolidated Pairwise comparison for Learning and Growth Perspective KPI's .**

		<b>Employee turnover</b>	<b>Training expense per employee</b>	<b>Rewards expense per employee</b>	<b>Full Time Equivalent</b>
		1	2	3	4
<b>Employee turnover</b>	1		0.92	0.68	0.81
<b>Training expense per employee</b>	2	1.09		0.58	0.52
<b>Rewards expense per employee</b>	3	1.47	1.71		1.27
<b>Full Time Equivalent</b>	4	1.24	1.91	0.79	

**Step4: Use the eigenvalue method to estimate the relative weights of the decision elements.**

Pair wise comparisons among n elements in each level lead to an approximation of each  $a_{ij}=w_i/w_j$  which is the ratio of the weight of element  $i$  to element  $j$ . The estimated weight vector  $w$  is found by solving the following eigenvector problem:  $Aw=\lambda_{max}w$ , where the matrix A consists of  $a_{ij}$ 's, and  $\lambda_{max}$  is the principal eigenvalue of A. If there is no inconsistency between a pair of elements, then  $a_{ij}$  is equal to  $1/a_{ji}$  for any  $i$  and  $j$ . The result is that  $\lambda_{max} = n$  and we have,  $Aw=nw$ , where  $n$  is the number of elements in each row. Written out more fully this matrix equation become as follows:

$$\begin{matrix}
 & A_1 & A_2 & - & - & - & - & A_n & & \begin{matrix} W_1 \\ W_2 \\ \vdots \\ W_n \end{matrix} \\
 A_1 & \left| \begin{array}{c} W_1 \\ \frac{W_1}{W_2} \\ \frac{W_1}{W_1} \\ \vdots \\ \frac{W_1}{W_n} \end{array} \right. & \left| \begin{array}{c} W_1 \\ \frac{W_1}{W_2} \\ \frac{W_1}{W_1} \\ \vdots \\ \frac{W_1}{W_n} \end{array} \right. & - & - & - & - & \left| \begin{array}{c} W_1 \\ \frac{W_1}{W_n} \\ \vdots \\ \frac{W_1}{W_n} \end{array} \right. & \times & \left| \begin{array}{c} W_1 \\ W_2 \\ \vdots \\ W_n \end{array} \right. \\
 A_2 & \left| \begin{array}{c} \frac{W_2}{W_1} \\ \frac{W_2}{W_2} \\ - \\ \vdots \\ \frac{W_2}{W_n} \end{array} \right. & \left| \begin{array}{c} \frac{W_2}{W_1} \\ \frac{W_2}{W_2} \\ - \\ \vdots \\ \frac{W_2}{W_n} \end{array} \right. & - & - & - & - & \left| \begin{array}{c} \frac{W_2}{W_n} \\ \frac{W_2}{W_n} \\ \vdots \\ \frac{W_2}{W_n} \end{array} \right. & \times & =n \left| \begin{array}{c} W_1 \\ W_2 \\ \vdots \\ W_n \end{array} \right. \\
 A_n & \left| \begin{array}{c} \frac{W_n}{W_1} \\ \frac{W_n}{W_2} \\ - \\ \vdots \\ \frac{W_n}{W_n} \end{array} \right. & \left| \begin{array}{c} \frac{W_n}{W_2} \\ \frac{W_n}{W_1} \\ - \\ \vdots \\ \frac{W_n}{W_n} \end{array} \right. & - & - & - & - & \left| \begin{array}{c} \frac{W_n}{W_n} \\ \frac{W_n}{W_n} \\ \vdots \\ \frac{W_n}{W_n} \end{array} \right. & \times & \left| \begin{array}{c} W_1 \\ W_2 \\ \vdots \\ W_n \end{array} \right.
 \end{matrix} \quad (17)$$

