

MASTER'S SEMINAR

Industrial Buying Behavior

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Abstract

International oil and gas projects and huge investments are very important. Thus, in order to not lag behind, marketers need to understand the buying behavior of organizations since this is a key to success when formulating marketing strategies. The aim of this seminar is to provide a better understanding of the supplier selection criteria and the dimensions and roles in the buying center for different buyclasses.

To do so, the literature on Industrial Buying Behavior, Buying Process, Buying Center, Other Influenced Factors and Choice Criteria has been reviewed. Different technology adoption theories have been introduced and compared.

Finally, I consider the selected variables which are crucial in selected industry and consequently research questions have been provided.

Keyword: Industrial buying behavior, Supplier Selection, Procurement, Key buying criteria, Decision making unit

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Chapter 1

Introduction

1 Chapter 1: Introduction

The following sections will provide a background to the areas of industrial buying behavior and also the industry selected in this seminar.

Industrial and institutional marketers have often been urged to base their strategies on careful appraisal of buying behaviour within key accounts and in principal market segments. Industrial buying takes place in the context of a formal organization influenced by budget, cost, and profit considerations. Furthermore,

organizational (i.e., industrial and institutional) buying usually involves many people in the decision process with complex interactions among people and among individual and organizational goals. (Webster F. E. and Wind Y. 1972)

Industrial buying behavior (IBB) is in essence the arrangement of how industrial organizations purchase goods and services (Kotler P. and Armstrong G. 1999). This area is essential for the understanding of customer needs and must be taken into consideration for successful suppliers.

Robinson et al. (1967) states that when understanding the industrial buying behavior a permanent process of problem solving and decision-making must be taken into consideration. All members in a business who become involved in such a buying process are centered to a specific group. These processes and group members may vary when purchasing different kinds of products or services.

1.1 Background

1.1.1 Industrial Buying Behavior

Industrial buying concerns the purchase of products and services for use in an organization's activities. Organizational buying behavior, or industrial buying behavior, is the field of industrial marketing that focuses on the understanding of how companies and organizations buy goods and services. IBB has been defined by (Webster F. E. and Wind Y. 1972) as a *“complex process of decision making and communication, which takes place over time, involving several organizational members and relationships with other firms and institutions”*.

Many researchers in the past have illustrated the problem of describing industrial buying behavior from different perspectives (Robinson, Faris et al. 1967; Webster Jr and Wind 1972; Sheth 1973). As some researchers have described the entire area of IBB, they have developed extensive models including psychological aspects of the many individuals and the process that take place between them (Webster Jr and Wind 1972; Sheth 1973). The early researchers contributions to the development of IBB has been broad, as well giving guidance for future researchers as to defining the very basic rules and factors of IBB, and the interactions of these. Environmental, organizational, interpersonal and individual are all such factors that

affect industrial buying. IBB is a complex process over time that involves interaction between several persons, both within and outside an organization (Webster F. E. and Wind Y. 1972)

Robinson et al. (1967) describes that in each purchasing situation, with same product in mind; the individual purchasing patterns will differ depending on the buying situation, i.e. being the first time buying this specific product or have bought it or a similar product before. The different buying situations are defined by Robinson et al. as Buy classes and consist of *new buy*, *modified rebuy* and *straight rebuy*.

A major aspect of IBB is the process of procurement, the phases or steps that are identified when buying, such as searching information and qualifying suppliers (Robinson, Faris et al. 1967; Webster Jr and Wind 1972; Sheth 1973). Another aspect is the decision-making group within the organization and the different roles that these individuals or groups play, roles such as decision maker or initiator. Furthermore, critical evaluation criteria when choosing a supplier such as price or quality of the products offered plays an important role, as well as several other factors influencing IBB (Robinson, Faris et al. 1967; Webster Jr and Wind 1972; Sheth 1973; Dempsey 1978; Bharadwaj 2004).

Gopalkrishnam (1996) explains that a purchase's importance serve as a crucial link between the procurement decision and organizational strategy. The industrial buying process has been researched extensively and studies by (Robinson, Faris et al. 1967; Webster Jr and Wind 1972) are two of the pioneers. One reason for the popularity to study this process is that the importance of a purchase and the uncertainty of its outcome are of great strategic concern for the buying firm. Many of those who have studied the buying process use or refer to the buygrid-framework that (Robinson, Faris et al. 1967) developed in 1967.

