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Performance Measurement System in the Shipping Industry

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II. ABSTRACT

Title:

Since the objective of this thesis is to determine the performance measurement system in companies active in Iranian shipping industry we define what we mean by the performance measurement system. Neely (2005) defines PMS as the set of metrics used to quantify both the efficiency and effectiveness of actions. So the title of this thesis will be ``Performance Measurement System in shipping industry``. Regarding the companies we have selected to analyze, they first of all differ in their size, so our analysis much more were focused on the size but during our work there were other factors that revealed and influenced the difference of performance measurement system and management control in three companies. One of the other and most important factors was culture, considering Iranian culture more as individualistic and high power distance what means that control by the superiors is expanded to their subordinates. Another important factor was also external environment and the impact that competition and also government has especially over the largest company NITC and competition that have more effect over the medium and small one like Alpha and Beta Companies. In this context the most important thing is the performance indicators that three companies have employed, these performance indicators are financial, non- financial and operational measures or indicators that also have an impact in the nature of their business as it is shipping industry.

Key words:

Performance measurement, Management Control System, Shipping Industry, Financial and non-financial measures, External factors.

Methodology:

Information on operation of these three different companies in size has been obtained through structured interviews, these interviews has been made through telephone and e-mail exchanges. This research is carried out by the application of qualitative approach in order to acquire insight into the ideas and points of view expressed in the interviews.

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1. INTRODUCTION

1.1 Background

Now day's human beings have achieved the highest level of improvement in every aspect of life, businesses are among the highest development field whether it is production or service. Competition has never been tougher then now, something out of your control and you fail because your competitor take advantages over you, meanwhile you should take care of everything and one of the components of achieving success in your business is to apply a sound management control system.

The term "control", it originated from the French word "controller" which means "inspection" or "to check and verify" (Hoque Z., 2006). Moving forward and expanding the control concept from the management point of view control means: application of policies for directing, regulation and coordination of production, administration and other business activities in a way to achieve the overall organizational objectives (Hoque Z, 2006).

The management control system traditionally has been viewed as an analytical and calculative process to make decisions in the accomplishment of an organization's objective (Hoque Z, 2006). Regardless of the size of the company usually there is a function called management control and depending on the size of the organization the function of management control changes from its quite informal role in small organization to its formal and routine in relatively large one. In large organization management control system are widely accepted as absolutely essential for regulating and monitoring activities (Macintosh, 1997).

Many articles have been written about the relationship between management control system and strategy claiming that management control system should be tailored explicitly to support the strategy of the business and also differences in corporate strategy should logically lead to differences in planning and control system design (Emanuel, Otley and Merchant 2007).

Management control system and ``environmental`` insider and outsiders factors such as suppliers, competitors, government regulation and even the culture has been considered as an important factor affecting control systems as part of the organization structure at the organizational level (Jänkälä, 2007)

Management control system is composed of a number of components and one of the key components is measurements of performance (Rotch, 1993). Performance measures are tools to understand, manage and improve organization activities: you get what you measure, and you cannot manage a system unless you measure it (Franceschini ,Galetto,Maisano, 2007)

The service industry has become increasingly deregulated in the last two decades as well as experienced changes in ownership, technologies, competition and management. Shipping industry is among these service industry and we are interested in examining management control system with regard to performance measures employed in these industry.

1.2 Problem Discussion

Many theorists agree that the term “management control systems” has numerous meanings and it gives different ideas and meanings to different people depending on the context in which it is applied or discussed.

Management control system is compounded with different components that make management control components as a system, these components are: strategy, organization structure, performance measurement, direction, motivation, incentives (Rotch, 1993). More and more developments in this field are making performance measures as a key component of management control system. Simons (1995, 2000) has reformed his views and exchanged the term management control system for the new expression “Performance measurement and control systems”. All in all, performance measures can be seen today as a key element of modern management control system. Therefore performance measures as one of the key management control system components are tools necessary for every company in order to know how well they are doing with their business, whether they are meeting their goals, whether their work(process) is in control and whether their processes needs correction and further improvements. Therefore performance measures are tools to understand, manage, and improve organization activities (Franceschini ,Galetto,Maisano, 2007). Management control system and performance measures as a component of it depending on factors such as: size, strategy, information flow (centralized or decentralized structure), and also “environmental” factors such as government, socio-cultural as well as industry, raw materials, and markets, change its function and its role in an organization and also different type of measures are employed depending on these factors.

As an organization grow up e.g. in terms of employees, the need for having an appropriate management control system such as financial systems and performance measurements become vital. According to Davila and Foster (2005) company size (number of the employees) are positively associated with the rate of the adoption of management control components. They find that budgeting is among the first management control tool to be used in startup companies with some other type of measures. On the other hand, Khandwalla

(1973) claims that large firms apply administrative control using more advanced techniques or tools of management control such as different performance measures.

Many articles have been written with regard to management control system and strategy claiming that management control system is affected by strategy of the organization, e.g. in companies where their aim is to defend their position by competing on price of their product or service, control system is more tight. Latest research in this filed claim that even management control system affect the choice of strategy within an organization.

``Environmental`` factors surrounding the organization affect management control system and performance measurements employed within organization. When an organization operates in weak competition environment it is claimed that no comprehensive management control system is practiced. In a research case have found that higher competition was related to more comprehensive MCS in manufacturing firms and in terms of performance measures have reported a significant and positive relationship between market competition and the multiple performance measures usage based on the dimensions of the balanced scorecard (Jänkälä, 2007). Similarly it is claimed that industry in which an organization operates, influence of different interest groups including governmental bodies and even the culture of that country in which the organization operates do affect management control system and performance measurements employed within an organization. Taking on consideration the above argumentation we are interested in examining three different companies with regard to their size (number of employees) in the shipping industry. We are interesting in finding out that these three companies could possibly differ from each other with regard to management control system in terms of performance measurements employed in these companies.

In our opinion every type of business has its characteristics depending on many factors and so we are expecting that these three companies in shipping industry will have their characteristics with regard to their management control system and performance measures which they use in respective companies.

1.3 Objectives

The aim of this thesis is to analyze:

1. What type of performance measures as a component of management control system are available to and employed to different sizes of service companies (shipping industry)?
2. Based on the finding of the first question then what is the role of management control system with regard to performance measures in respective companies?

1.4 The scope of the study

On this study a research on application of performance measurement as a management control component will be carried out at three different sizes service oriented companies particularly companies engaged in shipping industry. Those companies are located in the Islamic Republic of Iran. These shipping companies are successful companies in Iran with a scope of operations inside and outside the country. These companies are Company Alpha (small size one), Company Beta (medium size one) and Gama ``National Iranian Tanker Company`` (NITC) (largest size one).

1.5 Disposition of the Thesis

1st Section: INTRODUCTION

In this part you can read the introductory of the thesis and the companies that we have analyzed, also in this section you can read the problem discussion and objectives of the thesis.

2nd Section: CASE METHODOLOGY

The case methodology shows the way we have obtained the data for the analysis, it shows which type of data we have used, and it shows the method selection, the choice of companies and criticism of sources.

3rd Section: THEORETICAL PART

In this section you can find the theory about the parts below.

Part 1: Service industry with a focus in shipping industry

Part2: Management Control Systems (MCS)

Part 3: Performance Measurement (PM)

4th Section: EMPIRICAL PART

In this section you can read the empirical about the parts below.

Part 1: Performance measurement systems within companies (NITC, Beta, Alpha,)

Part 2: Analysis and Comparisons

Part 3: Discussions

5th Section CONCLUSIONS

In this section you can find our conclusions on performance measurement system employed in different sizes of companies in shipping industry.

2. CASE METHODOLOGY

2.1 General research approach

Concerning methodology first of all we define what do we mean by terms like “methods” and “methodology”? By methods we typically mean the techniques that researchers employ for practicing their craft. Methods might be instruments of data collection (Bryman, 2008). Yin (2002) mentions six sources of evidence or methods of research such as: documentation, archival records, interviews, direct observation, participant-observation and physical artifacts. Then methodology is the study of the methods that are employed (Byrman, 2008).

When thinking for the research methodology that we are going to use in our thesis in gathering the relevant data that we need for the completion of the thesis we believe that qualitative approach through interviews and documentation is most appropriate method since our aim is to acquire insight development on management control system with regard to performance measurements rather than statistical analysis.

The term qualitative research is a conceptual device that people regularly use to make sense of their worlds by signifying particular forms of management research: an abstraction that enables us to give order to our impressions by enabling the categorization of certain aspects of lived experience (Johnson et al. 2007). We have avoided other sources of evidence especially face to face interviews due to physically residing in distance of interviewees who were located in Iran. The data collected concern characteristics of each company with regard to management control system in terms of performance measures which we believe it is hard to quantify (into numbers).

2.2 Perspective

Since these case studies are performance measurement as a component of Management Control Systems, the obvious choice of perspective is the managerial perspective. The interviewees who present their points of view are managers and heads of different departments within the companies. These participants are the head of accounting department in Alpha Company, the financial manager of Beta Company and Mr. Davood Saei vice financial manager of accounting department at National Iranian Tanker Company (NITC) or Gama Company.

2.3 Method Selection

In seeking to acquire a realistic picture of the research subject in examining the service companies in shipping industry the primary data has been collected through e-mail and telephone (interview) and other ways of internet communication interviews. The application of e-mail and telephone interviews is necessary as interviewees and also companies are physically residing in distant country, in Iran.

The advantage on this sort of communication over face to face could be that interviewees have the possibility to take time to read the questions and reflect on the answers.

Another advantage on interviews is that it's guided on conversations rather than structured queries (Yin, 2002). Other advantage that we see is as Yin (2002) describes the open-ended questions in which you can ask key respondents about the facts of a matter as well as their opinion about events.

A disadvantage on this type of telephone interview is the lack of detail response and usually respondents try to avoid this kind of interview.

The composition of the interview, questions will be structured in order to make people's responses as comparable as possible. The interview will be built on open-ended questions and it will give a clear understanding for the interviewee by addition information or examples in particular issue.

Yin (2002) mention three types of strategy case study analysis: first is relying on theoretical propositions, second is thinking about rival explanations and third is developing a case description. In our case the analysis has been relied on theoretical propositions which we linked with empirical analysis.

The analysis of the case studies has been by describing the company's current situation and performance measures that they use and then these case studies has been compared among the three companies regarding the measures of performance and also we were back to literature and see how these measures are described by theory, since here the question is the performance measures concerning the size of these three companies. Comparisons have been in that form that gives us the focus of these three different sizes of companies on control tools such as performance measures.

2.4 The choice of companies

Due to analyzing the performance measurement of the service sector companies with the focus on shipping industry, we have decided to analyze three different sizes of companies' active in this industry. The first company is Alpha Freight Forwarder which we categorize as a small company. This company is active in Iran transportation era, they are working as forwarder. The forwarders are the companies which are working between the owners of the freights on one side and the careers on the other side. Actually what they do is they buy their clients hazards through the transportation process, they give the clients guarantee for safety, on time delivering and the write transferring money through the transactions. Alpha has been started to do their activity near 15 years before, now, they have around 30 employees and they expand their business by 3 internal branches by their activity, Alpha has 4 departments, Sale and Marketing, Operation, Traffics and Accounting.

Second company is Beta Company which we categorize it as a medium size company. The nature of their activity is Marine services, but now, they are going to change their activity to Marine Contractor and shipping services, although this company registered its name for 7 years before, but they had no activity until last year, in fact they start their activities by buying some tugs to use them in Persian gulf to offer some support services for the shipping lines which are active in that area ,they have more than 60 employees (include crews) and 4 different branches through Iran ports and islands. The nature of the contractor companies in transportation industry is a new definition of shipping services in Iran.

The last company is National Iranian Tanker Company (NITC) which we name it Gama, we categorize it as a large company, is the main crude career in Iran, a country which oil and gas feed their most of annual budget. The oil and gas magazine categorized Iran as the holder of the third largest oil reserves and second gas reserves of the world are in Iran. NITC play a key role in transportation of the exported oil of Iran while this share plus the other countries of Asia just fulfill 26 percent of their capacity as their CEO said in an interview with their internal magazine Shamna. It is active for more than 50 years and they have 9 internal branches, 4 international offices and more than 170 international agencies are working close to NITC. Gama has around 4000 employees, with the Accounting, Operation, Business and Administrative services department.

2.5 Primary Data

The primary data of this research is collected through telephone interviews and e-mails due to long distance location of interviewees, and due to our limitations on traveling to Iran. The information collected in the telephone is used to examine non-response bias in the follow-up e-mail responses.

2.6 Secondary Data

The secondary data of this research is collected through website and magazine paper of National Iranian Tanker Company (NITC), but we had no active website for Alpha and Beta companies'. Other information is collected through online sources like (Google search), online library of Lund University (ELIN) and through Library of School of Economics and Management.

2.7 Criticism of Sources

All the validity of data gathered, in our case the telephone interviews and e-mails can be questionable because of some factors. Taking into consideration that our research was in three shipping companies of the Islamic Republic of Iran and considering that Persian culture is a bit like isolated from the rest of the world we had some problems with the data confidentiality, they were especially reluctant on the financial or quantitative figures of respective companies.

Another criticism or problem was that respondents had a lack of knowledge about the concepts that we were asking like Economic Value Added or Market Value Added or some kind of Balanced Scorecard but somehow they managed to give us some relevant responses.

The tools for gathering information were telephone interviews and e-mails because the respondents were residing in Iran, what we were a little bit concern since usually interviews are face to face with the interviewee but again we received very relevant sources from them through telephone interviews and e-mails.

However, there are two major concerns regarding Internet surveys: first, not everyone has Internet access and Internet users may not be representative of the target population; and second, some respondents may not be comfortable transmitting personal information over the Internet. These concerns fuel a perception that Internet surveys may, in fact, be more susceptible to non response bias (Hudson et al, 2004).

A big advantage that we had during the data collection from the interviewees was one of our group members who were a former employee of two companies (NITC and Alpha) and his communication with the interviewees was in Persian and then he translated the interview in English for the other two group members, what was a bit time consuming and sometime with misappropriations.