Or

$$\begin{matrix}
 & A_1 & A_2 & - & - & - & - & A_n & & \begin{matrix} W_1 \\ W_2 \\ \vdots \\ W_n \end{matrix} \\
 A_1 & \left| \begin{array}{c} 1 \\ 1 \\ \vdots \\ 1 \end{array} \right. & \left| \begin{array}{c} a_{12} \\ 1 \\ - \\ \vdots \\ 1 \end{array} \right. & - & - & - & - & \left| \begin{array}{c} a_{1n} \\ A_{2n} \\ - \\ \vdots \\ 1 \end{array} \right. & \times & \left| \begin{array}{c} W_1 \\ W_2 \\ \vdots \\ W_n \end{array} \right. \\
 A_2 & \left| \begin{array}{c} \frac{1}{a_{12}} \\ 1 \\ - \\ \vdots \\ \frac{1}{a_{1n}} \end{array} \right. & \left| \begin{array}{c} 1 \\ 1 \\ - \\ \vdots \\ \frac{1}{a_{2n}} \end{array} \right. & - & - & - & - & \left| \begin{array}{c} A_{2n} \\ - \\ \vdots \\ 1 \end{array} \right. & \times & =\lambda_{max} \left| \begin{array}{c} W_1 \\ W_2 \\ \vdots \\ W_n \end{array} \right. \\
 A_n & \left| \begin{array}{c} \frac{1}{a_{1n}} \\ \frac{1}{a_{2n}} \\ - \\ \vdots \\ 1 \end{array} \right. & \left| \begin{array}{c} \frac{1}{a_{2n}} \\ \frac{1}{a_{1n}} \\ - \\ \vdots \\ 1 \end{array} \right. & - & - & - & - & \left| \begin{array}{c} 1 \\ - \\ \vdots \\ 1 \end{array} \right. & \times & \left| \begin{array}{c} W_1 \\ W_2 \\ \vdots \\ W_n \end{array} \right.
 \end{matrix} \quad (18)$$

To calculate the  $w$  vector (also called the eigenvector) each column of  $A$  is first normalized and then averaged over its rows. This vector is used to find the relative importance of each element. Observe that since small changes in  $a_{ij}$  imply a small change in  $\lambda_{max}$ , the deviation of the latter from  $n$  (the number of elements in a row) is a measure of consistency.

Priorities  $p_i$  in each input sheet are calculated using the row geometric mean method (RGMM). With the pairwise  $N \times N$  comparison matrix  $A = a_{ij}$

Calculated

By: 
$$r_i = \exp \left[ \frac{1}{N} \sum_{j=1}^N \ln(a_{ij}) \right] = \left( \prod_{i=1}^N a_{ij} \right)^{1/N} \quad (19)$$

Normalized

By: 
$$p_i = r_i / \sum_{i=1}^N r_i \quad (20)$$

**Table (5-9): Consolidated Eigenvalue Balance scorecard.**

<b>Balance scorecard Perspective</b>	<b>Weight</b>	<b>Rank</b>
Finance	30.8	1
Customer	28.4	2
Internal Process	24.4	3
Learning and Growth	16.4	4

**Table (5-10): Consolidated Eigenvalue Finance Perspective.**

<b>Finance Perspective</b>	<b>Weight</b>	<b>Rank</b>
ARPU	22.3	2
Return On Assets	20.1	4
Return On Equity	23.9	1
Net Profit Margin	21.1	3
Current Ratio	12.6	5

**Table (5-11): Consolidated Eigenvalue Customer Perspective.**

<b>Customer Perspective</b>	<b>Weight</b>	<b>Rank</b>
Customer Churn	18.8	4
Satisfied Customer Index	22.8	2
Penetration Rate	26.0	1
Minutes of Usage	12.8	5
Number of Subscribers	19.6	3

**Table (5-12): Consolidated Eigenvalue Internal Process Perspective.**

<b>Internal Process Perspective</b>	<b>Weight</b>	<b>Rank</b>
Time to Market	26.4	1
Cost per customer	21.3	2
Market expense per customer	18.5	3
Service coverage	16.0	5
Customer complaint ratio	17.8	4

