

**EFFECTIVENESS OF PURCHASING AND MATERIALS MANAGEMENT IN
SMALL BUSINESSES IN THE VAAL TRIANGLE**

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ELIAS RAMONOE MAHLASELA

DECLARATION

I declare that:

**"EFFECTIVENESS OF PURCHASING AND MATERIALS
MANAGEMENT IN SMALL BUSINESSES IN THE VAAL TRIANGLE"**

is my own work, that all the sources used or quoted have been indicated and acknowledged by means of complete references, and that this dissertation was not previously submitted by me for a degree at another university.

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OCTOBER 2000

LANGUAGE EDITING

E.R Mahlasela, esq

M Comm dissertation titled

"Effectiveness of Purchasing and Materials Management in small businesses in the Vaal Triangle."

LS

This is to certify that Mrs Sorgdrager edited the language of the above mentioned dissertation. For spelling, The Pocket Oxford Dictionary, new edition, (Clarendon Press - Oxford) 1984 was used.

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RESUMÉ

**EFFECTIVENESS OF PURCHASING AND MATERIALS MANAGEMENT
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DEGREE: MAGISTER COMMERCII

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SUMMARY

Many changes are affecting today's business environment. They are so many that it sometimes is difficult to keep up with them in an appropriate way. This is especially true for those small manufacturing business owner managers who work in purchasing and supply management.

New trends that emerge in this field, among them greater emphasis on quality and value package, reduction on the number of suppliers but long - term relations with preferred suppliers, better service and the use of technologically advanced information systems, criticality of products/ marketing timing, environmental objectives, price based costing and escalating customer demands have influenced the task, knowledge, skills, personal characteristics and development of the purchasing managers.

These changes will have a major impact on the work and duties of purchasing and materials manager. The developments in purchasing and supply management should, of course, keep pace with the changing business environment. Purchasers increasingly need to demonstrate their added value to the firms they work for and prove their abilities to cope with the challenges they are confronted with.

The purpose of this study is to look into how purchasing and materials management can help manufacturing firms in the Vaal Triangle to cope with these changes and keep abreast with these trends.

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CHAPTER 1

ORIENTATION AND OVERVIEW OF THE STUDY

The first chapter embodies the theme of the study. It places the study in perspective and presents a systematic format for the study. In addition the purpose of this study and its significance are illustrated. The scope and limitations of the study are also presented. This chapter commences with a brief literature survey on the effectiveness of purchasing and materials management. The sole intention of this brief literature survey is to provide impetus for the study.

1.1 INTRODUCTION

1.1.1 Background

Effective purchasing must involve activities, objectives and measurement relating to both factual and strategic issues. It should be asked, "Is the right thing done" before asking, "is it done the right way?". For example: in purchasing the calculation of the number of requisitions dealt with by a buyer in any one day may tell us something about the efficiency at passing papers. The number of items received on time and the number of items which fail to meet the specification, will also be of benefit in that regard. However, the effectiveness may be more concerned with establishing vendors who have the potential to supply for many years to come competitively.

{effectiveness - having the desire to produce the intended results}

Effective management of materials and purchasing can contribute significantly to the success of most modern manufacturing firms. The study explores the nature of this contribution and the management requirements for effective and efficient performance. The acquisition of materials, supplies, services and equipment at the right prices, the right time and on a continuous basis has captured the attention of many managers in both public and private sectors. The rapidly changing supply scene with cycles of abundance and shortages, varying prices, lead times, and availabilities, provides a continuing challenge to those firms wishing to obtain a minimum contribution from this area.

The valuable contribution that purchasing makes to the overall success of the firms are well beyond the simple act of buying or dealing with sales persons. *Dobbler & Burt (1996:19)* describe purchasing as one of six basic functions common to all types of firms, namely, *creation*: the idea or design function; *finance*: the capital acquisition, financial planning and control function; *purchasing*: the acquisition of required materials, services and equipment; *conversion*: the transformation of materials and ideas into economic goods and services, and *distribution*.

According to *Russil (1997:5 – 7)* the acquisition of materials services and equipment are some of the activities of purchasing, purchasing professional responsibilities, include management functions such as planning and policy making, motivation, evaluation and control as well as a broad range of related activities. *Russil (1997:39-40)* suggests that modern day buyers are involved in at least five key activities. These are:

- *leading* discussion to determine sourcing requirements and availability;

- *developing*: selecting and managing the most effective supplier;
- *securing* purchases that minimize total cost of use;
- *ensuring* timely delivery, meeting the specified quality, quantity and other related services, and
- *meeting* the needs in the most cost effective manner for both internal and external customers.