Another problem that we faced was the lack of website of the two companies Alpha and Beta, where the information gathered for the National Iranian Tanker Company (NITC) from their website was very helpful for us but again the problem was translation where we should have been through the same process as interview translation. Another critique that we address is that we have to keep two of responders name's confidential what you can see on the work below.

3. THEORETICAL FRAME

3.1 Service Industry with a focus in Shipping Industry

3.1.1 Service industry in brief

Early in the 20th century, employment in the service sector overtook employment in the manufacturing sector. By 2005, service sector employment had grown to more than twice that of manufacturing. For several reasons, management control in service industries is somewhat different from management control in manufacturing companies (Anthony and Govindarajan, 2007). Anthony and Govindarajan (2007) define the characteristics of service industry as: absence of inventory buffer, difficulty in controlling quality, labor intensive and as multi-unit organizations.

The service sector is composed of a wide range of diverse organizations. The common view of the outsider is that the service sector is a vast number of small or relatively small-sized organizations. This neglects the important role of the very large organizations that also exist in this sector (Fitzgerald, 1988).

Performance measurement may be appropriate for one type of service business, but not another. Services can be classified into three sectors namely: professional services, service shops, and mass services. The classification process is based mainly on the volume of customers, contact time and the degree of customization and discretion (Sartorius, Eitzen and Nicholsson, 2006).

The service industry has become increasingly deregulated in the last two decades as well as experienced changes in ownership, technologies, competition and management. Other unique qualities of service sector include intangibility, heterogeneity and simultaneity, perish ability. Many services rendered involve a range of intangible variables that include atmosphere, perception, the quality and timing of delivery, appearances and other vague phenomena.

Service outputs are also seldom the same (heterogeneity), production and consumption is simultaneous and an inventory cannot be built up because services are perishable.

The absence of inventory in the service sector results in a critical need to develop indicators that match unused capacity with demand finally, high levels of labor intensity demand that service sector PMS develop innovative measures to monitor labor efficiency (Sartorius, Eitzen and Nicholsson, 2006).

3.1.2 Shipping industry as service sector

Ship management is one of the complex business disciplines that include a great number of decision-making processes, and strategic cases which are executed by related managers within several divisions of the shore-based organizations in the global market environment of maritime transportation industry. In general, the organizational performance and reputation of the ship management companies depend on the availability of a well-structured shore-based organization, an effective management style, and integration of technology and innovation into the business cycle to manage the competitiveness in this industry. The dynamic structure of the maritime transportation industry puts pressure on the critical decision-making processes in maritime scenarios. Therefore, the decision-makers in this industry require analytical tools and quantitative methodologies to manage the administrative, commercial, technical, and operational decision processes in an effective manner (Kandakoglu A. et al. 2008).

Shipping, or carriage of goods by water, has played a significant role in the development of human society over the centuries. Shipping has been a crucial link by which commercial relationships have been established between widely separated parts of the world. There are two major types of shipping services: shipload services, which move goods in bulk for one or a few shippers; and liner services, which carry relatively small shipments of general cargo on a regular schedule for many shippers. Some ships are owned by firms engaged in the production or processing of goods in bulk. Examples are tankers owned by petroleum companies, and bulk carriers owned by steel companies. Most ships, however, are owned by firms whose prime business is shipping. These owners make their vessels available to importers/exporters through a highly efficient international network of shipping brokers.¹

The prime operating objective of shipping is to move passengers and freight from one place to another as safely, economically and reliably as possible in line with good practice. There are a variety of reasons why people choose to use a shipping company to carry their goods or themselves, any one of which will play a part in the decision making process. In the case of freight it is to carry goods from one place of origin to a place where they will be of more value. The tentative theory behind this proposition is that a commodity is of more value once transported to where more work can be accomplished on it, or where it is finally sold to consumers (Gubbins E., 1996).

¹ <http://www.thecanadianencyclopedia.com>

A shipping industry must always remember this derived nature of the demand for shipping services. By derived is meant that consumers are using sea transport as a means of fulfilling other objectives (Gubbins E., 1996).

Shipping is often the least expensive way of moving large quantities of goods over long distances. The existence of reliable water transportation has been a key to the economic and political well-being of most nations throughout history.²

3.1.3 Characteristics of Shipping Industry

The Shipping Industry is characterized by its volatility. Due to volatile revenue streams, shipping companies usually have some years of supernormal profits and some years of losses. The vessels constitute almost 90% of the fixed assets of shipping companies. As the vessel cost can range between USD 20-300 mil., the industry in addition to being cyclical is also capital intensive. The standardized nature of the shipping services makes it difficult for any single company to wield significant pricing power. The industry is regulated by the rules and regulations of International Maritime Organization IMO (is based in the United Kingdom with around 300 international staff) and other international bodies in addition to the fiscal, judicial and manning requirements of the flag state ³(Care Ratings). IMO has adopted a comprehensive framework of detailed technical regulations, in the form of international diplomatic convention which govern the safety of ships and protection of the marine environment. National governments, which form the membership of IMO, are required to implement and enforce these international rules, and ensure that the ships which are registered under their national flags comply. The majority of conventions adopted under the auspices of IMO or for which the Organization is otherwise responsible, fall into three main categories. The first group is concerned with maritime safety; the second with the prevention of marine pollution; and the third with liability and compensation, especially in relation to damage caused by pollution. Outside these major groupings are a number of other conventions dealing with facilitation, tonnage measurement, unlawful acts against shipping and salvage etc...⁴ Iran is a member of IMO since 1958.

² <http://www.thecanadianencyclopedia.com>

³ <http://www.googlesearch.com>

⁴ http://www.imo.org/About/mainframe.asp?topic_id=3

3.1.4 Different types of ships

Merchant ships can be of four types:

- 1) Tankers
- 2) Bulk Carriers
- 3) General Cargo Vessel
- 4) Container Shipping

Tankers

Tankers can be of four types:

- 1) Oil tankers
- 2) Product tankers
- 3) LNG tankers
- 4) Acid tankers Edible oil tankers⁵

3.2 The Concept of Management Control System

3.2.1 Concept of Control

First of all we have to start by understanding and explaining what do we mean by the concept of management control. If we look at the term “control” it originated from the French word “controller” which means “inspection” or “to check and verify” (Hoque, 2003).

Merchant (1987) considers control issues from the point of view of a business manager. He assumes that organizational objectives have been determined and that the aim of control is to "keep things on track" and to prevent "major, unpleasant surprises. According to Weber control means: application of policies for directing, regulation and coordination of production, administration and other business activities in a way to achieve the overall organizational objectives. In the other way thirty years ago Professor Robert Antony wrote that “Control” is the process of assuring that the organization does what management wants done (Rotch 1993).

Horngren, Foster and Datar (2000) define “control” as: a) deciding on and taking actions that implement the planning decisions and b) deciding on performance measurement and the related feedback that will help future decision making. Feedback in this case refers to the

⁵ <http://www.pdfgeni.com/ref/The-world-shipping-industry-pdf.html>

examination of past performance and systematically exploring alternative ways to make better decisions in the future (Rotch, 1993)

3.2.2 Concept of management control

Now moving forward and expanding the control concept to a system or to a management control system we come to the concept of what does management control system (MCS) mean. A clear distinction should be made between management accounting (MA), management accounting system (MAS), organizational control (OC) and management control system (MCS). MA refers to a collection of practices such as budgeting or product costing, while MAS refers to the systematic use of MA to achieve some goals. OC refers to controls built into activities and processes such as statistical quality control, just in time. MCS is a broader term that encompasses MAS and also other controls such as personal or clan controls (Chenhall, 2003).

Management control systems, as the name suggests, include three concepts:

- 1) Management
- 2) Control and
- 3) Systems.

Many theorists agree that the term “management control systems” has numerous meanings and it gives different ideas and meanings to different people depending on the context in which it is applied or discussed. If these three words are taken separately, each has a problem of defining itself because they all belong to a wide discipline, which has developed over the last 40-45 years.

Management was a subset of those things, which went on in an organization. Control was a subset of the total range of managerial activity (planning, motivating, coordinating, staffing, directing, controlling etc...). Systems were the subset of organizational systems which included only formal, systematically developed, data-handling system (Herath, 2006).

There are also narrower views of what constitutes MCS, separate management control from strategic control and define management control as dealing with employees’ behavior. It is people in the organization who make things happen. Management controls are necessary to guard against the possibilities that people will do something the organization does not want them to do or fail to do something they should do. If all employees could be always relied to do what is best for the organization, there would be no need for MCS” (Malmi and Brown, 2008). The MCS as traditionally has been viewed as an analytical and calculative process to

make decisions in the accomplishment of an organization’s objective. Again Professor Antony defined management control as the process by which managers assure that resources are obtained and used effectively and efficiently in the accomplishment of an organization’s goals (Herath, 2007). In summing up, the MCS is a means of gathering data to aid and coordinate the process of making planning and control decisions throughout the organization. There are a number of interrelated components that comprise an organization’s MCS such as: Strategy, strategic planning and strategic management, accountability structure, responsibility accounting (such as budgeting), performance measurement, direction, motivation, incentives (Hoque, 2003).

Management Control System as a system of organizational information seeking and gathering, accountability and feedback designed to ensure that the enterprise adapts to changes in its substantive environment and that the work behavior employees is measured by reference to a set of operational sub-goals (which conform with overall objectives) so that the discrepancy between the two can be reconciled and corrected for (Emmanuel, Otley and Merchant, 1996).

Managers’ involved in designing, implementing, and using MCSs must consider a large number of situational factors that, individually and collectively, affect either the costs or the effectiveness of various management controls. Because the range of organizational settings is large, many relevant situational factors exist. Examples of factors that affect one or more MCS choices include differences in aspects of: national culture, differences in the structure, stability, size, growth, competition, and regulation of the industry market: differences in aspects of the ownership, size, strategy, and culture of organization: differences in management and employee experience, skills and training (Merchant and Van der Stede, 2006).

A general management control contingency framework

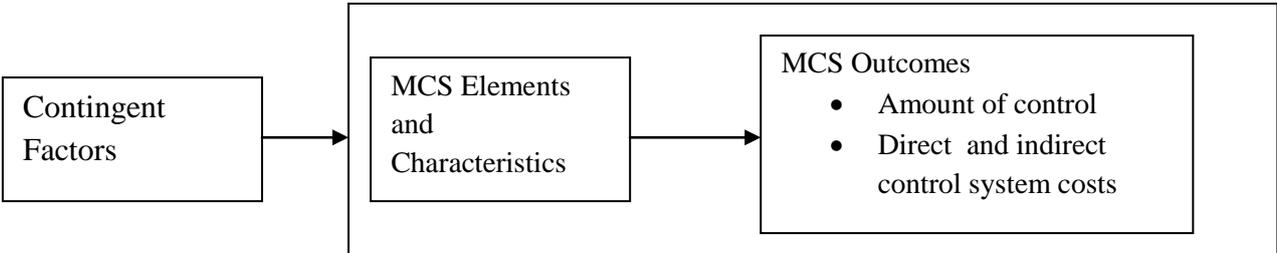


Fig. 1 Adapted from Merchant and Van der Stede (2006)

3.3 A framework of management control

Organizational Management Control System

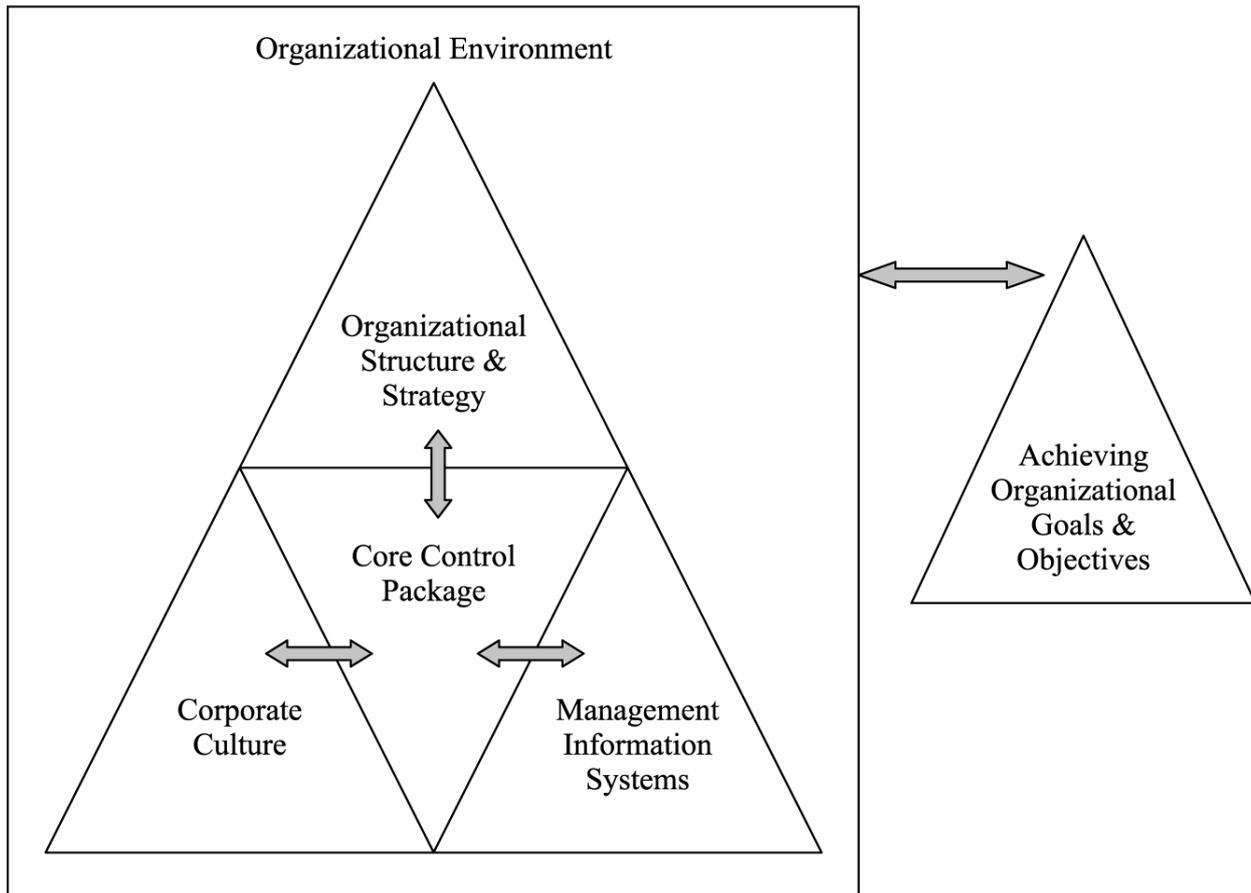


Fig. 2 Adapted from (Herath, 2007)

- 1) The large pyramid on the left MCS
- 2) The small pyramid on the right Goals and Objectives

In this figure the dimension of the organizational management control system is represented by a series of interacting triangles, which are bounded by a rectangle. The innermost triangle comprises the “core control package”. The core control package represents the core control practices and mechanisms of the organization. The surrounding three triangles represent the other components of the control system: corporate strategy and structure, corporate culture, and management information systems. Organizational structure consists of the organizational hierarchy, rules and regulations and reporting relationships while strategy represents the organizational goals and objectives and the ways of achieving them. Corporate culture is a collection of values, beliefs, norms, and the patterns of participant behavior, which

characterize the organization. Management information systems consist of the formal and informal systems of information for managers.