**Table (5-13): Consolidated Eigenvalue Learning and growth Perspective.**

<b>Learning and growth Perspective</b>	<b>Weight</b>	<b>Rank</b>
Employee turnover	20.5	3
Training expense per employee	18.5	4
Reward expense per employee	32.4	1
Full Time Equivalent	28.6	2

**Step5: Check the consistency property of matrices to ensure that the judgments of decision makers are consistent.**

The consistency of a set of pairwise comparisons considered before we accept the weights generated by this process. Consider the situation proposed earlier where the committee assessed factor one as four times as important as factor two. If the decision maker considered factor two twice as important as factor three, then factor one should be preferred eight times over factor three. This is an example of perfect consistency with respect to strength of preference, but perfect consistency is not guaranteed due to the human aspect of the process.

According to Taylor III (2002:379), each human beings ideally wants consistent decision. On the contrary, there are many cases in which the decision makers cannot make perfectly consistent decisions.

The AHP method can tolerate the inconsistency by providing the measurement of assessment inconsistency. This measurement is one of the important elements in priority determination process according to pairwise

comparison. The higher consistency ratio, the more inconsistent assessment result. The acceptable consistency ratio is less than or equal to 10 percent, although in some cases the consistency ratio which is higher than 10 percent is still considered acceptable (Forman dan Selly, 2001: 70).

According to Taylor III (2002: 379), Consistency Index (CI) can be calculated by using formula (21).

$$CI = \frac{\lambda_{\max} - n}{n - 1}. \quad (21)$$

This is a suitable equation for measuring the accuracy for two reasons. First, small changes to non-diagonal elements in a positive reciprocal matrix will lead to only small changes in the eigenvalues. Second, the  $n$  eigenvalues of an  $n \times n$  matrix with diagonal entries of one will always sum to  $n$ . Thus, the more consistent a matrix is, the less the  $a_{ij}$  entries will deviate from their actual values and the closer will be to  $n$ . For different values of  $n$ , Saaty and others have computed the Consistency Index for a large number of matrices with random entries and averaged these results to produce the Random Index (RI). Saaty defines the consistency ratio for a matrix as equation (22).

$$CR = \frac{CI}{RI} \quad (22)$$

A matrix with a CR value less than 0.1 is considered by Saaty to have acceptable consistency.

Random Consistency Index (RI) can be observed in Table (5-14) as follows:

**Table (5-14): Random Consistency Index.**

<b>n</b>	1	2	3	4	5	6	7	8	9	10
<b>RI</b>	0.00	0.00	0.58	0.90	1.12	1.24	1.32	1.41	1.45	1.49
<b>CGI</b>			0.31	0.35	0.37	0.37	0.37	0.37	0.37	0.37

Source: <http://www.people.revoledu.com/kardi/tutorial/AHP/index.html>.

If  $CR \geq 10\%$ , the data acquired is inconsistent.

If  $CR < 10\%$ , the data acquired is consistent.

The test of consistency result will be very useful in the AHP method. If the test result is inconsistent ( $CR \geq 10\%$ ), then the result from the AHP method will be of no use in decision making.

Geometric consistency index GCI is calculated using equation (23):

$$GCI = \frac{2 \sum_{i < j} \ln a_{ij} - \ln \frac{p_i}{p_j}}{(N-1)(N-2)} \quad (23)$$

Description:

$n$  = Amount of items compared

$w_i$  = Weight

$c_i$  = Sum of column

CR = Consistency Ratio

CI = Consistency Index

RI = Random Consistency Index

GCI = Geometric consistency index

**Table (5-15): Consistency ratio Balance scorecard and perspectives.**

	$\alpha$	Lambda	GCI	CR
Balance scorecard	0.1	4.007	0.01	0.3
Finance	0.1	5.043	0.04	1.0
Customer	0.1	5.019	0.02	0.4
Internal Process	0.1	5.036	0.03	0.8
Learning and Growth	0.1	4.028	0.04	1.0