All institutions, whether private, government or community organizations, require goods such as raw and other materials, machinery and equipment, as well as services such as installation, repair, maintenance, etc.

- *manufacturing* firms have to buy goods and services to use in their production process;
- *commercial firms* require goods and services for reselling, and
- *service organizations* such as banks, hotels and transport firms, also have to purchase in order to continue their business activities.

{ this study focus on manufacturing firms }

In many modern manufacturing firms, the enormous cost of raw materials acquisition, is estimated to be to the purchasing function. The study shows that 54% of the firms around Vaal Triangle Metropolitan Area (VTMA) are experiencing the same situation. It is wise to give a brief overview of the purchasing and materials management to place the study in perspective. According to *Bailey & Farmer (1990)* the growing importance of purchasing and materials management can be ascribed to the increasing specialization which characterizes the market as a whole. The overall management of materials is an organizational philosophy that has evolved through

application of the systems' approach to management which provides for integration of all management functions. The primary materials management objective is to co-ordinate all the firm's activities that are part of the material cycle, from supplier through the firm's operations and on to the customer.

According to Colton & Rohrs (1985:2) purchasing and materials management is: *A wide spectrum of varied activities and is totally committed to providing a smooth flow from suppliers to productions, to finished goods inventory, to customers.*

One of the main reasons for its significance, according to Hugo et al. (1998:10) is the ever-increasing scope of material's costs in relation to other cost elements and the need for cost saving. The following can be the primary contributory factors in this regard: the increasing need for an *assured supply* and a reduction in the costs of requirements. From a purchasing perspective, firms are constantly subjected to cycles of surpluses and shortages, and hence uncertain availability. Prices may vary considerably and new substitute products take the place of established ones. The result is a dynamic purchasing section, that will make the most of opportunities and counter threats, has become a necessity and a challenge in a growing firms.

According to the study, the purchasing process involves determining need, selecting the suppliers, arriving at proper prices, terms and conditions, issuing the contract or order and following up to ensure proper delivery.

Much emphasis has been placed on the purchasing function, because of the following reasons:

- As a result of a continuing explosion in technology, in order to be competitive, firms need more highly trained personnel with knowledge in the areas of new, sophisticated materials and equipment to make purchasing decisions. For those who qualify, the National Association of Purchasing Management awards the professional designation "Certified Purchasing Managers" (CPM).
- A strong influence has been the unprecedented changes in the nation's economy. The 1970's and 1980's, marked by periods of uncommonly high inflation, required sound solutions to new situations arising from costs of new materials, labour, transportation, storage, and levels of inventory. The purchasing function's mandate is clear to the provision of solutions.
- The other area is that of significant developments in techniques and skills actually used to perform the buying function. Among these are Lawrence Miles' introduction of *value analysis*, the Program Evolution Review Technique (PERT) system, Electronic Data Processing, Materials Requirements Planning, Kanban – JIT information system and other innovative quantitative procedures for decision making (Colton & Rohrs, 1985:11).

{ reducing inventory levels remains a goal of all operations managers, in some or the other ways, these techniques have to be employed because they help cut inventory carrying costs by reducing inventory to an absolute minimum }

Purchasing is generally regarded as a more clerical function or as a service function concerned with spending. It is because of profitability and professionalism that purchasing was regarded as a key activity by both the private and public sectors.

Profitability has a wider meaning than "pecuniary gain" and can be extended to cover anything that is advantageous to the firm. Purchasing/Procurement may enhance the profitability of the firm. Some of the contributions that efficient procurement may make to profitability are:

- ensuring that the costs of bought out goods and services are advantageous to the firm;
- enhancing the working capital of the firm;
- obtaining value for money, and
- promoting profitable purchasing opportunities by expanding possible supply sources. { it all depends on whether the firm desires to use more than one supplier when purchasing a given item. }

On the other hand the development of purchasing as a profession is evidenced by amongst others:- the establishment of institutions concerned with promoting professional purchasing. *For example*, Institute of Purchasing and Supply, National Association of Purchasing Management and an International Federation of Purchasing and Materials Management.

As a result of these factors, it becomes clear that purchasing plays an important role as far as different sectors of the economy is concerned (Lysons, 1989:2-7).

During the times of increased specialization and expanding technology, the major functions of business management becomes more interrelated and interdependent. The materials management department is an important and integral part of the firm's management team. It requires the co-operation and attention of all the firm's activities so that it can efficiently, and effectively perform its duties and services to further the best interests of the firm.

In its definition, the materials management combines all activities concerned with the orderly flow of raw materials, components, operating supplies, and finished goods.

Colton & Rohrs (1985:6) outline the status of materials managers to be equally important as those of marketing or production managers. The *materials manager* supervises and is responsible for purchasing, inventory management, production control, receiving, storage, shipping, surplus and scrap disposal, expediting and quality control.