Webster et al. (1972) claims that factors influencing IBB can be structured within two categories of variables: task and non-task. The former are directly related to the buying problem, whilst the non-task variables include aspects beyond the specific buying problem.

Furthermore the task variables influence the nature of the industrial buying

process, which will end up in a buying decision (ibid).

1.1.2 Industry Selection

Researchers have recognized the fact that buying behavior varies depending on the situation at hand, which makes it meaningless to generalize about (Webster Jr 1965; Dempsey 1978).

The behavior will also vary across product categories, therefore it is interesting to map these in various areas and thus an industry must be chosen (Dempsey 1978; Bharadwaj 2004).

As a huge amount of proven natural oil and gas and other fossil fuels reserved in the area, Middle East is the critical area to supply energy to the whole world. The energy supply can be in different forms. Natural oil, gas in unprocessed or refined form and now a day the electricity supply become an applicable alternative to invest. In addition to export issue, Middle East is also need a huge amount of energy for internal use in variety of industries. In this regard many big and powerful private or public companies are active in petroleum and energy industries such as Aramco in Saudi Arabia, NIOC in Iran, etc. Inside the middle east Iran posses the 3rd position in proved natural oil resource after Saudi Arabia and Iraq and 1st position in proved natural gas resource. By this knowledge Iranian government made a strategic decision and decided to invest in Iranian petroleum and energy industries more than 115 Billion US\$ within next 10 years. This strategy will lead to form and strengthen many firms in upper industries. In each kind of above mentioned industries different kind of cables including power & telecom cables play highlighted role in supply chain. In this regard many firms' activities are limited to supplying cables and related accessories to relevant industries such as End Users, and Engineering – Procurement – Construction companies (Here after EPCs). Considering this huge investment and the importance of this matter for equipment suppliers, we have decided to evaluate buying behavior of Iranian organizations who are involved in Oil, Gas & Petrochemical industry.

1.2 Problem Definition

International Oil/Gas Projects are widely spread all over the world and various companies from different fields and businesses are involved in them. Iran is one of the

hot spots in the world with enormous resources of Oil & Gas. In the recent years with removing of some limitations in foreign investment in Iran, MNCs become more interested in these projects and they invested huge amounts of money in Iran.

Financing, Engineering, Consulting, Construction, Logistic, Procurement and many other companies are involved in one hand and on the other hand even the governments are involved and Political, Economical, Social and Technological issues are also concerned in these projects.

Marketing in these projects are very complicated and needs to be considered very carefully and companies should have an excellent view and understanding of Decision Making Units and each party's interests and requirements.

Various players in these projects have different interests and concerns. Financing companies and institutes need safety and less risk in their investment. They ask for guarantees from home and host country governments. It causes that, governments also deal with each other in order to organize various and different things. In some cases home country financing forces the host country and consequently all engaged parties in the project to supply some of necessary things from home country or special geographic zones.

On the other hand contractor companies are responsible for preparing a tender and processing all necessary things to choose an EPC (Engineering, Procurement and Construction) company for implementing the project. Contractors in Iran usually are very big governmental companies; they aren't interested in service and in some way they don't care about the End-User they want to control implementing of a project in a scheduled an specified time and budget with an EPC company.

End-users usually aren't involved in the projects and they are not decision makers but the interesting thing is that they must operate something that they didn't have any role on its implementation and if someone makes a mistake then the End-User will be in trouble all the time in future.

EPC companies also are very big and international companies that get the order for Basic and Detail Engineering, procurement of all necessary equipments and

construction. They must implement the project in a specified time with a defined budget. EPC companies usually are concerned about time and money. They have to be on time and in case of delay they must pay plenty of penalties to the contractor. On the other hand they have a defined budget and they should also be profitable. They don't care about the End-User and his interests. In some cases the projects are so big that even very big EPC companies couldn't do the job alone and they have to make some Joint Ventures that it makes the work more and more complicated. In such cases we should consider various duties of each party and their interests also. But in all projects, EPC's are responsible for procurement and all the suppliers and sub-suppliers should deal with them. So we have to understand their buying behavior.