Furthermore, if any of the components are not compatible with the other four, “the result will be an ineffective management control system” As the overall framework depicts, there is a direct relationship between control and the achievement of organizational goals and objectives as they are articulated by both feedback and feed-forward loops (Herath, 2007).

3.4 Management Control System Mechanisms

An increasing body of literature is written about forms of control and control mechanism which can be implemented and practiced within an organization. Ouchi (1979) aiming to find out what are the mechanisms through which an organization can be managed so that it moves towards its objectives defines three control mechanism: Markets, Bureaucracies, and Clans.

3.4.1 Market Mechanism

As a pure model, a market is an efficient mechanism of control. Competition determines the price and the prices convey all of the information necessary for efficient decision-making. Ouchi (1980), claim that in a frictionless market where prices exactly represent the value of a good or service, decision-makers need no other information and arbitrary rules are unnecessary. In addition to information, prices provide a mechanism for solving the problem of goal incongruity. Given a frictionless price mechanism, the firm can simply reward each employee in direct proportion to his contribution, so that an employee who produces little is paid little, and all payments, being exactly in proportion to contribution, are fair. It is said that market cannot exist without a norm of reciprocity which assures that, should one party in a market transaction attempt to cheat another, that the cheater, if discovered, will be punished by all members of the social system, not only by the victim and his or her partners (Ouchi, 1979). Based on what is said above for the market mechanism, there is little reason for a formal organization to exist at all but in reality this is not the exact case so other form of mechanism are needed.

3.4.2 Bureaucratic Mechanism

If the market mechanism fails as a mechanism control than Bureaucratic mechanism is most likely to replace it. The fundamental mechanism of control involves close personal surveillance and direction of subordinates by superiors. The information necessary for task

completion is contained in rules; these may be rules concerning processes to be completed or rules which specify standards of output or quality (Ouchi, 1979). Ouchi (1980) claims that a rule however, is essentially an arbitrary standard against which a comparison is yet to be made. In order to use a rule (e.g., a budget, or cost standard), a manager must observe some actual performance, assign some value to it, and then compare that assigned value to the rule in order to determine whether the actual performance was satisfactory or not. In a bureaucratic control system, the norm of reciprocity is reflected in the notion of "an honest day's work for an honest day's pay", and it particularly contains the idea that, in exchange for pay, an employee gives up autonomy in certain areas to his organizational superiors, thus permitting them to direct his work activities and to monitor his performance. These steps are possible only if organization members accept the idea that higher officers have the legitimate right to command and to audit or monitor lower persons, within some range. A bureaucracy contains not only a norm of reciprocity, but also agreement on legitimate authority, ordinarily of the rational legal form.

3.4.3 Clan Mechanism

Social requirements are that set of agreements between people which, as a bare minimum, is necessary for a form of control to be employed. When socialization processes refers to the properties of a unique organization, we may refer to it as a clan (Ouchi 1979). A Clan requires not only a norm of reciprocity and the idea of legitimate authority but also social agreement on a broad range of values and beliefs. Because the clan lacks the explicit price mechanism of the market and the explicit rules of the bureaucracy, it relies for its control upon a deep level of common agreement between members on what constitutes proper behavior, and it requires a high level of commitment on the part of each individual to those socially prescribed behaviors. Clearly, a clan is more demanding than either a market or a bureaucracy in terms of the social agreements which are prerequisite to its successful operation.

The following table summarizes the above discussion:

Type of Control	Social Requirements	Informational Requirements
Market	<i>Norm of Reciprocity</i>	<i>Prices</i>
Bureaucracy	<i>Norm of Reciprocity Legitimate Authority</i>	<i>Rules</i>
Clan	<i>Norm of Reciprocity Legitimate Authority Shared Values, Beliefs</i>	<i>Traditions</i>

Table 1 Source: Ouchi (1979)

All in all, Ouchi (1980) observed that the conditions necessary for a pure market, bureaucracy, or clan are rare. Even a combination of these control mechanisms may be insufficient in many cases.

3.5 Management Control System and Strategy

In recent years there has been a growing interest in the relationship between management control system and strategy. Many articles have been written in this context claiming that management control system should be tailored explicitly to support the strategy of the business (Smith 1997). Miles and Snow have identified four types of firms in with regard to their strategy. First, defender type strategy where manager of these companies are generally specialized in the product or service type that organization produce. They have a narrow product range, search little for new products and aggressively compete on price; quality and service rarely make major adjustments to their technology structure or method of operation (Hoque 2003).

Smith (1997) characterized the planning and control systems of defenders as likely to be very detailed focusing on reducing uncertainty, emphasizing problem solving, control systems are likely to be centralized and there may be a heavy reliance on feed forward control. Control may also be achieved through creating highly specialized work roles, formalized job descriptions and standard operating procedures.

Second, prospector type strategy- companies with this type of strategy continuously search for new markets opportunity and regularly experiment with possible new trends and innovation. They have creativity as a priority over the efficiency and maintaining flexibility (Hoque 2003). Smith (1997) described prospectors as having difficulty implementing comprehensive planning systems due to the changing demands of their environment. Control systems may focus more on problem finding than problem solving, and flexible structures and processes may assist the organization to respond rapidly to environmental change and to create such change. Formal accounting controls such as standard costing, flexible budgeting, internal auditing, use of ROI and inventory control are not those that might be expected to act as an integrative device in an innovative, product-focused organization, with an emphasis on flexibility and quick responses, and after-the event control.

Third, analyzer or mixed strategy. According to Hoque (2003) this types of companies seems to incorporate both the defender and prospector type of strategy. These types of companies operate in two types of product-market domain. The first one is one that is relatively stable and the other one is dynamic.

In our opinion also the management control system applied in these types of companies contains elements from both management control system applied in defender type of strategy and also elements form prospector type of strategy.

The last one is Reactor Strategy which they classify below the defender type of strategy claiming that this type of companies has no direct strategic direction and they make no adjustments until absolutely necessary by being forced to do so by environmental pressure (Houque 2003). In our opinion management control system in these companies is somehow similar with defenders management control system; perhaps even more tightly control is applied.

More contemporary viewpoints, however, suggest that there may be a two-way relationship between the two variables (MSC and strategy). That is, MCS shapes, and is shaped by, strategy (Kober et al, 2007).

3.6 Performance Measurement System

3.6.1 What are performance measurements?

Performance measurement (PM) systems historically developed as a means of monitoring and maintaining organizational control which is the process of ensuring that an organization pursues strategies that lead to the achievement of overall goals and objectives (Brignall and Ballantine, 1995). Performance measurement is the selection and use of quantitative measures of capacities, processes, and outcomes to develop information about critical aspects of activities, including their effect on the public. Performance measurement is the regular collection and reporting of data to track work produced and results achieved (Turnock and Lichiello, 1997).

The goal of performance measurement systems is to implement strategy, in setting up such systems senior management selects measures that best represent the company's strategy. A performance measurement system is simply a mechanism that improves the likelihood the organization will implement its strategy successfully (Anthony and Govindarajan, 2007).

Performance measurement is a topic which is often discussed but rarely defined. Literally it is the process of quantifying action, where measurement is the process of quantification and action leads to performance (Neely et al. 2005). When you can measure what you are speaking about and express it in numbers you know something about it, otherwise your knowledge is of meager and unsatisfactory kind (Neely, Gregory and Platts, 2005).

A commonly cited management phrase is: what you measure is what you get (Merchant and Van der Stede, 2007). Organizations achieve their goals, that is they perform, by satisfying their customers with greater efficiency and effectiveness than their competitors (Neely et al. 2005). *Effectiveness* refers to the extent to which customer requirements are met, while *efficiency* is a measure of how economically the firm's resources are utilized when providing a given level of customer satisfaction (Neely et al. 2005).

Hence the level of performance a business attains is a function of the efficiency and effectiveness of the actions it undertakes, and thus:

- Performance measurement can be defined as the process of quantifying the efficiency and effectiveness of action.
- A performance measurement system can be defined as the set of metrics used to quantify both the efficiency and effectiveness of actions (Neely et al. 2005).

Fitzgerald identifies a holistic continuum of six performance dimensions that are appropriate to all service sector companies. The six dimensions are the competitive position of the

company, the financial performance, the quality of service, the flexibility of the service, resource utilization and innovation. The first two dimensions measure the results of the company's strategy while the last four dimensions are determinants of the company's competitive success (Sartorius, Eitzen and Nocholson, 2006).

3.6.2 A framework for performance measurement system design

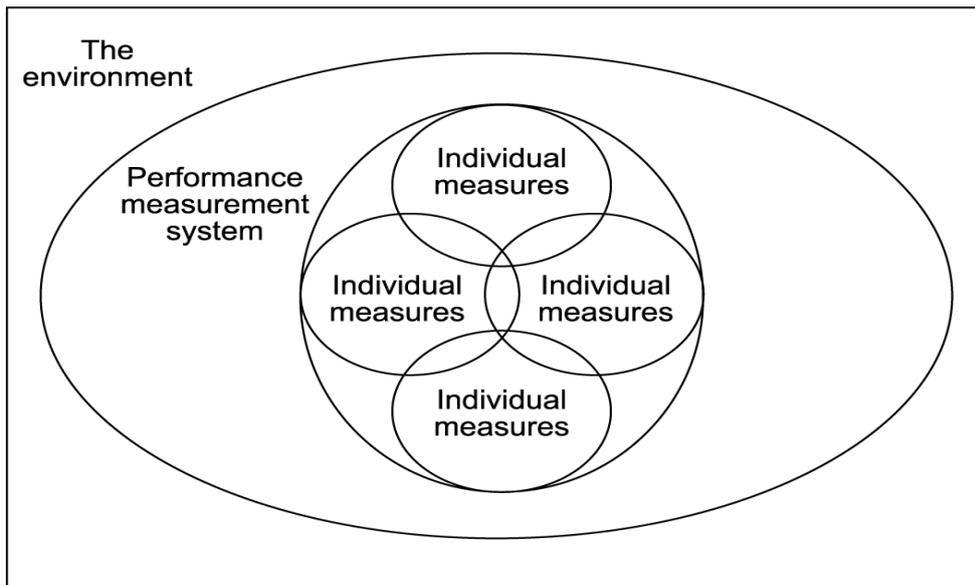


Fig. 3 Adapted from (Neely et al 2005)

This figure is structured around a framework which highlights the fact that a performance measurement system can be examined at three different levels:

- (1) The individual performance measures;
- (2) The set of performance measures – the performance measurement system as an entity; and
- (3) The relationship between the performance measurement system and the environment within which it operates.

3.6.3 What are performance measures?

A performance measure can be defined as a metric used to quantify the efficiency and effectiveness of an action (Neely et al. 2005).

Performance measures can be used for multiple purposes. Moreover, different people have different purposes (Behn, 2003). Performance measures are tools to understand, manage, and improve organization activities (Franceschini, Galeto and Maisano, 2007).

The effective performance measures allow us to understand:

- How well we are doing (correct process representation).
- If we are meeting our goals (identification of the goals and the reference standards).
- If our customers are satisfied (control of the process development).
- If our processes are in control (control organization effectiveness and efficiency parameters).
- If and where process improvements are necessary (identification and correction of problems), (Franceschini, Galeto and Maisano, 2007).

At managerial levels of organizations, both at the corporate and entity levels, job responsibilities are both broad and varied. In common jargon, managers are said to be multitasking. Reflecting that task variety, the list of measures used in practice to motivate and evaluate managers' performances is long. These measures can be classified into three broad categories. Two of these categories include summary, single-number, aggregate, bottom-line financial measures of performance and third includes combinations of measures (Merchant and Van der Stede, 2007).

We refer to two of these categories as including summary measures because the measures reflect the aggregate effects of both revenue and cost related decisions. The first category of summary measures includes market measures that are, those that reflect changes in stock prices or shareholders return. The second category includes accounting-based measures which can be defined in either residual terms (such as, net income after taxes, operating profit, residual income or economic value added) or ratio terms (such as, return on investment, return on equity, or return on net assets). The third category of measures includes combinations of measures. These combinations can involve the use of both market and accounting measures or non-financial measures (e.g. market share, sales growth, inventory turnover, and customer satisfaction), (Merchant and Van der Stede, 2007).

A performance measurement system attempts to address the needs of the different stakeholders of the organization by creating a blend of strategic measures: outcome and driver

measures, financial and non-financial measures and internal and external measures (Anthony and Govindarajan, 2007).

Recognizing that organizations compete on many factors other than cost and price, Fitzgerald et al. (1991) suggested six dimensions of performance, split between two which measure the results of a strategy (competitiveness measures such as market share or sales growth rate, and financial measures such as (cost, profit and value-added) and four dimensions which are the determinants of that strategy's success (quality, flexibility, resource utilization and innovation), (Brignall and Ballantine, 1995). Fitzgerald (1991) divides the performance dimension into financial and non- financial performance dimension: According to her the financial performance can be measured by: Profitability, Liquidity, Capital Structure, Market ratios. Non-financial performance such as (resource utilization, quality of service, innovation, and flexibility) could be measured by: resource utilization e.g. is measured by productivity and efficiency. Quality of service could be measured by: reliability, responsiveness, aesthetics/appearance, tidiness/cleanliness, comfort, friendliness, communication, competence, availability, security. Innovations as non-financial performance measures could be measured by: performance of the innovation process and performance of individual innovations. And neither last but not least has flexibility that could be measured by: specification flexibility, volume flexibility and delivery speed flexibility (Brignall and Ballantine, 1995).