**Step6: Aggregate the relative weights of decision elements to obtain an overall rating for the alternatives.**

**Table (5-16) shows Priorities BSC perspectives and KPI's based on AHP.**

<b>Goal: Measure Paltel Group business performance</b>							
<i>Main criteria</i>	<i>Global Weight</i>	<i>Sign</i>	<i>Sub criteria</i>		<i>Local Weight</i>	<i>Final weight</i>	<i>Rank</i>
F	<b>Financial perspective</b>	<b>30.8%</b>	<b>F1</b>	Annual Revenue Per User (ARPU)	0.223	6.87%	3
			<b>F2</b>	Return On assets (ROA)	0.201	6.19%	7
			<b>F3</b>	Return On Equity (ROE)	0.239	7.36%	2
			<b>F4</b>	Net Profit Margin (NPM)	0.211	6.50%	4
			<b>F5</b>	Current Ratio (CR)	0.126	3.88%	16
	<b>Customer Perspective</b>	<b>28.4%</b>	<b>C1</b>	Customer Churn	0.188	5.34%	9
			<b>C2</b>	Satisfied Customer Index	0.228	6.48%	5
			<b>C3</b>	Penetration Rate	0.260	7.38%	1
			<b>C4</b>	Minutes of Usage	0.128	3.64%	17
			<b>C5</b>	Number of Subscribers	0.196	5.57%	8
P	<b>Internal Process Perspective</b>	<b>24.4%</b>	<b>P1</b>	Time to Market	0.264	6.44%	6
			<b>P2</b>	Cost per customer	0.213	5.20%	11
			<b>P3</b>	Market expense per customer	0.185	4.51%	13
			<b>P4</b>	Service coverage	0.160	3.90%	15
			<b>P5</b>	Customer complaint ratio	0.178	4.34%	14
	<b>Learning and Growth Perspective</b>	<b>16.4%</b>	<b>L1</b>	Employees turnover	0.205	3.36%	18
			<b>L2</b>	Training expense per employee	0.185	3.03%	19
			<b>L3</b>	Reward expense per employee	0.324	5.31%	10
			<b>L4</b>	Full Time Equivalent	0.286	4.69%	12

### **5.3 Business Performance Management Dashboard.**

BPM dashboard designed to enable senior executives to execute strategy, manage performance, and drive new or optimal behaviours across the group. They are primarily designed to facilitate monthly strategic review or operational planning sessions and help executives collaborate on ways to fix problems or exploit opportunities. BPM dashboard focuses on helping Paltel Group to chart a new strategic direction.

Performance targets have time frames, which affects how KPI's are calculated and displayed. Establish annual targets for key processes and initiatives, to keep employees on track to achieve those long-term targets, Paltel Group can divide time frames into intervals that are measured on a more frequent basis. Targeted improvement each quarter affected by season such as summer as number of visitors increased during this period, groups may back-weight the targets toward the end of the year.

The goals associated with KPIs are known as targets because they specify a measurable outcome rather than a conceptual destination. Ideally, through AHP and collaboration with buy-in can attain more accurate targets. Targets can also be set by a KPI team charged with translating strategic objectives into a performance plan.

The proposed dashboards enables the Paltel group to evaluate performance difference in each period separately. Since the measures used in the model are in different kinds it is nearly impossible to evaluate the observe

performance with each other. But in the model, each observed value is normalized according to the goals so that a performance score is calculated which can be used to comparison. Observe the improvements that take place between the measurement periods. Moreover, the capability to calculate a single performance level which indicates the overall performance.