1.3 Problem Importance

Much of the buying and selling in advanced economics is between organizations, that is, industrial rather than consumer market exchange. Hence, it is important to understand organizational buying behavior. In comparison with research in consumer behavior, however, the study of organizational buying behavior is still at the conceptualization stage. In relative terms, the study of organizational buying behavior is lacking in empirical tests of its theories and their managerial implication (Moriarty, 1980 cited by (Anderson, Chu et al. 1987)

1.4 Research Motivation

Industrial buying behavior is an extensive area, both for the practical marketer as well as from an academic perspective (Kotler P. and Armstrong G. 1999)

I have chosen to look at one part of International projects, namely Oil, Gas and Petrochemicals since it is one of the most important industries in the world and because of its importance cables and cabling systems also have outstanding role. More precisely, I focus on Iranian market.

1.5 Outline of the Seminar

This seminar consists of three chapters. This first chapter introduces the reader to the subject and gives an understanding of what will be researched. Then the literature review will present findings on the subject from several different authors. Finally the conclusions drawn and research questions for this research will be

included in the last chapter of this seminar.

Chapter 2

Literature Review

2 Chapter 2: Literature Review

The purpose of this chapter is to give an overview to the evolution of industrial buying behavior based on previous literature within the research area. Relevant literature in the field of research will be provided.

2.1 Industrial Buying Behavior

Transactional and competitive buying behavior is referred to as “the classical buying philosophy”, and relational and cooperative buying behavior is called “the modern buying philosophy”.

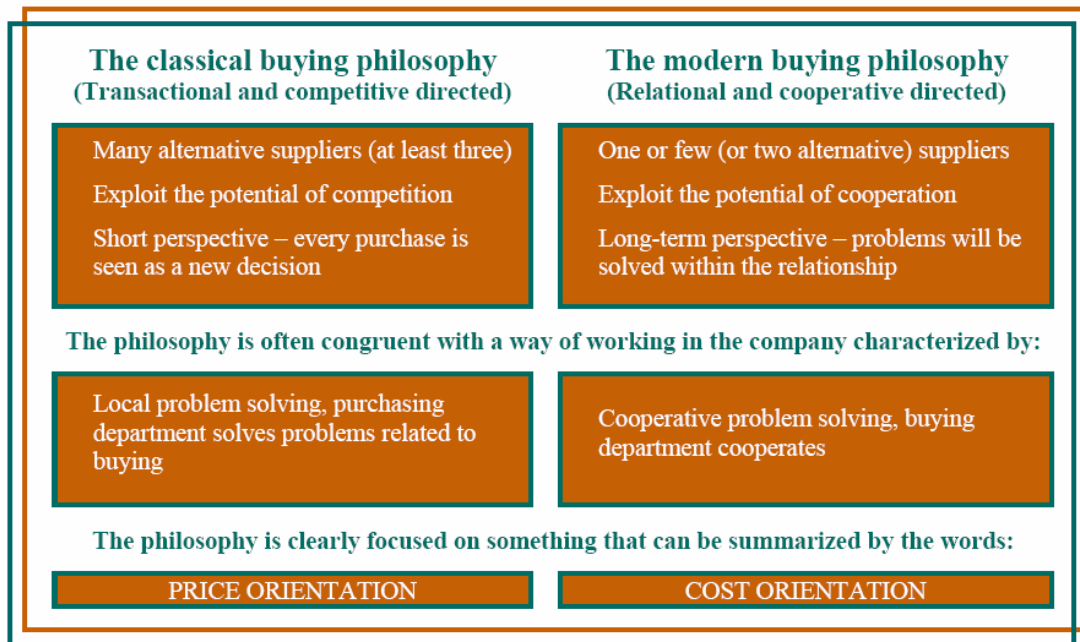


Figure 2- 1 Two ways of buying – a classical and a modern buying philosophy

The modern buying philosophy has become widespread when it comes to attitudes about how a company should work. However, the classical buying philosophy still dominates the way in which most companies actually work. Which philosophy a company chooses to use depends on several factors, and there is no one right or wrong strategy.

Companies can use different philosophies during different time periods. The philosophy selected may also depend on the type of services that are bought.