Three sets of measures of service sector performance are proposed: cost, hard performance measures and soft performance measures. An example of a hard measure is the response time to a service request, i.e. a measure that is easily quantified; examples of soft measures include the attitude and appearance of the service representative and the quality of service documentation, i.e. measures that are difficult to quantify (Fitzgerald, 1988).

3.6.4 Why performance measurement?

Different purposes require different measures (Behn, 2003). Here we briefly introduce some reasons why to adopt a performance measurement system:

- Performance measurement provides a structured approach for focusing on a program's strategic plan, goals, and performance.
- Measurements focus attention on what is to be accomplished and compels organizations to concentrate time, resources, and energy on achievement of objectives. Measurements provide feedback on progress toward objectives.

- Performance measurement improves communications internally among employees, as well as externally between the organization and its customers and stakeholders. The emphasis on measuring and improving performance (*results-oriented management*) creates a new climate, affecting all the organizations aspects.
- Performance measurement helps justify programs and their costs. Measurements provide the demonstration of a program's good performance and sustainable impacts with positive results, in order to support the decision making process (Franceschini, Galeto and Maisano, 2007).

3.7 Financial and Non-financial measures

3.7.1 Key financial performance measures

Financial performance measures focus on the financial aspects of the organization. They are also called accounting-based measures, because as they are based on financial statements such as income statements and balance sheets (Hoque, 2006).

Accounting-based measures generally include measures such as return on investment (ROI), residual income (RI), net earnings or profits, earnings per share (EPS), revenue growth, cash flows, economic value added (EVA), market value added (MVA). These methods are used to evaluate or measure an organization's performance in dimensions that are crucial to its health and survival (Hoque, 2006). Merchant and Van der Stede (2006) defines financial measures in residual terms (such as, net income after taxes, operating profit, residual income or economic value added) or ratio terms (such as, return on investment, return on equity, or return on net assets).

3.7.2 Key non-financial performance measure

There is the view that non-financial measures should reflect the drivers of future financial measures. The bottom line is that traditional performance measures should be replaced with more flexible, dynamic measures. Broad criteria such as customer-based measures, product and process measures and continual improvement and innovation measures enable the organization to establish longer term improvements that are likely to lead to increased productivity and competitiveness (Hoque, 2006).

Merchant and Van der Stede (2006) defines non-financial measures such as: market share, sales growth, inventory turnover, customer satisfaction.

Performance measurement literature identifies the following common measures of non-financial performance of a business: *Efficiency measures* are those that focus on quality, time and efficiency. *Innovation measures* assesses and organization's innovative capacity, and measure such things as number of new patents, number of new products launches, process time to market and time taken to develop next generation of products. *Learning and growth measures* assess organization learning capacity to enhance organizational long term growth, and measure such things as employee intellectual capacity, employee training and development, the employee incentive system, employee turnover. *Customer measures* assess the relationship with customers and encompass such measures as market share, customer response time, on-time performance, product reliability, customer satisfaction (Hoque, 2006).

3.7.3 Types of financial measures (accounting-based measures)

Traditionally most organizations have based their managers' evaluations and rewards heavily on standard accounting-based, summary financial measures (Merchant and Van der Stede, 2007). All financial performance measures can be argued to suffer from limitations of completeness, accuracy, and neutrality. They are complete because by definition they measure only those aspects of managerial or economic performance which are quantifiable in financial terms. The accuracy of financial performance measures is spurious in that the application of generally accepted accounting principles can result in different income figures (Emmanuel, Otley and Merchant, 1991).

Accounting-based summary or bottom-line performance measures come into basic forms: residual measures (or accounting profit measures), such as net income, operating profit, earnings before interest, tax and depreciation and amortizations (EBITDA), or residual income and ratio measures (or accounting return measures), such as return on investment (ROI), return on equity (ROE), return on net assets (RONA), or risk adjusted return on capital (RAROC). These measures are typically derived from the rules defined by standard-setters for financial reporting (Merchant and Van der Stede, 2007).

According to Hoque (2006) Accounting-based measures generally include measures such as return on investment (ROI), residual income (RI), net earnings or profits, earnings per share (EPS), revenue growth, cash flows, economic value added (EVA), market value added

(MVA). These methods are used to evaluate or measure an organization's performance in dimensions that are crucial to its health and survival.

Accounting-based measures have some significant advantages. They satisfy many of measurement criteria. First, accounting profits and returns can be measured on a timely basis (in short time periods) relatively precisely and objectively. Timeliness, precision and objectivity are all important critical measurement qualities (Merchant and Van der Stede, 2007). Accounting rules for assigning cash inflows and outflows even to very short measurement periods have been set and described in great detail by accounting rule makers such as the US Financial Accounting Standards Board (FASB) and International Accounting Standards Board (IASB), (Merchant and Van der Stede, 2007).

4. EMPIRICAL FRAME

4.1 Gama or (NITC) Company

After the nationalization of Iranian oil industry in 1951 the export of oil from Iran to the market had some troubles which lead to foreign tankers banned the Iranian ship export oil to outside markets and on that time the National Iranian Tanker Company established in 1955. Then in 1970 was acquired by NIOC (National Iranian Oil Company). In 1975 according to the new Article of Association, NITC was registered as an independent shipping company while its capital shares were fully owned by NIOC. In 1976 NITC entered in a joint venture with British Petroleum Tanker Company for a period of 10 years during which extensive marine shore and trainings were successfully carried out for Iranian staff. In 1980 the war between Iran and Iraq started, and really in war times it is hard for a country to keep exports growing. NITC during Iran and Iraq war rendered a very exceptional performance as to:

- Carrying 2, 5 billion barrels crude oil per day under transshipment.
- Operation in the most hazardous war zones.
- Suffering nearly 200 air raid attacks resulting over 150 seafarers as martyred.

After the war in 1989 NITC started the implementation of Tanker Fleet Replacement Project, NITC launched a new building project for construction of 30 oil tankers with the overall capacity of 6,000,000 tones DWT to replace the old and War-damaged vessels. For implementation of this project NITC absorbed over 1.8 billion USD credit from international finance sources.

In compliance with the law of Third-Five year development plan of its trade in year 2000 NITC goes to Privatization Scheme and it was privatized.

4.2 NITC at present:

4.2.1 Strategy and different international standards as base for measures

As a result of current oil and gas developments in Iran especially regarding to the South Pars Gas Field Projects, NITC is preparing to maintain adequate transportation for excess quantities of oil, Liquefied petroleum gas (LPG), Liquefied natural gas (LNG) and petrochemicals to foreign markets and play an active role in the global energy business. The best description of NITC current position is what Mr. Mohammad Soori the Chief Executive Officer of the company stated in an interview with Shamna magazine (Internal Magazine of

NITC): *at the present, the capacity of NITC fleets is 9,600,000 Deadweight tonnage (DWT) where we have 14 ships on the process of manufacturing which will be delivered to us on 2011, by those ships the capacity of shipping will be increased to 14,111,000 DWT. Now NITC is the fourth largest shipping company of the world but after having the new ships it will be the third largest shipping company of the world. We have already a plan to use some other ships on our permanent operation fleets until three years later which will increase our capacity as the first shipping company of the world.* Based on this statement by Mr. Mohammad Soori we understood that NITC is still in growing phase (increasing capacity) and also expanding in new markets. In another statement he declared that: *we manage the company which does not rely on any significant market, the priority of giving services to NIOC is that even if they pay us less than what the other customers pay, as well as we use the high level standards we have no problem to do our services in world market. During these years, over 82 percent of our revenue is created from international market demands; the dispersal of our services is 51 percent for Europe, 26 percent for Asia (Include Iran), 15percent for Africa and 8 percent for miscellaneous markets.*

Going back what we have written above for management control system and strategy we can categorize NITC as prospector type of strategy which according to the Miles and Snow are companies which continuously search for new markets opportunities and regularly experiment with possible new trends and innovation. In our opinion the growth of NITC has a consequence in management control system and in performance measurers employed. Differences in corporate strategy should logically lead to differences in planning and control system design (Emanuel, Otley and Merchant 2007).

Mr. Naeimi answer the question about the branches and their activities in the growth time, he express: *by the expanding of our new fleets, the operational activities through the branches near the Persian Gulf have been increased visibly, the most important activities of the branches could be summarized as following:*

- Full supervision on the process of landing and disembarking crudes and derivatives, inspection and confirmation of custom evidence, paying related expenses to the related organizations due to branches.
- Supervision and cooperation on all process of joining and departing crews to the ships and reverse, like the ask for permission to leave country from Iran Immigration Board, ticketing, feeding, camping and using operational boats to support the ships supplementary needs, crews and so on.

- Close connection of the branches departments with the related department in central office to have fluent working process.
- Planning to send the elementary needs of the ships, delivery and repair the engines problems of the ships.
- In Neka branch we are going to get ready for Caspian sea market and the required capacity for those activity has been fully supported in that branch in the North of Iran.

As an interpretation of the branches activity, he believes that all the branches have the same activities as the central office, but more specialized in the operational part. NITC is a member of most international standard associations such us: P&I club, North of England and East of England, which by these associations and some other standards awards like the ISO 9001 (International Standards organization), ISM (International Safety Management), ISO 14001 (International Organization Environment), PMS (Planned Maintenance System), CBM (Condition Base Monitoring) and some other standards organizations such as: STCW, ISPS, GAC, Lloyd's Register and Green Award. In the other hand *Mr. Moosa Kazem Naeimi chief executive of NITC believes that: ` being alive and have a competitive advantages with the competitors we should keep high our level of standards in all aspects as safety, quality control, security and environmentally and NITC succeeded in this area. The ultimate goal of the company is to have no accident and no pollution in the seas, to achieve this aim, NITC used all international accepted standards both financial and operational, even though some of these standards were voluntary to apply⁶.* In our opinion being member (applying these standards) requires a hard work by any company and so for NITC and we know that these standards contain many measures (financial, non financial and operational measures) and some of these measures exclusively are compatible for shipping industry. Going through each standard will go beyond the scope of our thesis and will not be possible taking into consideration the lack of time for the thesis to be completed but we will refer to this standards when it possible and relevant for our thesis.

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⁵ <http://www.nitc.co.ir/>

4.2.2 Headquarter, branches and ships relationship (information flow)

Mr. Moosa Kazem Naeimi- chief executive of NITC describe the administrative system of NITC as a complex and broad system which have some professional units as well as subunits which could be listed as: Transaction Commission, Auditing, Safety and Quality, IT, Telecommunication, Structuring, Investigation for Investment, Planning and Public Relation, and Branches and Agencies which are a broad part of company activities. In the past four years NITC has had a rapid growth in all aspects of its activities, it has developed many new fleets and administration department has had a productive and constructive role on this, it has supported the company's market by expanding and manipulating the standards, e.g. by the accurate standards level of the company it is more reliable for foreign companies to rent the ships. Another role of administration department in the growth time is in checking and controlling all the aspects of the renting ships to the customers, they analyse all risks and then the permission for the renting of ships would be issued. Mr. Naeimi also said that: *``if we find a minimum variation or deviation from the international accepted regulations or safety, security and environmental standards we won't let them to hire ships``*. Again in our opinion clearly standards are used as a base for operational measures. The controls related to the quality of manipulating standards are done in both central and branches offices and on the deck of ships. To continue Mr. Naeimi talked about the communication links between the central office, branches, and ships, he said; *now the central office is linked with the operational branches in Kharg, Boushehr, Bandarabbas and Mahmoodabad by using point to point system which is more reliable and faster than internet connection.*

All the operators of the branches are in connection with the central office via this system and also they can use their E-mails, Intranet, and *``financial total system``* like the operator of central office do. About the telephone system he said that they have an active VOIP system. With this system where the branches phone numbers can be dialled as an internal phone number of central branches, the speed and reliability of the connection between the branches and branches with the central office will be increased. Next, the link of Sharjah office and the ships with this system is in process. Based on what is said above by Mr. Naeimi we believe that even though many tools to make more easy the communication between the headquarter, branches and ships are practised still the process of information flow is very complex due to hierarchical (central) organizational chart. As we understood even though the branches act *``independently``* within the framework of their duties, still their work is controlled by headquarter and *``a special department is supervising and coordinating the branches*

affairs`. So in our opinion the NITC more or less belongs to the Bureaucratic control mechanism which we defined it in the literature part for which the fundamental mechanism of control involves close personal surveillance and direction of subordinates by superiors. The information necessary for task completion is contained in rules; these may be rules concerning processes to be completed or rules which specify standards of output or quality. On the other part of Mr.Naeimi's interview for Shamna magazine he talked about the successful contracts of the company with the construction contractors and the key success factors in this era, he said one of the key success factors is manipulating different kinds of contracts due to different types of managing processes. In another interview Mr. Saei (*Vice Financial Manager of NITC*) categorized the activity of the financial department of NITC in two specific parts: First part; daily routine and regular activities of the financial department which are done by the ``total financial system``. These activities are listed as : payments, charging money for the internal and external branches of the company, supplier accounts, contractor accounts, branches and agencies accounts, goods & raw material accounts, salaries, and generally the standard mechanism of the regular accounting activities.

Second Part: is to manage the process of preparing financial statements for the 6 months period and final period and also defence of that in the auditing time, tax declaration and make decision in emergency cases and finding the new ways of how to encounter with the international limitation which they have through the sanction for the company, tracing the company liabilities include credits or debt, preparing reports for the boards, foreign banks and national banks to benefits by their advantages.