Scientific research brought about various contributory factors to South African purchasing and materials managers. *Hugo et al. (1997:290-292)* indicates amongst others, those factors that contributed to South Africa's purchasing and materials management.

- Knowledge, expertise and information possible to trade competitively could safeguard purchasers against two risks (price instability and availability problems) associated with unstable commodity markets.

- Those goods manufactured in South Africa do not always represent the most recent technology, thus purchasers have to be knowledgeable about the available technology.
- Monopolistic trends, limited competition, price restrictions and low level of marketing, indicate that purchasing and materials management need to make a deliberate effort to acquire information about the market.
- Because of unfavourable economic situations such as a high inflation rate, labour disturbances and political unrest in South Africa, there has been an adverse effect on the currency and it resulted into long-term implications for buyers of capital goods. The only counter-measure is for the purchasers to have knowledge of international markets and exchange rates. This makes research on purchasing essential.

In presenting a list of reasons for the increasing importance of the purchasing function and its influence on other business functions. *Hugo et al. (1998:10 – 15)* suggest that increased productivity in South Africa is still related to labour inputs, while materials inputs remain of secondary importance, despite it being up to five times larger than labour inputs.

Since the study focuses more on small businesses and on manufacturing firms in particular, it is imperative to look into purchasing and materials management into this context. Small business can be defined in different ways, specifying any size standard to define small business is necessarily arbitrary, for people adopt different standards for different purposes. Legislators, for example, may exclude small firms from certain

governmental regulations and may specify ten people as the cut-off point. Moreover, a business may be defined as 'small ' when compared to larger firms, but "large" when compared with smaller ones.

Even the criteria used to measure the size of the business vary. Some criteria are applicable to all manufacturing areas, while others are relevant to only certain types of business. Examples of criteria used to measure size are:

- number of employees;
- sales volume;
- asset size;
- insurance in force, and
- volume of deposit.

The Small Business Administration (SBA) establish size standards which determine eligibility for SBA loans and for special consideration in bidding on government contracts. Some of this standards are shown in table 1.1 as indicated in Broom.

Table 1.1 is presented on the next page

Table 1.1 Examples of Proposed SBA Standards

	Number of employees
Copper ores mining	2 500
Pulp mills	2 500
Metal can manufacturing	2 500
Newspaper publishing and printing	250
Poultry dressing plants	250
Radio broadcasting	50
Employment agencies	25
General contractors	25
Furniture stores	20
Repair shops	15

Source: Adapted from Broom et al. (1983:27)

In the USA, a number of yardsticks on cut-off point are employed to define small business. According to *Siropolis (1986:6-7)* common yardsticks are the following:

- Total assets: the total cash, inventory, machinery and their resources.
- Ownership: total investment made by owners, yearly sales revenues, and number of employees.

In order to qualify, a small business should not only employ less than 500 employees, but should also be independently owned (i.e it should not be

part of another business) and managed. (i.e small business owners should be free to run their business as they please) (*Siropolis, 1986:6*).

1.2 THE PROBLEM STATEMENT

Ineffective purchasing and materials activities are more than likely to cause costly interruptions in production operations. Recent developments in our economy have placed greater importance on purchasing and managing of inventory. According to *Hugo et al. (1998:10)* shortages of materials, inflation and high interest rates have forced firms to emphasize purchasing and inventory management.

Small manufacturing businesses in VTMA are operating under severe conditions where breaking into the major markets is difficult and involve a very insurmountable task. However during this period of political dispensation in our country, small business firms are an important building block and source of jobs in an economy, wherein purchasing is one area in which large firms can assist as far as their development is concerned, and also contributes to the goals of the Reconstruction and Development Programme of the present government.

The VTMA's economic and business operations have been dominated by a few big conglomerates, and the importance of small business, manufacturing firms in particular, has long been ignored. In any case, the current South African government is encouraging purchasing from small businesses in an effort to get small business and especially underdeveloped groups into the mainstream of the country's economy. An example is its so-called *Ten point plan*, according to which:

- the government's tender procedures have been simplified to make it easier for small entrepreneurs to tender for government contracts;
- a percentage preference has been set for small businesses from underprivileged communities, and
- financial guarantees are no longer required for tenders smaller than R100 000.

To add on to that, strategic issues in purchasing and materials management for manufacturing firms is one area that needs consideration for effectiveness and efficiency of the firm. Strategy can specifically be defined as a plan of action for realising specific objectives. In general terms strategy has been defined as a discernible pattern over time in a stream of corporate decisions. Thus any stream of decisions, whether good or bad, could be considered as strategies. Strategies also contribute to the development of competitive advantage and superior performance over time.