Sheth (1973) explains that not all the buying decisions are a result from a systematic decision-making process. Ad hoc situational factors do also often result in a buying decision, for example unforeseen situations like machinery breakdowns.

Industrial buying behavior is influenced by a selection of variables (Webster Jr and Wind 1972). These variables are divided into four fundamental classes; *environmental*, *organizational*, *interpersonal* and *individual*. Table 2.1 illustrates this classification and exemplifies variables being used. The variables are also grouped in task and non-task variables that apply to all other classes. The task variables are directly related to the buying problem, and the non-task variables are broaden beyond the specific buying problem. To separate variables into task and non-task are not

always obvious, so the one being predominant ought to be chosen in many cases. The correlation between these variables is illustrated in figure 2.2

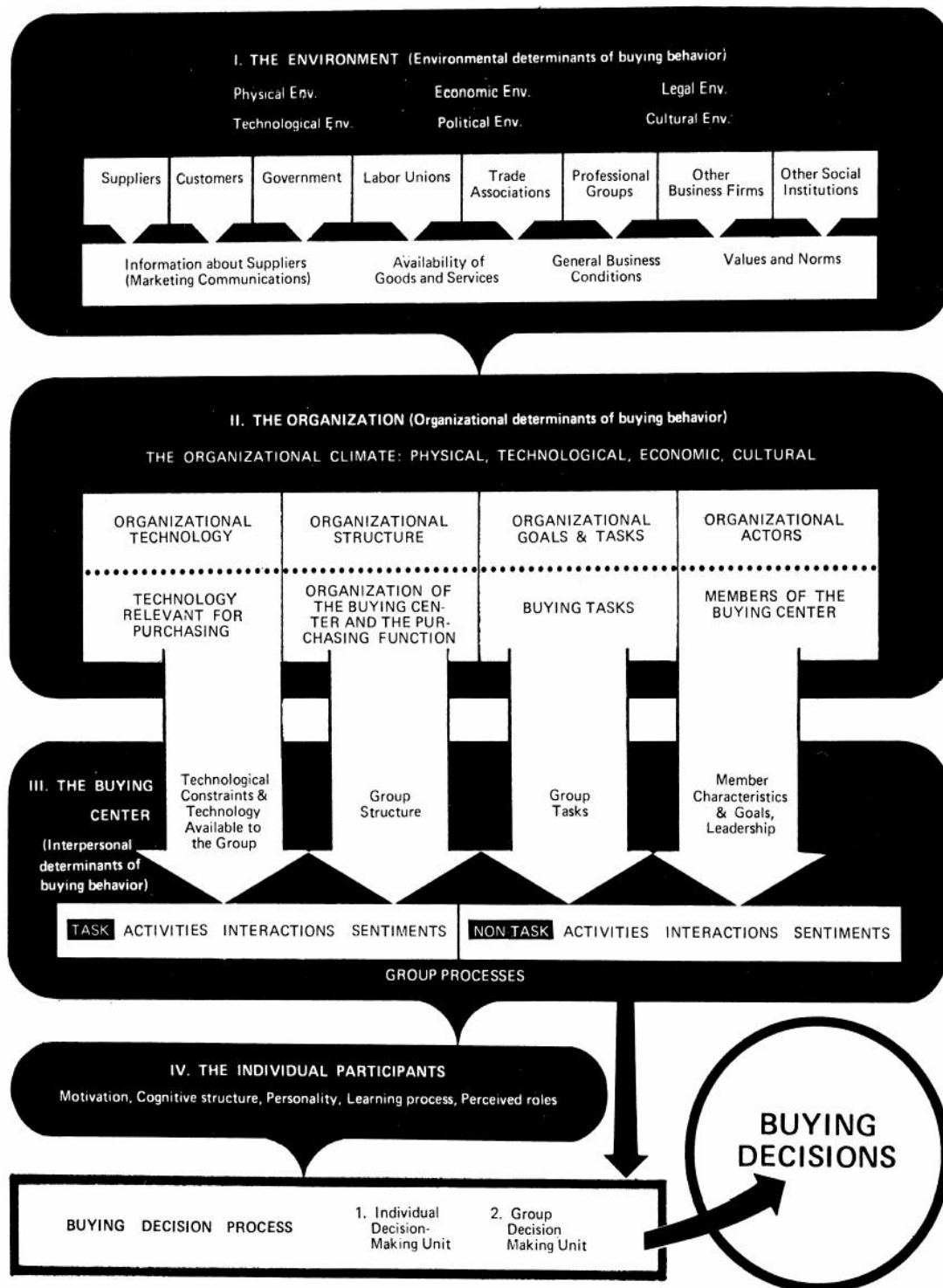


Figure 2- 2 A model of organizational buying behavior

Source: (Webster & Wind, 1972).

	Task	Nontask
Environmental	Anticipated changes in price	Political climate in an election year.
Organizational	Policy regarding local supplier preference	Methods of personnel evaluation.