Mr. Saei was also responsible for improving the information flow of the company, he proved the ``total financial system`` of the company and he changed the manual system to a computerized high facility system, about this system he said; *in my opinion, financial web system of Sharjah Branch (In United Arab Emirates) is a system which everyone who deal with it should be proud of that, it is a component of fully high techniques and it can work in both Farsi and English language and links to Tehran central office. The last manual system problems have been solved such as ledgering manually and sending them frequently to central office, in other words, our financial system is a really unique system in all shipping companies, it is working in the large scale and has multi currency function, purchasing system and accrual method, facilities to send the requests directly from the ships to central office and branches to omit waste time.* Again in our opinion it is clear that NITC has improved the information flow within the organizational chart but still we believe that it is too much standardize and centralized and almost everything had to be sent to headquarter. In

continue he believes that they should have a complete and comprehensive commercial system which appropriately link to the financial system to avoid and remove the wastes and fails of the process , having more rapid reflection on the liabilities and company income, issuing the leasing invoices online, link monetary information with the financial information, controlling an online checklist of the ships fuel from their supervisors to recharge on time, developing and restructuring administrative department system.

4.2.3 NITC performance measures based on accounting standards

As far as NITC is a company which transformed its ownership from public sector company to a private sector company, the company's main attention is to achieve maximum conformity to the standards of accounting and auditing and they "don't use" formally specific financial indicators in performance measurement, while their target in financial performance measurement is to reach these sets of standards and having confirmation of independent legal auditor, Mr Saei *"In general we are not using a specific method but a combination of performance measures such as profitability on the operations comparing to the industry norms. Conformity to the audit standards is a great measure of performance to us. By reading these sets of standards we found that there is no exact point and indicators in those standards directly, on the other hand, in standard number 160 in attachment part, first chapter, part 11, has been written: "the aim of preparation of financial statements is to prepare summarized and categorized information about the financial condition, financial function and financial flexibility of entities which will be helpful for a wide spectrum of users to make a relevant decisions"*. By regarding these part of the standards of the Iran Accounting Standards we could see the word *flexibility*, it means the companies should provide information which users could easily estimate to what extend company is flexible in different financial condition, as a result we could say, although NITC "does not formally declare" these kinds of measurement, but indirectly it provide the base information for measurement indicators. In continue, in the same reference in the user part of the standards, one of the main users of the financial statements are investors of the company, *"the investors should have reliable and relevant information which represent inherent risks and return on their investment, also they need information which is helpful and relevant to make decision about purchasing, holding or selling their shares and evaluation of abilities of the entity to pay the interest of their shares."* Again on this part of the standards which plays a key role in providing financial statements and NITC comply with it, is to provide some information for return on investment and the

ability to payment of the interest , these are some of top financial performance measurement indicators which we believe NITC by conformity to these standards exactly do it. According to the Iran Financial Accounting Standards publish number 160, first chapter, part 22 ; “ *Entities managers controlling all information , due to predictable future(at least 12 months after Balance Sheet Date) to have a reliable evaluation of: to what extent the activities of the companies are constantly growing. The degree of these controls depends on the available present and past facts related to the cases. In cases where the history of the company shows that the company is profitable and financial resources are easily available, it is possible to have a bright conclusion about the continuously activities of the company without much analyses, if not, then to evaluate the extent of future of the company managers needs some other skills and tools like the effective options on current profitability and expectable, age schedule of the payments of the dues, and potential financial resourcing .*

As reflection we could easily find that it is mandatory to use some *skills and tools* on the standards of accounting in Iran which NITC comply, on the other hand, as NITC is a large and strong company with the fully financial back up by both; first , its history of activities which has a kind of monopole in Iran crude carrier and by regarding the reserves of Iran in the resources of Oil and Gas in the world, it seems that this company would not have any uncertainty in continuing its activity while Iran has enough Oil and Gas resources and second the financial power of the portfolio of its stockholders, we could conclude that NITC has no problem and question about its constant continuity in its life time activities, despite of exceptional cases, and they do not feel the shortages of these kind of measures. Although by regarding those two alternatives above, according to the Iran financial standards, the manager of the companies have to prepare supporting information to predict profitability of the company which exactly is determined in the list of financial measures of performance measurement system.

According to Iran Auditing Standards, publish number 124, principles and main regulations, chapter 20, main goals and principles of the auditing of financial statements, part 2; *the main aim of auditing of financial statements is, to make able the auditors to have a brief explanation of all financial statements have been prepared in all significant options according to the financial standards.*

And in the same time, number three of the same standards and same part it has been written; *although the auditors accepting report can increase reliability on the financial statements, but it cannot guarantee the continuing life of company and this report is not a support document for confirmation of efficiency and effectiveness of the company manager system and*

employees. The vice financial manager of NITC had main emphasize on the conformity of the financial statements and financial activity on the auditing standards, it make us to have a related explanation of the auditing standards due to performance measurement system, number two in above, has confirm what Mr. Saei said about the conformity level of the activities and auditing process, mainly for a company like NITC which has a sort of stockholders which needs all financial statements reliable to their predictions and here we can see the link of financial standards and auditing standards together in the standards. In continue, we found a conflict between those standards in financial standards fundamental criteria in financial indicators, like uncertainty in continuing and the other options which support all of financial indicator, financial indicator of performance measurement are a sort of indicators which has a quite link to the other options of performance measurement like efficiency and effectiveness ,in fact , the main reason of performance measurement system is to make sure about efficiency and effectiveness which definitely are in conflict by number 3 of mentioned part of auditing standards of Iran which is a main scale of NITC to their activities.

4.2.4 NITC Training

According to the training department targets of the NITC, the company moved through these activities (trainings) as summarized below;

- 95-STCW Course.
- Chartring for the crews.
- Turbochargers and paint courses for the crews.
- Professional languages for engines and control by using foreign teachers.
- Expanding the management skills abilities courses.
- Risk management courses.
- Observing on the tankers and training centres.
- ESH courses.
- Safety, HSE, H2S, GMDSS, PSO Courses.

According to the figures announce by the training department of NITC sum of the training is 603,151 man power for 1723 employees which shows this department reaches to its targets for the last year training planning of the company and these figures shows the option of training is one the most important options which CEO of the company care.

4.3 Summarize of NITC Performance Measurements and MCS

4.3.1 Strategy and its` consequences` in changing MCS- information flow

NITC is still in growing phase (increasing capacity) and also expanding in new markets which leads us to what we have written in the literature part for management controls system and strategy where we can categorize NITC as prospector type strategy which according to the Miles and Snow are companies which continuously search for new markets opportunity and regularly experiment with possible new trends and innovation. In our opinion the growth of NITC has a consequence in management control system of this company.

Emanuel, Otley and Merchant (1991) argues that differences in corporate strategy should logically lead to differences in planning and control system design. As a result of this growth NITC have made changes in their ``information flow system``. Manual system of information flow is replaced with computerized facility system. Branches are linked through online company network using finance software.

Mr. Naeimi talked about the communication links between the central office, branches and ships, he said; now the central office is linked with the operational branches in Kharg, Boushehr, Bandarabbas and Mahmoodabad by using point to point system which is most reliable and quick more than internet connection. Other tools of communication such as VOIP system, Intranet, Emails can be used to increase the speed and reliability of the communication between the ships and branches, branches between each other, and branches with headquarter.

Although many tools to make easier the communication between headquarter, branches, and ships are employed still the process of information flow is very complex duo to hierarchical (central) organizational chart. As we understood even though the branches act ``independently`` within the framework of their duties still their work is controlled by headquarter and a department is supervising and coordinating the branches affairs. So in our opinion based on the understanding of information flow system, NITC more or less belongs to the Bureaucratic control mechanism which we defined it in the literature review part.

4.3.2 Operational Measures

We said that NITC is a member of international *standards in all aspects such as safety, quality control, security and environmental* (ISO 9001, ISO 14001, ISM, PMS, CBM, STCW, ISPS). Applying these standards requires a hard work by any company and so for NITC and these standards have many measures (financial, non financial and operational measures) and some of these measures exclusively are compatible for shipping industry.

In our opinion these standards are used by NITC as a base measure for their success. This is supported by the fact that Mr. Naeimi with regard to renting or leasing of ships where he said that *“if we find a minimum variation or deviation from the international accepted regulations or safety, security and environmental standards we won’t let them to hire ships”*. Our interviewee (Mr Saei) asked about operational measures and duties said that capacity determine which type of ship and size should be used in order to have optimal usage of the space (ship) *“economies of scale”* and also number of crew serving on board of the ships is determined by the ship type and size and obviously a ship cannot be overmanned. Duties of each rank are defined and also the tasks are predefined.

Everyone says that time is money but time for NITC really means money taking into consideration the asset specificity of the NITC (ships). If you transport goods with a car or a truck from one location to another you are not so much worried when you are going to park your car or truck but when you transport goods with a ship which carries thousands of tons!!!...well you might be worried about that, an example is the Suez Canal where it takes a long time to pass through and there are some restrictions and delays on way. So time is really critical for NITC and shipping industry in general.

According to the speech of the CEO of NITC published in Shamna, where he believes that the effective operational activities factors, producing base on the market demands, having expectable profit in activities, on time processing and delivering, and high sales abilities, are the key factor. To sum up NITC has many operational measures which are included in standards which NITC apply and also a great attention should be paid for capacity, time and crew because of characteristics of shipping industry in this case NITC.

4.3.3 Financial Measures

About the financial performance measures we can say that taking into consideration the size and business of the company not so many financial performance measures are used by NITC. Mr Saei *“In general we are not using a specific method but a combination of performance measures such as profitability on the operations comparing to the industry norms”*. Referring the Iranian Auditing standards we found that standard number 160 in attachment part, first chapter, part 11, has been written: *“the aim of preparation of financial statements is to prepare summarized and categorized information about the financial condition, financial function and financial flexibility. Profitability measures such as return on investment are required to be used by companies subject to auditing standards. Also EPS is another measure which should be used by companies subject to Iranian auditing standards. As investors are the main users of financial statements, investors or shareholders interest is to know also how much is the earning per share (EPS), (Emmanuel, Otley and Merchant 1990), which is a ratio or financial measure that calculates the net income divided by the outstanding shares of the company.*

Since we did not receive a clear answer from our interviewee about the financial measures employed in NITC we think that profitability measures as they also argue such as rate of return on assets, rate of return on equity, operating profit margin and some other profitability measures are used by NITC but overall all we can conclude that they do not have a specific *“formal”* measure predetermined or set as a target to be achieved but instead a combination of them.

4.3.4 Non-Financial Measures

As we mentioned in the literature part there are many non financial performance measurements. Common measures of non-financial performance of a business such as efficiency *measures* that focus on quality, time and efficiency are also performed by NITC. We already mentioned before that NITC applies many standards (ISO 9001, ISO 14001, ISM, PMS, CBM etc...) with the aim of increasing the quality of its service. *Learning and growth measures* assess organization learning capacity to enhance organizational long term growth, and measure such things as employee intellectual capacity, employee training and development and so on. NITC has its own training department which trains its employee in

many fields. According to the figures announce by the training department of NITC sum of the training is 603,151 man powers for 1723 employees. These figures indicate that training of employees is one the NITC priorities. *Customer measures* assess the relationship with customers and encompass such measures as market share, customer response time, on-time performance, product reliability and so on. We know that NITC applies ISO 9001 which requires that customer satisfaction is monitored but does not specify methods. Again we refer to the CEO of NITC speech published in Shamna, when he says that on time processing and delivering, is one of their key non financial measures.

4.4 Beta Company

4.4.1 Brief description

Beta company has been registered as a company in 2002 but it had not start the activity until last year (2008), and they did not define yet the form of business association they will be engaged.

Beta is a shipping contractor company which deals with supporting services to some great shipping liners in the region of Persian Gulf. These services provide consumption goods; tugging, fuel delivering and purchasing ordered material for them and deliver on deck. The Beta Company is a medium size company with about 60 employees; this company mostly operates in the Iranian shipping contractor market.

4.4.2 Beta Strategy and development

This company is yet in their starting phase of operations and the strategy is still developing by the CEO and CFO of the company, strategy which is not finalized yet. The company is looking forward in a near future to be fully operative and with a clear strategy for the company.

4.4.3 The flow of information between departments and branches

Since this company is a medium size company also the hierarchical level of company is flatter than any other large company and the supervision is under control of the CEO of the company. As we said before that the company is still in the start up phase and obviously there is an atmosphere of configuration and consolidation. The organizational chart of the company is based much more in between the formal and informal information flow or in other words it is based in the bureaucratic and clan control mechanisms since the CEO vision is against any total bureaucratic system and according to him there should be a hierarchical and linear mix together. All departments have a linear relationship in between but these departments work under the supervision of CEO which again we can conclude that also Beta belongs to the bureaucratic control system. Concerning the financial information flow the company has a contract with another software developer company where the software now is just working as testing software and branches will be linked to this software. According to the responder the financial department will be kept independent from other departments and branches that information will be sent from the branches to the related departments and than information are

sent to the financial department. According to the responder the financial information should be kept confidential even for other departments and it seems that information flow has a long journey to do even we have considered this company as flatter one but this is to confirm that the company definitely is a bureaucratic control entity.

4.4.4 Beta performance measures

Again we relate the performance measures with the consolidation period that Beta is going through, performance measures or indicators that company intends to use are mostly the residual measures of performance like residual income and return on investment or the profitability measures such as return on capital employed and net income. Anthony and Govindarajan (2007) argue that economic performance or profitability performance is always measured by net income (e.g. the income remaining after all costs). According to them there are also other types of profitability measures such as: contribution margin, direct profit, controllable profit etc...So Beta has not yet provided any financial statement and they have not measure any kind of financial ratios based on accounting information.

Beta on non-financial performance measures is based on time and measures like service lead time and other time based measures will be used by them. Concerning the learning and training activities the company does not have any special department or perspective on this but they are looking to hire knowledge and experienced employees in order to minimize the training expenses and the rest of the activity is left to the future developments.

Regarding the customer perspective or customer relationship the company is oriented more on the quality of services conform international standards and on time services delivery in order to maintain the customer satisfaction at the desired level. Also the CEO designs a kind of question sheet to ask them for the degree of satisfaction on the related activities. The administration department is in charge for setting standards based on the international related standards and achieving the maximum conformity to the international related standards is another variable which should be considered.