Focus is going to be put on the effect of purchasing and materials strategies in manufacturing firms with different levels of performance.

In order to realise the potential of purchasing and materials management, the department must be involved and contribute to the firm's strategic planning process. Management should have knowledge as to where the future materials for growth and new products will come from. Are the sources assured? Will prices be predictable and affordable? How are suppliers discovered, developed, and managed for the benefit of the firm? How will new products be supported through four life cycles? Will there be external technology to support new products? Which suppliers will be in business in future? What forms of supplier relationships will yield the best

business results for the firm and its suppliers? Which role does purchasing play in a firm's strategy? To what extent does purchasing impact upon the business performance? Is purchasing really strategic?

{ answers to these questions are discussed in different chapters throughout the study }

Management can acquire knowledge of different problem areas as far as purchasing is concerned from the following purchasing strategies:

- *Assurance-of-supply strategies:* designed to ensure that future supply needs are met at least in terms of quality and quantity.
- *Cost-reduction strategies:* designed to reduce the laid-down cost of what is acquired, or the total cost of acquisition and use-life cycle cost.
- *Supply-Support strategies:* designed to maximize the likelihood that the considerable knowledge and capabilities of the supplier are available to the buying firm.
- *Environmental-Change strategies:* designed to anticipate and recognise shifts in the total environment so it can turn them to the long-term advantage of the buying firm.
- *Competitive-Edge strategies:* designed to exploit market opportunities to give the buying firm a significant competitive edge.

1.3 OBJECTIVES OF THE STUDY

1.3.1 Fundamental objective

The basic objective of this study is to see how effective and efficient is purchasing and materials management in small manufacturing business firms.

1.3.2 Supporting objectives

In order to achieve the fundamental/primary objective of the study, the following supporting objectives are outlined:

- to supply the firm with methods to ensure a steady flow of materials and services to meet its needs;
- to ensure that purchasing is cost effective;
- to ensure good inventory management so as to give the best possible service to users at the lowest cost;
- to ensure long-term relationship with suppliers; and
- to search continually for new and alternative ideas, products and materials to improve the firm's efficiency and profitability.
-

1.4 DEMARCATION OF THE FIELD OF STUDY

Target group for this study is the manufacturing firms within Vaal Triangle Metropolitan Area. (refer to annexure A and C)

1.5 RESEARCH METHODOLOGY

This study consists of a literature review and an empirical research.

1.5.1 The literature study

To acquire a detailed knowledge of the theoretical and contemporary approaches in this respect, relevant literature on purchasing, materials and supply management was studied.

Extensive information was collected from formal and informal publications such as text books, journals, sponsored research projects, articles in newspaper and previous studies on the subject. Questionnaires were used to gather that information that was not available from publications.

1.5.2 Empirical Research

A questionnaire that would strengthen the validity of the study and to efficiently develop ways to record information that is extracted from the literature was designed. Its contents were evaluated on the basis of relevance and non-bias. Questionnaires were personally distributed to and collected from the respective respondents.

The total amount of 400 small manufacturing firms (annexure C) were identified and a random sampling method was used to distribute questionnaires. (Every fourth firm from the list has been targeted for the survey). 100 questionnaires (quarter of the total number of small manufacturing firms around the area) were sent to the respective firms and the response rate was 54%.

1.6 HYPOTHESIS OF THE STUDY

Since the nature of the study was not to explore the past view, an hypothesis was not established.

1.7 DIVISION OF CHAPTERS

Chapters are divided as follows:

Chapter 1: It embodies the theme of the study and places the study in perspective and presents a systematic format for the study. (background, problem statement, objectives, demarcation research method and hypothesis)

Chapter 2: The focus in this chapter is to have a look at the concept itself, purchasing and its importance to the firm.

Chapter 3: Materials management and strategic issues in purchasing as a role player in enhancing the efficiency and effectiveness of the firm is looked into.

Chapter 4: This chapter discusses the considerable issues for effective decision making in purchasing and materials management.

Chapter 5: This chapter analyses the findings from the empirical research.

Chapter 6: This is the last chapter where a conclusion is drawn and recommendations are made.

1.8 ACRONYMS AND ABBREVIATIONS

The terms listed below, which are all used in the study, need to be clarified in order to eliminate possible confusion.

Effectiveness : Having the desire to produce the intended results.

Small business : It is referred to as firms and manufacturing firms throughout the study.

Manufacturing firm : They comprise small businesses that purchase raw materials and convert them to finished products.

Kanban : Information cards that provide suppliers with a clear description, with specifications, of the firm's specific needs.

Organization : The condition or state of arranging the activities of the firm.