Interpersonal	Meetings to set specifications	Informal, off-the-job-interactions.
Individual	Desire to obtain lowest price.	Personal values and needs

Table 2- 1 Distinguishing characteristics of buying situation

Source: (Robinson, Faris et al. 1967)

Wind and Thomas (1980) have suggested that industrial buying behavior can be divided into three different areas: buying process, buying center, and affecting factors. Each of these areas consists of several parts, which can be seen in figure 2.3. The areas are in turn divided into smaller parts, making the complex concept of industrial buying behavior easier to grasp.

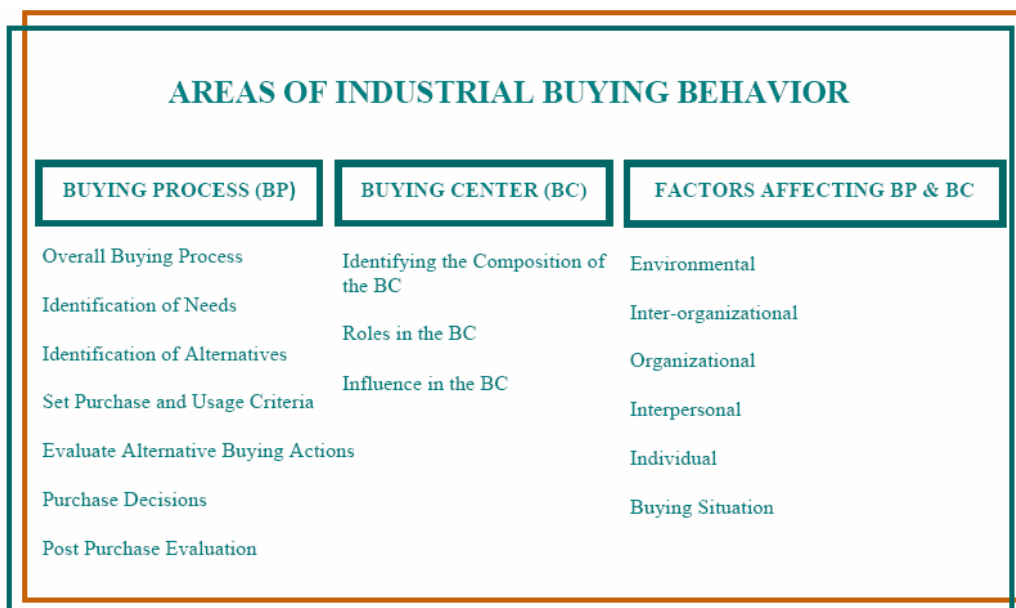


Figure 2- 3 Areas of industrial buying behavior

2.2 Buying Process

According to Webster J. (1965), when understanding the industrial buying process it is necessary to examine both industrial and individual decision-making. This is due to the fact that individuals are making the industrial buying decisions (ibid).

The industrial buying process is regarding industrial decision-making in procurement situations and many researchers have emphasized the importance of modeling this process (Webster Jr 1965; Robinson, Faris et al. 1967; Sheth 1973; Wind and Thomas 1980).

One of the most referred to buying processes is the one developed by and incorporated in the Robinson et al. Buygrid framework.