4.5 Alpha Company

4.5.1 Strategy and MSC

Alpha is a freight forwarder company. There are many explanations in defining what is a freight forward company and one simple definition is that Freight Forward company ``is the one which forwards freight from one point to another point``⁷

The head of accounting department (our responder) define Alpha as `` *the company which I am working on, is a freight forwarding company, we stand between the clients and the carriers, we buy their hazards and sell a sort of freight services to them* ``

Alpha Company started its activity near 15 years ago and now is sound and well established company. As we understood from our interview with accounting manager of Alpha, it is expanding its business and ``growth strategy`` is seen as a factor of surviving or beating its competitors.

About the MCS in growth time the responder said `` *In some cases, in the growth time, we even need to create another part (department) in our company, which I as financial manager should provide a report for the CEO of the company to give him an estimation on the increasing capacity costs for us, training expenses, recruiting expenses, and new salaries for new employees* `` He believes that strategy is linked with MCS employed within a company. *I believe, the growth strategy of the company is linked (impact) with the ``annual plan sheet`` of the managers, we should move in favour of the annual activity plan of the management of the company.*

Asked about their reaction in high competitive and ``exceptional environment`` that could reflect on organizational changes he said: *At the first step, in exceptional environmental changes, each chief of departments start to prepare a report base on a brief prediction on the effect of that change on the company condition, after preparing the reports of the effects then we have a meeting with the CEO of the company to find the ways to jump over or pass the exceptional problem together by looking to all aspects of the problem, to have bright picture of the problem and its accumulative effect on our job. The responsible person who make decision about these option is CEO of the company , but his final decisions is based on his personal idea and also the reports which we make for him about that certain case. After finalizing the decision against that exceptional case and announcing the way to overcome it, each chief of the departments is in charge to arrange his or her department due to move on*

⁷ <http://www.a-mcargo.com/gpage.html5.html>

the way which is established in the meeting and by this way of actions all employees are informed by their seniors in charge to move collectively in favour of company benefit..

All in all, based on the responder we can see that strategy and company ``environment`` do effect Management control system within a company.

4.5.2 Information Flow

Regarding the information flow, relationship between the departments in Alpha company in order to understand what kind of structure they practise in this company, the responder said that they have a formal organizational chart which support the information flow up and down and vice versa but employees are also allowed to exchange information ``without`` fulfilling the organizational chart: *we have a written organizational chart, but in order to remove waste time each employee has permission to trace his or her duties with other departments colleagues. As an employee of accounting department we have to have a close relationship to the other departments, the ``rules`` (communication form) will be suggested by the responsible person usually the head of each department to the CEO. After his confirmation, this ``new`` communication way will be formal and will be announce by each head of departments and executive to their subordinates.*

Furthermore the responder said that their organizational chart of the organization depends on the situation in which the company is: *in general cases our organizational chart is linear but in the time of tensions and any important option it becomes hierarchical. In fact, we have a flexible organizational chart to flow information to omit wastes but any head of departments should be informed for the activities of its subordinates. In the time of the tensions between the subordinates of two department, the problem will be solved by a meeting between the subordinates and related head of departments, if not then we would have another meeting with the CEO of the company and he is responsible for the solution of the problem.*

They have no administrative computerized system to connect departments with each other or with subsidiaries. Information, letter requests are delivered manually and some important information which will be sent via e-mail they have to do a CC (Carbon Copy) to the CEO of the company. Branches sent their requests by fax or e-mails to responsible person in central office. E.g`` *in the case of the projects costs and petty cash expenses reports, branches send the list of the expenses to the operational department (they are mostly organized and categorizes as operation department employees), after confirmation of the chief of operation, the cover letter of the costs and the related documents will deliver to the financial department to record on financial software of company``.*

Formally, branches has no connection to each other, in fact, central office play the role of information hub for all branches, but in the operational cases and arrangements, sometimes the different branches needs cooperation together like the projects, which the port of discharge should be in connection to final destination.

About empowerment of the branches, mostly they have to work under supervision and control of operational department which is main responsible for the branches activities, in some cases where the branches needs to make a quick decision about the process, they do it , but they have to have a brief report to their responsible department in the central office. In the time of paying costs of the projects the branches have to have a close relation to both financial and operational departments.

In our opinion, based on what is said above Alpha is in between clan control system and bureaucratic one. Clan mechanism control system as defined by (Ouchi, 1985) social requirements are those that set the agreements between people which, as a bare minimum, is necessary for a form of control to be employed. Referring to the responder's answers we can find out that these social requirements are present in Alpha Company but at the same time there are also formal rules which are a characteristic of Bureaucratic form of control mechanism. As Ouchi (1985) claims the conditions necessary for a pure market, bureaucracy, or clan are rare.

4.5.3 Financial Measures

Equity ``protection`` is the priority of Alpha company and they use measures such as ROI, RI, ROCE and so on to ``protect`` it: the responder: *As far as we are a private sector company, we have to protect our equity, to protect it we need some controlling options on our current performance. We do that annually and sometimes periodically. We use some of the measures like ROI, RI, ROCE and a sort of the ratios like the acid ratio and current ratio to have updated view of our profitability.*

He said that there is no standard figure (percentage) to be achieved but the average of the best condition of the company in past beside the future targets and objectives of the company are scale for present measures

``In the late of each year all head of departments have to provide a report of their activities for the CEO of the company to gives him an accurate report of present condition of the company, based on these reports key success factor of the company and weak points are recognize and then based on the vision of the company the CEO of the company prepares a

plan of the company activities in cooperation with the head of departments and at the beginning of the year this plan will be communicated to the employees of the company` (responder)

The results of these measures are compared with the targeted result and the responsible person for these comparisons is CEO of the company. *He has a structured schedule for this comparison; sometimes these results of each department are confidential for the other departments, mean while just he knows to comparison. In the comparative paper which the manager of the company has, he has a level of accepted variances from the fixed amount and options on the start of the year, then , in the time which a specific department has a big departure from the variances they would make a meeting to find the reason and causes of the variances and find a way to eliminate these faults with the manager of the company , for the plan of the next year first priority will be rectify of the causes of the fails for the past year and then meet the new targets and objectives (responder)*

Based on the responder answers we can say that Alpha does have financial measures which are formally practised in this company and even down to individual measures which is somehow contrary to what we were expected concerning the size of the company.

4.5.4 Operational Measures

Operation department has a schedule for the performance of the employees including other departments where their activities and the results of their activity could be measured by some data like: on time services to the customer, sending and receiving the cargoes on time, cargoes positions, expenses and project costs control according to the estimation of sale department, financial department and operation department.

``In the case of preparing periodic financial reports to management and financial manager also we have some scales to measure the efficiency and also in payment options, we have to have a very close relationship to the operation and sale department and traffic, to have on time and exact payment base on the terms of each contract and each project``

Although mostly in sales department, the operational measures are changeable depending on the conditions of the market: *`` while there is a exhibition about the gas and oil in our region they try to provide some services options to absorb them or as another illustration in wood industry fair the sales department emphasize will be more on the experiences of the company in the exact industry area to absorb them all, and testimonial of our previous clients are so important option for them to absorb new clients.*

Also other department like financial department activities being on time beside minimum fails is so important: *in different parts of the financial department the effectiveness of our colleagues measures based on the nature of them activities, for example those who are responsible for the ledgering and recording data on our financial software system have their own measurement system to show to what extent they did their job accurate like the percentages of the fails which find by the other colleagues and the amount of corrected ledgers in financial system.*

In sale department measures such as the number of the projects which are absorbed by sale managers, achievability of targeted number for a year, to what extent their Performa's concluded to the final contract, and how many agencies for the foreign freight forwarding could they absorb: *absorbing agencies in freight forwarding is one of the important option of our activity in this field of activities (responder.)*

For administration department, controlling the days of each employee, preparing and controlling on attendance sheets for each employee and report to financial department to make effect of those on their salaries.

4.5.5 Non Financial Measures

In the case of customers satisfaction measure they have question sheet for all of their customers and they send it directly by the administrative department to the clients and after receiving the client reflections on their activities, a handed copy of that reflections and suggestions would be send to the CEO and each head of departments to measure to what extent their customer are satisfied by their job. Also direct contact can be made by their clients for any request or any unsatisfied service deliver to them: *beside this question sheet, all the clients are free to contact to the manager of the company to reflex their ideas while the processes are ongoing.* The measuring of customer satisfaction depends on the terms of the contracts and the level of responsibility of Alpha Company to the clients. *while we are offering some services as the agency of another foreign company in Iran, the responsibility of us is limited to just the related agency not clients but in the case of full package project services we are doing measurement of our customer satisfaction, beside of these we have some offers for our fix clients to keep them for ourselves, like some discounts on project price, long term payments, creditable payments and give detail information of the project process.*

4.5.6 Training

Another important activity of the administrative department is to find training shortages of the employees in performing their jobs. Some times by expanding their activities of the company they need to upgrade the knowledge and skills of their personals to manipulate their new activities. Sometimes new employees are hired for the new position as a result of expansion of the business.

Expenses are calculated and the CEO permission is required: *``the administrative department provide a schedule of expenses to train the present employees and beside it they prepare a forecast of the new employee salary in proportion with their job position. A comparative letter will be sent to the CEO of the company for final decision.* In some cases like the financial department, they need to keep their employees upgraded for tax regulation purpose and some new accounting principles and rules: *``we have a contract with one of the famous training companies in accounting and we train our personnel to that company for short time training on that exact topic which we found it is our weak point.* Every quarter of the year they have an examination of their financial personnel in order to reach the accurate level of knowledge in accounting methods, bookkeeping and related tax and insurance regulations.

4.5.7 Reward system

All the staffs have to finish their daily activities on that exact date, if they could not finish their job on time and if it bears a loss for company, they have to pay that loss from their own salaries. Beside of these, Alpha Company has a reward offer for all departments with regard to different projects. For the sale department, if all targets are met or they go beyond the targets which they set, they won percentages of the profit for that particular project as rewards. For operation and traffic department, also if they could deliver the freights to destination earlier as customer requested, according to the contract with the clients, the company benefits by a kind of reward (payment in excess) from the clients and a percentage of that reward will be given to the operation and traffic department. In the case of financial departments the nature of rewards are different, they have some rewards for on time collecting the dues of the company (acc. receivable), on time invoicing and collecting of project expenses and so on , but these are not defined in percentage term e.g. there is no predetermined figure for how much account receivable should be reduced. The amount of rewards depends on the CEO and financial manager of the company, the Company also practised different penalties for non completion of duties by the employee.

5. ANALYSIS and COMPARISONS

5.1 Comparison on financial measures

NITC or Gama Company is a large organization and complex due to asset specificity, even the company is large they base their performance more in measures like profitability measures such as: net income, another measure that they use is earnings per share (EPS) which measure is in interest of shareholders of company, then return on investment and return on equity are measures that they employ, but they do not focus on measures like Market Value Added or Economic Value Added as new concepts of measures or they do not employ any kind of balanced scorecard tool but some of the measures that they do on financials, customer and learning and growth dimensions are obvious. They also rely in the conformity with accounting standards and auditing and they refer to these standards as measures of company performance. As a company with around 4000 employees they do not employ measures e.g. down to individuals. In comparison with Alpha Company which uses measures like residual income measures and return on investment and this is important due to equity protection, Alpha employs measures also down to individual employees and this perhaps due to the CEO of company who has studied abroad, in Europe and has brought some new concepts in the company, this perhaps can have effect because of culture and traditional way of education in Iran. The measurement also happens at the departmental level where at the end of year each head of department have to provide a report of their activities and these should be sent to the CEO and based on this report key success factors are recognized. Fitzgerald (1991) suggest that there two types of performance measure in any organization, those that relate to results (competitiveness, financial performance) and those that focus on the determinants of the results (quality, flexibility, resource utilization and innovation). This suggests that it should be possible to build a performance measurement framework around the concepts of results and determinants (Neely et al, 2005). Concerning Beta this company is still in consolidation phase and there are no measures employed but they intend to use measures like profitability measures such as net income. This company in comparison with the small one and large one it is in start up phase and control system like budgeting would be good tool for them. In this case it is kind of strange that the smaller company use much more measures than the larger one this perhaps the smaller company is focused in performance and competitiveness than the largest one which is a kind of monopoly in the market and measurements does not direct them so much on their activities.

5.2 Comparison on Operational Measures:

The first case study company which is the largest company in the categorization of our thesis is NITC, in operational measurements of the company, the target is to have maximum conformity by the international accepted standards to keep their customer survive and satisfy. There are a sort of the different standards which we listed them into the part of the interview include safety and environmental international standards, quality of services, quality of the maintenance, condition base monitoring. The successful history of the NITC in the international shipping industry awards like the Sea Trade award which they won for last year and having such a great customers like the shell and NIOGC (National Iranian Oil and Gas Company) shows that they could achieve to their planning to conformity to the standards in operational measures, in addition the option of time is so important for the shipping companies like the NITC, on time delivery , charging and discharging the crudes are so important for them and by manipulating the rigorous controls of the both operation department and business department on the function and activities of the tankers and by using on time services of the branches, they achieved this goal successfully , on the other hand, we believe lack of some formal measures like the variances measures , include labor efficiency, material scrap and service output to all service, is a result of the nature of the organization of the company, looking to result of entity as a whole and somehow each department instead of each employee performance measures, it means, we believe individual measures should be set on NITC company in the future , while they are under growing time.

In the case of the second company which we categorized as medium size company, they just started their activities meanwhile they need a close and compress planning on their tugs schedule in the customer aspect to be able to pay the mortgages of the tugs value paid which mostly their measures have more focus on time base measurement indicators, beside this, the company is going to structuring and as their financial manager said, we have to regard on the growing on the capacity of the company according to the strategy and vision of the company goals, they have to have a very rigorous measurement control in the future as we predict they would have, the owner has studied abroad, he studied in Europe in logistics and transportation which has a good training system in this spectrum, and the history of the third company also shows us they will have an almost complete sets of the standards and planned measurement , but now, we have nothing presets indicator as performance measurement indicator to judgment about their style.