**Table (5-17) : Business Performance Management dashboard for Paltel Group.**

Goal: Measure Paltel Group business performance												
	<i>Main criteria</i>	<i>Global Weight</i>	<i>Sign</i>	<i>Sub criteria</i>	<i>Local Weight</i>	<i>Final weight</i>	<i>Rank</i>	<i>Target</i>	<i>Actual</i>	<i>Performance Result</i>	<i>Achievement</i>	
F	<b>Financial perspective</b>	<b>30.8%</b>	<b>F1</b>	Annual Revenue Per User (ARPU)	0.223	6.85%	3	100	94	6.46%	94.00%	
				<b>F2</b>	Return On assets (ROA)	0.201	6.17%	7	0.187	0.15	4.97%	80.21%
				<b>F3</b>	Return On Equity (ROE)	0.239	7.34%	2	0.25	0.238	7.01%	95.20%
				<b>F4</b>	Net Profit Margin (NPM)	0.211	6.48%	4	0.23	0.2204	6.23%	95.83%
				<b>F5</b>	Current Ratio (CR)	0.126	3.87%	16	1.5	1.6	4.14%	106.67%
<b>Finance performance Index is:</b>									<b>28.80%</b>	<b>93.50%</b>		
C	<b>Customer Perspective</b>	<b>28.4%</b>	<b>C1</b>	Customer Churn	0.188	5.34%	9	0.29	0.34	4.55%	85.29%	
				<b>C2</b>	Satisfied Customer Index	0.228	6.48%	5	0.7	0.65	6.01%	92.86%
				<b>C3</b>	Penetration Rate	0.260	7.38%	1	0.72	0.7	7.18%	97.22%
				<b>C4</b>	Minutes of Usage	0.128	3.64%	17	0.8	0.64	2.91%	80.00%
				<b>C5</b>	Number of Subscribers	0.196	5.57%	8	2.7	2.65	5.46%	98.15%
<b>Customer performance Index is:</b>									<b>26.12%</b>	<b>91.96%</b>		
P	<b>Internal Process Perspective</b>	<b>24.4%</b>	<b>P1</b>	Time to Market	0.264	6.44%	6	136	142	6.17%	95.77%	
				<b>P2</b>	Cost per customer	0.213	5.20%	11	99	124	4.15%	79.84%
				<b>P3</b>	Market expense per customer	0.185	4.51%	13	41	52	3.56%	78.85%
				<b>P4</b>	Service coverage	0.160	3.90%	15	0.95	0.95	3.90%	100.00%
				<b>P5</b>	Customer complaint ratio	0.178	4.34%	14	0.072	0.0608	3.67%	84.44%
<b>Internal Process performance Index is:</b>									<b>21.45%</b>	<b>87.91%</b>		
L	<b>Learning and Growth Perspective</b>	<b>16.4%</b>	<b>L1</b>	Employees turnover	0.205	3.38%	18	0.04	0.037	3.63%	108.11%	
				<b>L2</b>	Training expense per employee	0.185	3.05%	19	800	731	2.77%	91.38%
				<b>L3</b>	Reward expense per employee	0.324	5.37%	10	20452	19650	5.53%	104.08%
				<b>L4</b>	Full Time Equivalent	0.286	4.72%	12	210	324	3.04%	64.81%
<b>Learning and Growth performance Index is:</b>									<b>14.98%</b>	<b>91.33%</b>		
<b>Paltel Group business performance Index is:</b>									<b>91.34%</b>			

## **Chapter 6**

### **Corrective Actions and Conclusion**

This Chapter covers the final reflections of this thesis. The final result of the thesis analysis presented with respect to the data collected from the company and proposed corrective actions. Also, conclusions and recommendations included in this chapter.

#### **6.1 Corrective Actions.**

The relative weights for each performance measure constructed in previous Chapter facilitate the development of an index to track the Group's progress in execution its strategy. From the relative weight of each performance measure to the Group's overall goal, we can assess the relative effect of the change in a performance measure from one period to the next on the Group's overall performance. By tracking each performance measure individually, from period to period, and then collectively quantifying the relative effect of the change in each performance measure, we can construct an index to monitor the firm's progress against its mission.

The final weights and priorities obtained from the above application for the selected indicators have been provided in the Table (5-17). In addition, based on the obtained results from this research, the ranking of BSC perspectives are presented in Table (5-17). The results of the main criteria in BSC - ranking indicates the first rank for the "Finance perspective" with

30.8%, the second for “Customer perspective” with 28.4%, the third rank for “Internal process perspective” with 24.4% and the fourth rank is “Learning and growth perspective” with 16.4%.