Strategy : A means by which long-term objectives are accomplished.

CPM : Certified Purchasing Manager

PERT : Program Evolution Technique

EDP : Electronic Data Interchange

MRP : Materials Requirements Planning

JIT : Just-in-Time

TQM : Total Quality Management

R&D	:	Research and Developments
EOQ	:	Economic Order Quantity
CIM	:	Computer Integrated Manufacturing
SA	:	South Africa
USA	:	United States of America
%	:	Percentage

1.9 GENERAL

- The Harvard method for reference is used.
- Tables and figures are used on relevant places in the dissertation.
- Where sources are not indicated, it must be seen as own research
- Oxford Advanced Learners dictionary was used to define terms, definitions and concepts.
- If there is only reference made to the year, emphasis is made on the general impression of the author.

CHAPTER 2

PURCHASING MANAGEMENT IN PERSPECTIVE

The focus of this chapter looks at the concept itself, purchasing management, its nature, responsibilities and importance to the firm.

2.1 INTRODUCTION

Management consultant Peter Drucker stated that effectiveness is doing the right things. Effectiveness is more related to the specific professional skill in procurement, which is the function of the department (*Henritz et al. 1991:399*). Managers typically have the three major resources at their disposal - capital, personnel, materials. This study focuses specifically on materials, the management of materials and the control of materials costs in a business firm. The emphasis integrates the purchasing activity with all other materials activities in the context of a total firm's operation, it consistently relates this function to relevant activities in the engineering, production, marketing and finance functions.

{Materials purchased (as one of the components of direct costs) constitutes more than 50% of the total costs. This is the case in most firms in VTMA- smaller percentage reduction in this costs could result in major increase in income.}

2.2 THE GENERAL NATURE OF PURCHASING MANAGEMENT

Academic literature provides divergent interpretations of the concept of purchasing and purchasing function, and more often than not, the

management of this function is confused with the concept of "purchasing function". Although the management of the function and the various purchasing activities form an integrated whole, they should nevertheless be diversified for efficiency purposes. *Purchasing management* relates to planning, organizing, directing, coordinating and controlling the various purchasing activities (*Hugo et al. 1998:8*). Accordingly, small business firms tend to focus more on the following purchasing activities for their internal and external operations.

For internal operation:

- determination of the exact requirements of a firm in terms of the most economic qualities and quantities;
- receipt and inspection of incoming goods in terms of conditions and norms specified in the order;
- inventory holding and control within the firm;
- design and application of systems and procedures to support purchasing transactions administratively, and
- salvage of materials and the disposal of redundant stock.

For external operation:

- continual search for and location of suitable suppliers;
 - negotiation with as well as selection and evaluation of suppliers in terms of reasonable prices and other pertinent conditions, and
 - placing orders and following them up to ensure timely delivery.
- (*Van Rooyen & Hugo, 1983:6-7*).

2.3 MANAGEMENT'S RESPONSIBILITIES

As the complexity of firm's increased in the 1980's, due to growth, acquisitions and mergers, supply lines became more uncertain, foreign buying activity heated up, purchased material quality received heightened attention, and emphasis on obtaining the profit leverage of purchasing as a means of maintaining or increasing the firm's competitive position intensified. Purchasing has assumed larger, and different responsibilities.

{profit leverage - a relatively small percentage saving in the purchasing price, may develop into a relatively large percentage increase in net income}

It is of importance to explain the place and role of purchasing in business management. The purchasing function can be observed from three viewpoints:

- 1st as a function of a firm;
 - 2nd as one of the basic elements required to accomplish productive work, and
 - 3rd as an activity responsible for outside manufacturing.
(Dobler & Burt, 1985:3).
-
- The nature of purchasing allows it to be a basic and integral part of firm management. For a firm to be successful, all its individual parts must be successful. It is impossible for any firm to achieve its full potential without a successful purchasing activity. In the long run, the success of a firm depends every bit as much on the purchaser as it does on the owner who administers the other functions of business.

- The basic goal of every firm is the development and manufacture of products that can be marketed at a profit. This goal can be accomplished by means of procuring materials at the right quantity, quality, time, place and from the right suppliers. Purchasing is the only activity that can make possible all these goals.
- The last viewpoint of purchasing according to Dobler is, it is responsible for outside manufacturing. This statement/viewpoint, stems from the fact that the materials which go into a typical firm's products, can originate from the firm's purchasing activities. It does not only purchase raw materials, which are being converted into processed parts, but it also purchases finished processed parts. The parts made are actually in assemble with the parts bought to make the firm's final products (*Dobler & Burt, 1985:8-9*).