Buying is not an event, buying can be seen as a process where separate steps, stages and/or phases can be identified. “From the time at which a need arises for a product or service, to the purchase decision and its subsequent evaluation, a complex myriad of activities can take place” (Wind and Thomas, 1980, p.242)

2.2.1 Robinson, Faris & Wind (1967) – Buyphases

The Robinson et al. Buygrid framework incorporates a buying process. Compare to the (Webster Jr 1965) model it is somewhat more extensive and consists of eight steps called Buyphases. These phases are fundamental to industrial buying and even though they are described sequentially and in the order they usually are performed it is possible that some of the steps happen simultaneously. Especially phases 4 and 5 tend to take place concurrently in particular when the buying organization is well informed and information need is small. The phases are as follows (Robinson, Faris et al. 1967) :

1. Anticipation or Recognition of a Problem (Need) and a General Solution
2. Determination of Characteristics and Quantity of Needed Item
3. Description of Characteristics and Quantity of Needed Item
4. Search for and Qualification of Potential Sources
5. Acquisition of and Analysis of Suppliers
6. Evaluation of Proposals and Selection of Suppliers
7. Selection of an Order Routine

8. Performance Feedback Evaluation

Dwyer and Tanner (2002) have modernized this model, suggesting that companies start with problem recognition. They then search for alternatives, evaluate the alternatives, and select a solution which is then implemented and evaluated. The buy-grid model is a commonly used theory in marketing to understand how the buying process can be performed in different companies.

2.2.1.1 Anticipation or Recognition of a Problem (Need) and a General Solution

In this first phase the process is either set into motion by the buying organization that recognizes a problem or by external sources such as a (potential) supplier and anticipates that a need will arise (Robinson, Faris et al. 1967) . This phase is regarded as two steps:

- a) Recognition of a problem (need) by someone with at least partial authority in the organization in order to be heard. The recognition might occur from sources such as:
 - Inventory running low
 - New needs are derived from the customers of the buying organization
 - Unsatisfactory performance of existing option
 - Breakdown or malfunction
 - Realization that better options exist
- b) The awareness that this might be solved (satisfied) through a purchase and in what particular direction the solution lies.

2.2.1.2 Determination of Characteristics and Quantity of Needed Item

Decisions at this phase, concerning the general problem solution, are usually made within the using department or group (Robinson, Faris et al. 1967) . Those involved need to agree on, in a specific and narrow way, how the problem can be solved in order to enable more specific analysis. Hence, they need to decide, what application requirements that must be met, and the desired type and quantity of the good or service. In some cases this phase proceeds simultaneously with later phases

2.2.1.3 Description of Characteristics and Quantity of Needed Item

As an extension to the prior phase, now the translation of the need into a specific solution can easily be communicated to others (Robinson, Faris et al. 1967) . The description becomes the basis for action inside and outside the buying organization thus demands are set to be precise, otherwise the remainder phases will be more complicated and the results less precise.

2.2.1.4 Search for and Qualification of Potential Sources

Here the organization shifts from searching for alternative solutions into searching for potential sources of supply, leading to a qualification of suppliers (Robinson, Faris et al. 1967). Since the purchasing process often is complex, it may take several months before a firm finally selects a supplier (Patterson and Dawes 1999). It is common for firms to use a two-phase search process (Robinson, Faris et al. 1967). First, a buyer narrows the total number of possible suppliers down to a list of suppliers that meet the organizations' demand. Secondly, the buyer gathers more detailed information on these suppliers and based on this information they select a few of them that are the most appropriate for meeting the objectives. The criterion for qualification varies with the buying organizations, the specific situation and the buying influences involved. No matter how suppliers are qualified, the result of this phase is a decision of which suppliers will be considered as potential vendors.

2.2.1.5 Acquisition of and Analysis of Suppliers

After suppliers have been examined the buyer request offers (Patterson and Dawes 1999) this may in cases of standardized procurements involve only checking a catalog or telephoning a supplier to attain information (Robinson, Faris et al. 1967) . On the other hand, more complex situations may involve a series of counter proposals and new offers, extending over period of time. In the former situations, where little information is needed phases four and five often take place simultaneously. In the latter situations, where more information is needed, these phases are separate.

2.2.1.6 Evaluation of Proposals and Selection of Suppliers

The various offers are weighed and analyzed and possible negotiations have been conducted with several of the vendors (Robinson, Faris et al. 1967). During this