And finally the third company and smallest company have more measures in comparison with the other case companies which we studied as we did not expect. Almost in all aspects of the controls they have some measures, like the operational option, reward system, customer satisfaction, the most important option in the measurement is focusing in both individual measures and result measures in terms of working as a team in evaluating of each department activity by the CEO of the company, another important option of the performance measurement system of this company is all the measures and indicators are based on a final destination for whole company, it is an obvious symbol and symptom of collective approach in their activities, the other advantages of their operational measures is their time base schedule of the operation department to control the condition of the cargoes and ongoing processes and some links between the operational department and also sale department, the expenses of the projects made by financial, sales and marketing and operational departments to have tight control on the expenses and cost of the project, also we found a good link between the operational measures and their reward system is what we could not find in the information which we have had about the other case companies. On the other hand, their branches are working closely under control of the central office and they have no free space to move or transform data with the central office, in financial data, they have no direct access to the financial system. the other problem with the performance measurement system of this company could be the afraid of losing job on the employees of the company, every time they are working under pressure and threats of losing their job, it will reduce the efficiency and effectiveness of the individuals in the company, they would avoid of any flexibility and creativity on their jobs and their all actions should be those which dictated from their chief which would be limit their growing in internal new ideas due to do better their jobs. Although time is one of the most important options of the indicators in transportation companies but we believe, as most important base of the measures in operational department and the base of the rewards are the time of delivering the cargoes to the destination, they encounter with the danger of sacrificing quality of process in favor of reaching accepted time of delivering, In fact the indicator should be set to meet all the aspect of services like the environmental issues and quality of the service not only the time of delivering.

Financial Indicators comparison

Companies	Gama (NITC)	Beta	Alpha
Ratio based measures			
Return on Investment (ROI)	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
Residual Income (RI)	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
Return on Capital employed	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
Return on net assets	<i>Yes</i>	<i>No</i>	<i>No</i>
Return on equity	<i>Yes</i>	<i>No</i>	<i>No</i>
Current Ratio	<i>No</i>	<i>No</i>	<i>Yes</i>
Accounting based measures			
Profit margin	<i>Yes</i>	<i>No</i>	<i>No</i>
Earnings per share	<i>Yes</i>	<i>No</i>	<i>No</i>
Profit per Employee	<i>No</i>	<i>No</i>	<i>Yes</i>
Net income after Tax	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
Operating Profit	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
Residual Income	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
Economic Value Added(EVA)	<i>No</i>	<i>No</i>	<i>No</i>
Market Value Added (MVA)	<i>No</i>	<i>No</i>	<i>No</i>
Operational measures			
International Standards	<i>Yes (ISO 14001)</i>	<i>No</i>	<i>No</i>
Environmental, safety, quality of maintenance	<i>Yes (Standards)</i>	<i>No</i>	<i>No</i>

Table 2 Financial indicators

5.3 Comparison on non-financial performance measures

Taking into consideration that three companies we have interviewed are different in their size and some of their operations, also regarding non-financial performance measures the differences are obvious.

Starting with the National Iranian Tanker Company (NITC) which we consider it as a large company, they use some financial and non-financial measure of performance, these measures are the best indicators for the company and shows if the company is in the right track or it deviates from objectives. NITC as a shipping company uses efficiency measures of performance and focuses more on quality, on time delivery, training and growth and most important they focus on customer satisfaction measures. Hoque (2006) defines efficiency measures those that focus on quality, time and efficiency. Concerning quality NITC is awarded by the international organization on standardization (ISO 9001) and some other ISOs like the environmental standards and since they are awarded that means that NITC really cares about quality and performance is based on quality they deliver. NITC is a large company with about 4000 employees and as an international company they also measures the employees training and learning performance and according to the figures announced by the training department of NITC sum of the training is 603,151 man power for 1723 employees. On time delivery is measure that NITC uses since ships must deliver on time and since ships carry goods that are internationally distributed so time is a great indicator that tankers must reach the target place on time. The most important is customer satisfaction it is obvious that measuring of satisfaction is based on ISO 9001 which requires monitoring customer satisfaction but it does not specify methods. In comparison with Beta which is going through the configuration process and start up phase the company intends to be focused much more on time delivery, customer satisfaction but they do not do or they are not based on any measure regarding the learning and growth or employee intellectual capacity or employee development, they based more directly on skilled and experienced people to hire and their intention is in the future to start with a specialized department on training. Beta relies also on measures such as service lead time delivery and since their nature of business is also as a contractor, time is an important measure of their performance. That means that when you deliver on time customers will be satisfied with the delivery and performance of the company is increasing or it is at the desired level. Concerning the customer satisfaction measure Beta is not awarded from any international organization but they work conform those standards, and another way that they tend to measure customer satisfaction is that directly CEO prepares a question sheet and asks customer for the related activities they carry on. Alpha which is a

small company at the current activities but it is growing and it is the company that focuses very much on performance measurement and especially in non-financial performance measurement. Their main measures that they use are customer satisfaction and training. Customer satisfaction as an important measure of performance is measured by simply a question sheet and after the customers reflections the a copy goes directly to the CEO and each head of departments who evaluate the customer responses and see if they have to change anything or continue on current trends. In another way that they measure customer satisfaction is also direct contact of manager with the customers. Also Alpha is not awarded with any of international standards like NITC but it is obvious that their main indicator of performance is customer satisfaction. Regarding the learning or training measures they do this kind of measure by training employees' mostly in accounting but one of the accounting companies and at each quarter there is an examination in order to reach the desired level in accounting methods, bookkeeping, tax and insurance regulations. This is related to incentive system and the salary of the employee depends on the position and skills that he or she shows. So as a conclusion or summary we can say that the three companies as the main indicator of non-financial performance has customer satisfaction, now the difference in their size leads us to think about training measures and their way of doing training where beside NITC the other companies has not a specialized department on training of employees but most of training is done outside the company or it is outsourced. NITC in comparison with the two other smaller companies have a reward on quality, environment and safety so they focus more also on these measures than other two companies which are not awarded from any international organization and the non-financial measure such as customer satisfaction is measured simply on a questionnaire and in some cases direct contact with them, this is due to their small operative activities and a small number of customers so the contact could be also direct from the manager as in the case of Alpha. This show that three companies have a much more focus on measures like customer satisfaction and on time delivery but there is less focus of the two smaller companies on training and learning measures such employee training and development or employee intellectual capacity.

Non-Financial Indicators comparison

Companies	Gama (NITC)	Beta	Alpha
Efficiency based measures			
Material efficiency Variance	<i>Yes</i>	<i>Yes</i>	<i>No</i>
Ratio of services output to total output at each service process	<i>No</i>	<i>Yes</i>	<i>Yes</i>
Service Lead time	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
Quality and Time	<i>Yes (ISO 9001)</i>	<i>Yes</i>	<i>Yes</i>
Learning and growth measures			
Employee training	<i>Yes</i>	<i>No</i>	<i>Yes</i>
Number of new employees and their learning background	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
Employee development	<i>No</i>	<i>Yes</i>	<i>Yes</i>
Reward or penalty system	<i>Yes</i>	<i>No</i>	<i>Yes</i>
Labour efficiency variance	<i>No</i>	<i>Yes</i>	<i>Yes</i>
Customer based measures			
On time delivery	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
Customer Satisfaction	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
Customer response	<i>Yes</i>	<i>No</i>	<i>Yes</i>
Market share	<i>Yes</i>	<i>No</i>	<i>No</i>

Table 3 Non-financial indicators

5.4 Summarize on performance measures of three companies

Neely et al (2005) highlights the fact that a performance measurement system can be examined at three different levels:

First, individual performance measures; where we can conclude that over all there is a lack of performance measure down to individuals in all three organizations especially NITC where almost no individual measures are employed. In this context, Alpha organization takes the lead with many individual measures which makes its employees motivated to meet their targets. Second, performance measurement system as an entity; where we can conclude that there is performance measures employed in respective organizations but we would like to emphasize that Beta Company intends to use performance measures that they are going to use in the future because the company is still in consolidation phase.

Overall, our expectation that the largest organization will have more performance measures does not stand because Alpha organization which is the smallest company has almost the same level of measures with NITC excluding that NITC applies many international standards such as for quality, safety, environment and so on. This shows that Alpha is a small entity and due to this it makes the company more comfortable on measuring individual performance of employees. Regarding non-financial measures as you can see from the table customer satisfaction is a measure that three companies care about and use it. Beside this also on time delivery is a very important indicator of performance for three companies and three companies are engaged to have on time delivery services.

Furthermore, we can conclude that none of the organization applies new comprehensive performance measurement concepts like Balanced Scorecard (BSC), Economic Value Added (EVA) or Market Value Added (MVA), so their performance measurement is based almost complete focused on accounting based measure and especially on residual measures.

5.5 MCS in three companies and the role of PM

If the aim of control was defined as to keep things on track and to prevent ``major, unpleasant surprises (Merchant 1987) then control process in ``investigated`` organizations shared some common practiced: First of all, all organizations regardless of their size, strategy, ownership, organizational culture and so on, had their organizational chart where the flow of the information have to go through these charts where different type of reports where prepared and then ``scanned`` by managers in charge in order to keep them well informed about the developments in respective organizations and at the same time to provide them with the

opportunity to take timely and corrective action when needed. Forms of control and control mechanism implemented and practiced within an organization in our opinion are best explained using Ouchi (1980) control mechanisms: market, bureaucracies and clans. We used information flow as an indicator in defining which organization belongs to which control mechanism.

In our opinion, NITC which is the largest organization has also the largest and most complex information flow system with many units as well as subunits in comparison with the other two organizations. Different software's and other tools of communication are employed to make communication more fluent but still not everyone is free to use these tools because a particular person should use particular channels of communication in order to be controlled by its superiors. All information are formal and should follow the ``communications channel`` which are determined by many rules and obligation by organizational chart. NITC administrative system is complex and broad; we categorize NITC as highly centralized company respectively within bureaucratic type of control mechanism which involves close personal surveillance and direction of subordinates by superiors. And the information necessary for task completion is contained in rules. In a highly centralized organization most decision at any importance are taken centrally with middle managers being constrained by various rules, procedures and policies that govern what they are able to do (Emmanuel, Otley and Merchant, 1991). In contrast, in the other two organization information can be exchanged also informally and overall more ``friendly`` environment reigns in these organizations. We categorize these two organization (Alpha, Beta) as having both elements of bureaucratic and clan control mechanism. In Alpha Company there is a formal organizational chart which support the information flow up and down and vice versa but this organizational chart tightness of the organization depends on the situation in which the company is meaning as long as business is doing well and no big issues confront the company, the organizational chart is linear but when big issues face the company than the real organizational chart comes to light. In our opinion, Alpha has the element of controls both form clan and bureaucratic control system and it is much more ``linear`` than NITC. Beta Company is still in the start up phase and obviously there is an atmosphere of configuration and consolidation but CEO vision is against any total bureaucratic system and according to him there should be a hierarchical and linear mix together. Again like in the case of Alpha, Beta element of controls both form Clan and bureaucratic control system. All in all, Alpha and Beta are decentralized companies meaning that decisions are taken also by subordinates managers rather than just senior manager. Emmanuel, Otley and Merchant (1991) argue that different forms of

organizational structure (centralized or decentralized) will require different type of management control system to enable companies function effectively. In our opinion, NITC as a centralized (bureaucratic) company where the decisions are taken centrally with middle managers being constrained by various rules, procedures and policies that govern what they are able to do there is no strong reason to employ many performance measures in this company especially individual performance measures since everyone has to perform its “standardized duties”. This is supported by the fact that NITC has no reward system based on performance of employees but simply fixed salaries.

On the other hand, in Alpha and Beta company which are more decentralized companies than NITC where the decision are taken also by subordinates managers rather than just senior managers the situation with regard to performance measures is different. More performance measures are employed especially more individual performance measures. Even though Alpha Company in terms of number of employees is much smaller than NITC it has many individual performance measures to motivate its employee achieving company targets. This is supported by the fact that Alpha Company has developed a comprehensive reward system where many forms of compensating its employees are employed.

In our opinion, based on what we found in these three companies we can conclude that in centralized companies where decision are taken by managers at the top level in general there is lack of performance measures especially measures down to individuals in contrast with decentralized companies where more individual but also to some extent entity performance measures are employed.

An increasing body of literature is written about other factors mostly called as “environmental factors” which have an effect on management control system and performance measures employed in a company. This factors which could have had an effect on management control system and performance measures of our three investigated companies are considered in the next section.

6. DISCUSSIONS

6.1 Effects of external environment

Regarding competition of the largest company NITC we can say that their activities operate in almost complete monopoly in Iran. According to Simons (1990) increased in competition increased also in use of management control procedures. But in case of NITC this leads us to think that NITC as a large company has not so much control tools in use e.g. performance measures, even they rely on measures like profitability measures such as residual income or net income and earnings per share measure, and those non-financial measures such as customer satisfaction, training, quality, on time delivery and so on, but we refer to measures like e.g. Balanced Scorecard, EVA and MVA, their measures are already based on accounting such as net income. In the other way the smallest company Alpha and also medium size Beta they compete in a very competitive environment, we refer to Alpha which uses many measures as control tools, this is due to competition which they face and this also this is according to Simon's (1990) argument who argues that higher competition higher use of management control procedures. Much of the work conducted in the late 1950-1960 noted that particular forms of organization were best suited to particular environmental conditions. Also when we have to do with the Iranian environmental conditions, which means that Iranian government has a major influence on the businesses and companies in Iran. Lawrence and Lorsch study suggested that different organizational principles were appropriate in different environmental circumstances (Emmanuel, Otley and Merchant, 1991). The fundamentals of the relation between environmental (uncertainty) and MCS lie in the core of early contingency theories of organizations. The simplified idea is that the environment shapes organizational structures and that organizational effectiveness or performance depends upon the match or fit between the organization and its environment (Jänkälä, 2007). So we related this with the situation in NITC and Alpha Company where it seems that competition and government influence are two factors that impact their activities.

Gordon and Miller (1976) identify three main environmental characteristics to effect control system: **Dynamism:** or rate for change - high dynamism requires frequent control reports incorporated both financial and non financial information, which in case of Alpha and Beta shows this kind of dynamism. **Heterogeneity:** number of different product or service market served will lead to a decentralized control system, again the case with Alpha and Beta, what

for NITC we cannot argue that. **Hostility:** where more sophisticated MSC is needed (Emmanuel, Otley and Merchant, 1991).