The purchasing clerk has the responsibility and authority to schedule the delivery of outside production. The purchaser has the same managerial interests concerning their outside production as producers have concerning their internal production. Producers are interested in low unit costs and high quality. Purchasers are interested in keeping their supplier's costs down in reducing special costs. In addition, purchasers are interested in maintaining scheduled deliveries and good quality control to assure meeting production schedules to reduce the inspection costs.

A small business owner manager is faced with the challenge of managing the operation of the firm alone and successfully. He has to ensure the success of the firm by administering all the functions of the firm.

2.4 THE PURCHASING STRUCTURE AND ORGANIZATION

It is important to differentiate between centralized and decentralized purchasing: If a firm approaches purchasing on a decentralized basis, an individual will handle his own purchasing. The advantages of this approach is that the user probably knows needs better than anyone else. It may also be faster since, when the users need something, the buyer simply picks up the phone and orders it.

However, the advantages of centralized purchasing are so great in comparison with decentralized purchasing that almost all but the smallest firms are centralized. In centralized purchasing, a separate individual or office is established and given authority to make all purchases. The advantages to be gained from centralized purchasing are:

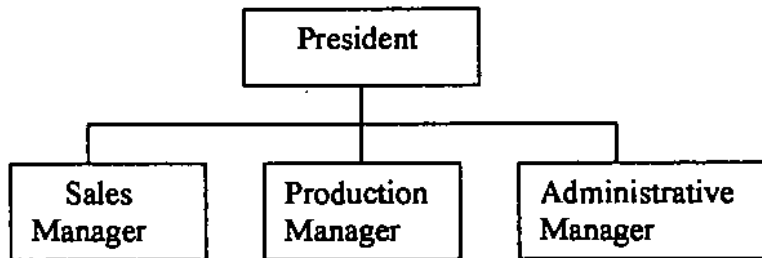
- it is easier to standardise the items bought if purchasing decisions go through one central control point;
- it cuts down on administrative duplication;
- by combining requirements , purchasers can go to a supplier and discuss an order a quantity that is large enough to get the supplier's interests. The supplier can be persuaded to give concessions, such as faster delivery, or quantity discounts;
- it is administratively more efficient for suppliers, since they need not call on several people within the firm, and

- it provides better control over purchase commitments since a larger percentage of a firm's cash outflow goes for material purchases and a central control point is needed to monitor the aggregate commitment amount at any specific point in time (*Le Roux et al. 1998:202*).

The process of building effective organizations involves many activities, but none are more important at the outset than the relationship between strategies, structures and delegation. Small firms in particular, though they operate on a small scale, have to be directed towards these relationships. Strategies, once devised, must be carried out in some structural framework, and no matter what organizational design is chosen, delegation takes place within it. Whether the organization structure is based on building blocks, information flows or people oriented concept, is immaterial; what really matters is that work must be assigned and executed in accordance with strategic plans and the firm's goals. It follows logically that organizational planning and delegation procedures are important segments of the integration of strategic goals and organizational designs.

What makes the task of organizing the material function particularly difficult is that not only firm's strategy and internal needs have to be considered but the outside world as well. Both the purchasing and traffic functions have clear contact with the market place and have to be responsive to market developments. If suppliers place high emphasis on marketing, and staff the area with well-qualified, aggressive and imaginative personnel with high status, the owner manager must find a suitable way to counter-balance this outside force. Figures below show an organizational structure of a small business as well as the development of different functions.

Figure 2.1: Organizational structure in which each person reports to one supervisor

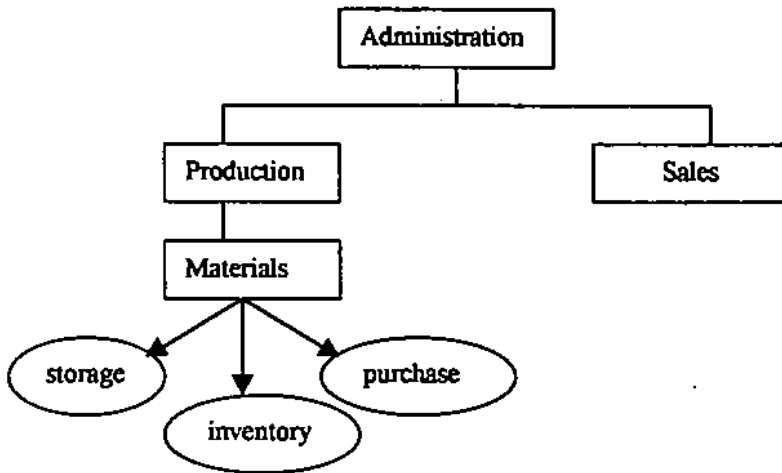


Source: Adapted from Longnecker et al. (2 000:393)

In a line organization, each person has one supervisor to whom he or she reports and looks for instructions. Thus, a single, specific chain of command exists. All employees are directly engaged in the firm's work: producing, selling, or performing administrative duties. Most very small firms, for example, those with fewer than 10 employees, use this form.