It should be noted that after opinion poll with the Paltel Group’s committee to prioritize KPI’s based on Table (5-17) using verbal scales of Cheng Yung and Huwang (1999), each performance indicator is given a quantitative value. Then for each criteria we determine the target and actual performance value and multiply each KPI value with final weight, we then aggregate all values for all indicators and perspectives to calculate the overall performance value for Paltel Group and then the business performance index is: 91.34%.

Therefore, by using the proposed model group, can identify the achievements level for each perspective, in Table (5-17) Paltel Group’s achieved in finance, customer, internal process and Learning and Growth perspectives for each by order, 93.5%, 91.96%, 87.91%, and 91.33% respectively.

## **6.2 Conclusion.**

Dynamicity environment of telecommunication industry, high-level of competition and increased customers' expectations has made necessity of getting awareness of attaining a comprehensive performance evaluation, confident, trustable and flexible. Paltel Group as a market leader in Palestine, should take advantage of methods and patterns consecutively

with the aim of consecutive evaluation and improvement of their performance.

This study found BPM incredible method as it helps organizations to plan, monitor, analyse, and manage business more effectively by providing a comprehensive view for enterprise. With a shared purpose, a consistent data model, real-time information, easy-to-use tools, and streamlined processes, it's much simpler to align operational procedures with strategy. And through increased insight, make faster decisions and boost performance to achieve business goals.

BPM can help an organization to focus on the key drivers of value as they relate to corporate strategy and specific organizational processes. BPM provides fact-based guidance for value-based decision making. Even more important, it enables a consistent process and framework for evaluating trade-offs related to investment by offering an integrated perspective of past, present, and future performance. By linking planning and forecasting to predictive and dynamic resource allocation, a company can deploy resources more effectively. BPM is a key tool for ensuring that the work employees do every day translates clearly into strategic value. In addition, if a company has a reliable measure of its performance, its executives can easily map that result against the performance of its competitors in the marketplace and quickly and confidently respond.

This research has contributed to providing decision makers with a systematic approach for establishing a visual strategy map with a consideration of the involved causal relationships among KPIs. The BSC strategy map construction framework proposed in this research would be a useful and valuable reference for other organizations, as BSC vary from organization to organization. Strategic analysis is performed to create logical links between the KPIs based on the content of the BSC evaluation criteria that are most appropriate for telecom industry performance.

Based on our research, we can see that strategy map which we built will solve some problems which have been existing in Paltel Group. Therefore we think BSC and strategy map should work together to help company to achieve the strategy goals, and use them in a complementary way.

This research proposes an approach based on the AHP and BSC for evaluating the performance of Paltel Group, The analytic hierarchy is structured by the four major perspectives of the BSC including financial, customer, internal business process, and learning and growth, followed by performance indicators. Because human decision-making process usually contains fuzziness and vagueness, the AHP is adopted to solve the problem.

A well-organized AHP information system is constructed to facilitate the solving process. It is our belief that AHP has reached the compromise and will be useful for many other cases as it has been in the past. In particular, AHP has broken through the academic community to be widely used by

practitioners. This widespread use is certainly due to its ease of applicability and the structure of AHP which follows the intuitive way in which managers solve problems. The hierarchical modelling of the problem, the possibility to adopt verbal judgements and the verification of the consistency are its major assets.

In this research we recommend to establish Business Performance Management Office, which actively guide Paltel Group of strategy management or in organizing strategic planning activities, and in developing plans, objectives and performance measures to ensure execution. The main responsibility of this office is to prepare and animate strategic planning workshops, accounting for and managing the expectations of multiple stakeholders involved in the planning process, while ensuring alignment of Paltel Group's direction with business sector and support unit priorities, identifying strategic objectives, key performance indicators, targets, and developing performance dashboards, Effectively monitoring the integrity of results reported, and Preparing and presenting performance dashboards and other strategic performance communications tools, both internally and externally.

### **6.3 Suggestion for Future Research.**

As stated before, the purpose of this research is to develop business performance management model and develop a Balanced Scorecard into a Strategy map and prioritize perspectives and KPI's using AHP

methodology. Future research on the adaptability of AHP method in different types of organizations. Also, considers operational issues not only from an upper-managements perspective, it would be important to evaluate details of the operational issues. Moreover, investigations of performance management crisis situation.