Taking into consideration the external environment that the three companies are operating we can reassert that the impact is paramount. The largest influence that “government” has over NITC and lack of strong competitors shows that they operate in at most complete monopoly what also leads them to have a kind of comfortable situation in the market. Concerning the other two small and medium companies, they operate in more a competitive environment and also they much more care about their performance. NITC which is still a part state own company and it is expanding and growing and operates with 25 supertankers which can hold two million barrels.

Tymon *et al.* (1998) have also highlighted and clarified that the external environment is comprised of two main dimensions: first, the general environment that includes sectors like the government, socio-cultural as well as economic conditions and technology, and second, the task or internal environment that involves sectors like industry, raw materials, markets and the finance sector. ⁸In 1990 the government of Iran has been resolved to privatize a number of state-owned entities; the overall economic structure has still been overshadowed by the massive public and semi-public sector (such as foundations). Existing laws and regulations are among the most obstacles of privatization. One of the key obstacles to successful privatization has been the lack of accurate information about the ownership structures of those entities that were offered to the private sector. By all we can see that government in Iran is very influential on the companies and especially those companies that deals with the crude oil shipping. As other environmental issues that are considered are the current financial crises, where the world demand for oil and sub products has been decreased and the effect is also decreasing in the price of products and services. Another uncertainty is also the Gulf of Aden where new crises are revealed as the pirates try to deprive the ships, other issue is changes in production of oil and this really affects NITC as the largest company in the region.

⁸ www.worldbank.org

6.2 Management Control System and Culture

The idea of management control systems operating as a package has existed many years before and there have been regular calls to study the phenomenon because management control system does not operate in isolation. The concept of a package points to the fact that different systems are often introduced by different interest groups at different times, so the controls in their entirety should not be defined holistically as a single system, but instead as a package of systems (Malmi and Brown 2008). Part of this packages system is the culture element which influence the other elements of package: planning, cybernetic, reward/compensation, and administrative.

Culture may exist as a context for an organization and may at times be beyond the control of managers (Clegg et al., 2005), culture is nonetheless a control system when it is used to regulate behavior. Flamholtz et al. (1985) defined organizational culture as “the set of values, beliefs and social norms which tend to be shared by its members and, in turn, influence their thoughts and actions” (Malmi and Brown 2008).

Malmi and Brown (2008) claim that the impact of values on behavior, institutionalized through belief systems, works on three levels. The first is when organizations deliberately recruit individuals that have particular types of values which match with those of the organization. Second, individuals are socialized and have their values changed to fit the organizational values. And finally values are explicated and employees behave in accord with them, even if they do not adhere to them personally.

Based on what is argued above culture have an impact on management control system and precisely the culture have an impact on the performance measurements which are “employed” in case of NITC, Beta and Alfa companies.

Lere and Kris Portz (2005) claims that differences in cultures can affect the appropriateness and effectiveness of the practices that make up a management control system. They raise the questions: In what meaningful, relevant ways do cultures differ between countries? And what do these differences imply about the elements that make up a management control system? We believe that when culture difference is in question then no one has better explained these differences than Geert Hofstede. From 1967 to 1973, Hofstede collected and analyzed data from more than 100,000 individuals working in more than 70 countries. Hofstede developed a theoretical framework that identifies four primary dimensions that differentiate cultures:

Power distance- is concerned with how close or how distant subordinates feel from their superiors. In a high power-distance culture being a boss means exerting power and keeping that gap open. Inequality is accepted: 'a place for everyone and everyone in their place'. So employees are frequently reluctant to express disagreement with their bosses and prefer to work for managers who take the decisions and the responsibility and then simply tell them what to do. In a low power-distance culture superiors and subordinates consider each other to be colleagues, and both believe that inequalities in society should be minimized. So those in power should try to look less powerful than they are.

Individualism/collectivism- the degree to which the culture encourages individual as opposed to collectivist group-centered concerns. In an individualist culture the emphasis is on personal initiative and achievement, and everyone has the right to a private life and opinion. By contrast, a collectivist culture is characterized by a tighter social framework, where people are members of extended families or clans who protect them in exchange for loyalty

Masculine/feminine- highlights 'masculine' cultures where performance is what counts; money and material standards are important, ambition is the driving force. Big and fast are beautiful; 'machismo' is sexy. In contrast, in 'feminine' cultures it is the quality of life that matters: people and the environment are important, service provides the motivation, small is beautiful and unisex is attractive

Uncertainty avoidance- is the ease with which the culture copes with novelty. In strong uncertainty avoidance cultures people feel the need for clarity and order. They feel threatened by uncertain situations, and higher anxiety and stress are experienced. This is combated by hard work, career stability and intolerance of deviancy. Thus employees believe that company rules should not be broken even when it is shown to be in the company's best interest and look forward to continue working with the firm until they retire. In a weak uncertainty avoidance culture, the uncertainty inherent in life is more easily accepted and each day is taken as it comes. A very pragmatic view is taken about keeping or changing those rules which are in existence, and employees expect to be working for the firm for much shorter periods.

A large power distance tends to be associated with centralization and less participative decision-making. Therefore, management control practices consistent with centralization tend to be more effective in large power distance countries (Malmi and Brown 2008). They claim that in a centralized organization, management control is likely to remain at high organizational levels, there is likely to be little if any delegation, and managers may have limited authority to make decisions.

As a result, measures of performance focusing on following plans and procedures laid out by top management are more likely to be effective in companies in large power distance countries than are measures focusing on the outcomes of decisions made. Therefore, one would expect little, if any, use of accounting measures, such as profit, variances, return on investment (ROI), and residual income, as indicators of managers' performance in large power distance countries. Iran in Hofstede's research is categorized as a country with high power distance (58), high uncertainty avoidance (59), low individualism (41) and medium masculinity (43).

⁹ Hofstede's Dimension of Culture Scales					
Country	Power Distance	Individualism	Uncertainty Avoidance	Masculinity	Long term orientation
Iran	58	41	59	43	---

Table 4 Source: Hofstede culture scale

This support our findings for NITC company which is a centralized company and does not use individual measures and even there is **“not” a formal** specific method of performance measurements at the top of company. This is supported also by low score in individualism (41) because the tendency to act according to the best interest of the group in collectivistic cultures means that there may be less need to use rewards and performance measures to align the interest of the individual with the interest of the group or organization. Management may find it more effective to emphasize work unit cohesiveness and provide team based rewards and training. And this is the case with NITC were no reward and performance measures are used down to individuals but team based training are practiced in NITC

Because strong **uncertainty avoidance** implies discomfort with unfamiliar situations, individuals in such a culture would want guidance for any situation they might face. To accommodate this, effective management control systems operating in strong uncertainty avoidance cultures will tend to have many formal or informal rules that limit the decision making of managers. As previously mentioned NITC is a centralized company which have many rules and formalities, even more rules and formalities where before when NITC was a public sector company (government owned) which support this statements?

⁹ <http://spectrum.troy.edu/~vorism/hofstede.htm>

So far so good, but what about the other two companies Beta and Alfa, both of these companies are also owned by Iranians and all of their employees are Iranians but these companies are more decentralized than NITC and also Alpha has more individuals' measures in comparison with NITC and even though Beta does not have many measures at the moment because of its early stage of operation they intend to use these kinds of individual measures in near future. In our opinion this is the case because the owners (CEOs) of both companies have studied in Europe and they somehow have brought the European and western countries way of managing companies and as a result of it these individuals measures are employed in these particular companies and the employees of these companies accept these measures because they treat their CEOs as a real Emperors and simply they accept the way the company is managed. To support our opinion that employees of Alpha and Beta companies are "adopted" with individual performance measures again we refer to Malmi and Brown (2008) where they claim that the impact of values on behavior, institutionalized through belief systems, works on three levels:

- When organizations deliberately recruit individuals that have particular types of values which match with those of the organization.
- Individuals are socialized and have their values changed to fit the organizational values.
- Values are explicated and employees behave in accord with them, even if they do not adhere to them personally.

To sum up, NITC as traditional Iranian company typically represents the characteristics of Iranian culture as defined by Hofstede and this is one of the reasons why NITC is a centralized organization and there is a lack of performance measure especially individual performance measures.

On the other hand, the other two companies Alpha and Beta has CEOs which brought modern ways of management in their respective companies due to their studies in Europe and they are true leaders in their respective companies which their employees do like to follow them.

7. CONCLUSIONS

If the aim of control was defined as to keep things on track and to prevent major, unpleasant surprises (Merchant 1987) then control process in investigated organizations shared some common practiced:

First of all, all companies regardless of their size, strategy, ownership, organizational culture and so on, had their organizational chart where the flow of the information have to go through these charts where different type of reports where prepared and then scanned by managers in charge in order to keep them well informed about the developments in respective companies and at the same time to provide them with the opportunity to take timely and corrective action when needed.

Second, all organizations regardless of their size, strategy, ownership, organizational chart, had some performance measures which were used in their companies in order to keep them in line with their targets.

Finally, we found that many other factors which surround a company influence performance measures and management control system employed in a company.

The largest company was also the more centralized one with a broad and complex information flow system, where the most of the decision were made by top and senior managers which make the company reluctant in using many performance measures especially individual performance measures. In contrast with other two companies: small and medium size which were more decentralized where decision are made also by middle managers which makes these companies using many performance measures especially individual one. Our expectation that the larger company will use more performance measures does not stand since we found that the smallest company has almost the same performance measures as the largest one. In addition to the size of the organization other factors influenced the management control system and performance measurements employed in a company, the level of competition in which these companies operates has an impact in management control system and performance measurement employed in respective companies, obviously the tougher competition bears tougher management control system and more performance measures employed.

Other groups of interest such as governmental impact in case of NITC was obvious meaning that the company was publicly (governmental) owned before the year 2000 which made this company immune towards its competitors and no comprehensive management control system and performance measures were employed and still NITC suffers from that period.

However, some symptoms like new computerized systems in information flow, manipulating different international standards were the normal time for such a large company to move from public sector to private sector takes time, makes us to believe that they will use more formal performance measures in the future.

Culture was another important factor in MCS and performance measures employed in respective companies. As we mentioned above NITC implement many mandatory and voluntary international accepted standards successfully, otherwise it shows a traditional Iranian company which typically represent Iranian culture and this was the reason for the lack of formal performance measures especially individual measures, whereas the other two companies which had their CEOs educated in Europe who brought more up-to-date way of managing the companies where seen as a true leaders in their respective companies which made employees to follow them.

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- 3) Mr. Davood Saei, the vice financial manager at Gama or National Iranian Tanker Company (NITC).

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Interview

Introduction



LUNDS UNIVERSITET

Ekonomihögskolan

Dear Sir/Madam

Here are the following students: Mr. Ashkan Afshinfar, Mr. Besar Berisha and Mr. Vigan Sadiku working in the thesis on master of Accounting and Management Control at Lund University, School of Economics and Management, Department of Business Administration.

This interview is a part of graduation at Lund University and we are kindly grateful to you for participating in this master thesis carried in Lund University in Sweden. This survey will be focused in determining “*performance measurement system in the shipping industry*”; we look forward and hope it will be an interesting master thesis.

All responses will be treated with the utmost confidentiality.

This study is being conducted under supervision of Prof. Olof Arwidi and Prof. Rolf Larsson lecturers in Management Accounting and Control at Department of Business Administration.

Your cooperation is appreciable in advance.

Best Regards

Prof. Olof Arwidi

Prof. Rolf Larsson

General information

Name of interviewee

Company and your position (job)

Address

City/Town

Country

Phone

Email

1 When was the company founded?

4. What type of ownership does the company possess?

5. Is this a company singular or does it have branches in other areas?

6. Which are the businesses units (departments) of this company?

7. How many people work for this company?

8. What are the recent awards if any?

Questions and discussions (answered by e-mail and phone)

1-What do you consider as characteristics of your business or industry?

2-What is your and your department characteristics role inside the company?

3- How your department manages the relation between other departments? (Include what kind of relation is it formal, informal, bureaucratic and etc, who makes the rules of the relation between the departments? How it announced? Is it hierarchical or linear? How the different levels of the departments connected to each other and what is the role of department managers? How tensions managed between two departments?)

4-How information flows through the connected department with your department? Does it has a mechanism or computerized? How the branches and subsidiaries are in connection with the central office? Are the Branches and subsidiaries linked together? Do you have any specific department in your company which is responsible for those branches actions? To what extent the branches have empowerment to made related decision to their job?

5-What key performance indicators are mostly used in your department? (Do you use some or any key performance measurement of financials like Return on Investment(ROI) , Residual Income (RI) ,Economic Value Added (EVA) Market Value Added (MVA) Return on Capital employed, Return on net assets, Return on equity, profit margin, Profit per Employee, Acid Ratio, Current Ratio, Gearing Ratio , non financial in three different aspects, A-Internal Business perspective: Material efficiency Variance, Ratio of services output to total output at each service process, Service Lead time, Rate of Material scrap loss, Labor efficiency variance, B- Innovation and Learning Perspective: Employee satisfaction, Time to Market Services, Number of new employees and their learning background, Reward or penalty system, C- Customer Perspective ; Customer Satisfaction Survey, Customer response time, market share. Do you measure your key success factor in order to keep it sustainable improvement? Why these indicators have been choosing? Who and how the Objectives for success would be set generally in the company? Who and how the objectives are sets in each department? If your controls options and tools are differ from given list please let us know what performance measures do you use)

6- Are there any standards put in place on how non financial performance should be measured? (standards for measuring).

7- Do you have any given amounts for benchmarking those amounts which you calculate in order to performance measurement? What is scale for those measures? How those scales are set? Who set these scales? How the organizational pyramid of employees informed for these scales in the other words Are standard reports practiced (employed) in your company, e.g. regular basis or upon completion of specific task or you have a personal contact with most of the administrative people when you discuss and communicate the result?

8- How the resulted measures compare with the target standards amounts if you have any?

9- How the variances (to what extent real is far away or close to standards) calculated and what and how actions are set to minimize the variances?

10- How the results of these measurements are set with the company's targets, mission, vision and strategy?

11-What is the Reaction on exceptional environmental changes, organizational changes (how this reaction managed? Who is responsible for this reaction? What is the role of company manager in these times? How it does effect on employees daily activity?

12-What are your actions or predictions to react on the organizational growth time of the company?