Figure 2.2 is presented on the next page

Figure 2.2 Development of different functions for a small business



Source: Own source

2.5 IMPORTANCES OF PURCHASING MANAGEMENT

Purchasing is not an end in itself. Materials and supplies are bought because they are needed. Purchasing's primary obligation is to provide users with their requirements. As a result, purchasing is sometimes regarded as merely a service function. This implies that purchasing has to subordinate itself to the aims, desires, and policies, and even the personal preference, of the departments serviced.

Also, although its importance varies with the type of business, purchasing constitutes a key part of operations management for most small businesses, as purchasing activities are used to obtain materials, merchandise, equipment and services to meet production and marketing goals. Through purchasing, a firm secures all production factors except

labour. For example, manufacturing firms buy materials, merchandising firms purchase goods to be sold, and all types of firms obtain supplies.

Purchasing contributes to profitable operations by ensuring that goods are delivered when they are needed. In a small factory, failure to receive materials, equipment, or parts on schedules can cause costly interruptions in production operations. In a retail firm, failure to receive merchandise may mean loss of sale, and possibly, a permanent loss of customers who are disappointed.

Another aspect of effective purchasing is to secure the best possible price. Cost saving goes directly to the bottom line, and purchasing practices that seek out the best prices can have a major impact on the financial health of the firm.

It should be noted however, that the importance of the purchasing function varies according to the type of the firm. In a small, labour intensive firm, such as an accounting firm- purchases of supplies are responsible for a very small part of the total operating costs. Such businesses are more concerned with labour costs than the costs of supplies or other materials they may require in their operations process.

Van Rooyen & Hugo (1983:14-15) quoted the following reasons for the increasing importance of the purchasing function:

- buyers have to be cautious about prices and price tendencies since in the past and still today inflation becomes increasingly problematic in the total buying expenditure;

- because of the situation that is competitively rigid, firms must buy at the lowest possible prices to maintain or increase their relative share of the market;
- to overcome the situation of shortages of requirements, firms have to make provision for obtaining either alternative sources or substitute products to ensure uninterrupted operations;
- choosing a foreign supplier is a good decision that should be made with great care, since the supply sources have taken a more international character;
- careful choice of foreign supplies is also important, based on issues such as political risks, that are manifested in boycotts and other uncertainties;
- due to sharp price increases, many governments intervened in the economic process by applying price control on certain products. As a result firms must inevitably examine costs to ensure continual maximization of profitability;
- product life cycles have been shortened by amongst other things by technological revolution, thus purchasing should pay special attention to the possibility of product obsolescence;
- stringent quality specifications and control require careful attention to the inherent features of products in order to comply with the stipulated quality requirements;

- the development costs of new products have continually increased and in order to ensure that products can be successfully marketed, the purchasing's contribution has become essential particularly for materials required and their functional suitability, and
- increased inventory costs have compelled firms to find a compromise between the danger of having too small a stock and the costs of keeping a large inventory.

Shepherd, then president of Texas Instrument Inc, made the point clearly some years back.

"We look to our purchasing departments to support our engineering efforts with ideas and suggestion and liaison with vendors, to support our marketing effort by pointing out new business opportunities and suggesting marketing approaches (not reciprocity) which can be helpful. We expect our purchasing departments, because they are in the position to be so well informed to be a source of innovations in their own operations and for the other operations within the company.

There is a tendency on the part of many to think that the purchasing mission is to buy things, whereas I think the purchasing mission is to be part of a larger system creating profits and growth. I'm not satisfied to have buyers sit at their desks waiting for paper requisitions to arrive and then converting these into other papers and sending them out to vendors. I want them to become more informed and influential and less simple data transmitters" (*Henritz et al. 1986*).

The importance of purchasing depends on the nature of a firm's products and its operations. And it can be determined largely by three factors:

- *absolute currency volume of purchases.* If a firm spends a large amount of money on materials, the sheer magnitude of the expenditure means that careful purchasing decision can usually produce significant profit;
- *percentage of product cost represented by materials.* When a firm's materials costs are 40% or more of its product costs, a small reduction in material costs increase profit significantly, careful purchasing pays off in such firms, and
- *types of materials purchased.* Most importantly materials' availability, quality, costs and services can be influenced by creative purchasing performance.