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جامعة النجاح الوطنية

كلية الدراسات العليا

تطوير نموذج ادارة اداء الاعمال في مجموعة الاتصالات الفلسطينية

إعداد

احمد حسن محارمة

إشراف

د. يحيى صالح

قدمت هذه الأطروحة استكمالاً لمتطلبات الحصول على درجة الماجستير في الإدارة الهندسية  
بكلية الدراسات العليا في جامعة النجاح الوطنية في نابلس، فلسطين.

2014

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## تطوير نموذج ادارة اداء الاعمال في مجموعة الاتصالات الفلسطينية

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الملخص

إن طبيعة قطاع الاتصالات الديناميكية والمنافسة الشرسة وارتفاع سقف توقعات المشتركين، أوجدت أهمية عالية للوعي بتقييم الأداء الشامل والموثوق والمرن، وبما أن مجموعة الاتصالات الفلسطينية هي رائدة سوق الاتصالات في فلسطين، فإنه من الضروري أن تستفيد من منهجيات تقييم وتطوير الأداء.

تستدل هذه الدراسة على أن إدارة أداء قطاع الأعمال هو أسلوب فعال في مساعدة المنشآت لتخطيط ومراقبة وتحليل وإدارة الأعمال بفعالية أعلى من خلال النظرة الشاملة على المنشأة، ومن خلال تحقيق غاية مشتركة بين الأطراف، وعينة بيانات ثابتة، ومعلومات حديثة، وأدوات سهلة التطبيق، وإجراءات موجهة، لكي يصبح من الأسهل توجيه العمليات التشغيلية نحو تحقيق الاستراتيجية، وذلك من خلال البحث المتزايد الذي يمكن من اتخاذ القرارات بصورة أسرع وتطوير الأداء لتحقيق أهداف الاعمال.

تساهم هذه الدراسة في تزويد أصحاب القرار بمنهجية منظمة لعمل خريطة استراتيجية تأخذ بالاعتبار العلاقة العملية ما بين مؤشرات الأداء القياسية.

لقد قام فريق التخطيط في مجموعة الاتصالات بالتعاون مع الباحث بمراجعة الأداء السابق للأعمال وذلك لاتخاذ القرارات بخصوص التوجه المستقبلي للعمل، وفي هذه الأثناء تمت مراجعة وإعادة صياغة استراتيجية مجموعة الاتصالات الفلسطينية لتحديد استراتيجية العمل وإنشاء بطاقات الأداء المتوازن والخريطة الاستراتيجية لقياس المؤشرات المالية وغير المالية.

يقدم المقترح في هذه الدراسة مرجع قيم لقياس الأداء الفعلي بالمقارنة مع النتائج المستهدفة، وتسهل الدراسة مراجعة وتقسيم النتائج لفهم الخطوات المستقبلية بناءً على الوضع الحالي.

تقترح هذه الدراسة نموذجاً قائماً على عملية التحليل الهرمي وبطاقة الاداء المتوازن لتقييم أداء مجموعة الاتصالات، حيث تقوم عملية التحليل الهرمي على العناصر الأربعة لبطاقات الأداء المتوازن وهي المالية والمشارك والإجراءات الداخلية والتعلم/ النمو لتتبعها مؤشرات الأداء الخاصة بها.

نموذج ادارة اداء الاعمال تم تصميمه ليمنح الإدارة التنفيذية من تنفيذ الاستراتيجية وإدارة الأداء وتوجيه أداء آخر جديد ومثالي في المجموعة، وهذا مصمم لتسهيل مراجعة الاستراتيجية شهرياً وتنظيم لقاءات تخطيط العمليات ومساعدة التنفيذيين لغايات الوصول نحو وسائل لمعالجة المشكلات أو استقصاء الفرص، كما تعمل ادارة اداء الاعمال بالقاء الضوء على مساعدة مجموعة الاتصالات على رسم مسار استراتيجي جديد لها.