An assessment of the significance of purchasing and a supply chain management can be stated simply as the performance of activities in this area that can have a major impact on the total performance of the firm as a whole. Quality, delivery and cost aspects of supply performance affect the ability of firms to meet the demands of their environments. Ability to meet customers and financial goals, in particular, can be influenced significantly by the degree of effectiveness and efficiency achieved in managing operations in the supply chain. There are variations in the level of impact, depending on the nature and operating circumstances of particular firms, but in none will the effects be negligible.

Changes in the environment of firms are placing demands on them to raise their standard of performance. If they are in the market sector they need to stove off and beat the challenges of competitors. If on the other hand, they are public sector in the non-market sector, they need to comply with the

wishes of their paymasters. For some, the pace of change has been so great that they have had to carry out a fundamental reappraisal of their business and corporate strategies and they have had to undergo a major transformation in order to cope. For others, the challenge still has to be confronted.

For many, the contribution from the supply chain has been growing as a result of decisions to purchase a higher proportion of goods and services from external, as opposed to internal services. As a result the very character of some firms is changing.

{supply chain -it is an approach to analyzing and /or managing logistics networks that has captured the attention of many businesses. The rationale for this interest is the opportunity for cost savings (efficiency) and /or better customer service (effectiveness). The ultimate objective is to improve the firm's competitive position in the marketplace and to sustain that position in spite of intensive competitive forces and rapidly changing customer needs}

Local government and/or authorities are becoming less in-house providers of services and more enablers. The range of service, which is required to be 'market tested' and which may end up being contracted out to the market place, is growing. Local authorities, thus are having to develop purchasing units to carry out this work and to look after the interests of the clients receiving the services.

Outsourcing in the private sector places a greater reliance on suppliers not only to supply more goods, but also to provide other services, such as product design and development. This means that purchasing and supply management can provide added value as well as cost reductions.

Competitiveness of the firm can be enhanced through quality improvements, logistics efficiencies and the compression of lead-times. Multifunctional teams in the buying firms, perhaps lead by purchasing, can provide an effective mechanism and put into practice, the role of evaluator, creator, and manager of interfirm supply links. Commodity management strategies can shape the structure of the supply chain and can influence the development of mechanisms of coordination. Champions in the supply chain may radically affect the way in which other links are managed and operated, in order to produce the desired standards of performance (*Saunders, 1997*).

In the last decade, managers have witnessed a revolution in technology and supply chains. A variety of shocks occurring throughout global markets have radically changed the way managers view their environments. The rate of change in markets, products, technology and competitors is rapidly increasing, leading the situation in which managers must make decisions on shorter notice with less information and with higher penalty costs (*Van Weele, 1994:14-15*). New technology on the other hand provides the firm with the opportunity to gain competitive advantage and to produce products and provide services at a relatively lower expenditure; it is of a significant strategic interest to most firm. Changing technology almost implies new equipment and new process (*Leenders & Fearon, 1993:570*).

In this situation, customers are demanding quicker delivery of products, as borne out by the proliferation of express mail competitors. These same customers require products that utilize state-of-the-art technology incorporating all of the latest features. Products are becoming less standardized, and customers are demanding options that are tailored to

their unique requirements. Computers are evaluated based on their speed and cost, automobiles on their safety and reliability, and long-distance telephone carriers on price competitiveness. Such products are thus becoming more complex, have a greater variety of options, and must be tailored to a greater number of shrinking market "niches". Many product life cycles, which in the past were fairly stable, now often lasts only several months in some industries. This has led the once popular management expert to compare current global markets to the fashion industry, in which products go in and out of style with the season.

South African firms are operating in a changing environment wherein they are exploring and adapting to these global trends. Small business, manufacturing in particular, have the opportunity to gain the competitive advantage as they continue to grow towards this direction. They are operating on a small economic scale with little investment in capital equipment. As a result their strategic plans would focus more on this new technology, unique customer requirement, automation of different activities and enjoy greater market share.

Managers throughout the supply chain are feeling the full effect of these shocks. Cutbacks are forcing managers to handle a greater number of channels, yet cost pressure care also require that they do so with less inventory. Because there is less growth in many markets, mistakes leading to lost sales cannot be easily dismissed and written off. Both customers and suppliers are better at measuring performance, so that mistakes are more easily detected. Exact quantities are being demanded, requiring a system of supply-chain management that is quick, precise, and provides a top-quality product every time.

Despite the apparent impossibility of surviving under such environmental conditions, some firms are thriving, as firms strive to increase customer value by improving performance while simultaneously reducing costs. One area that many firms are turning their attention to, is purchasing and sourcing management. There are three major benefits to be achieved from a focus on purchasing and out-sourcing management.

They are:

- cost;
- quality, and
- technology.

Monczka et al. (1998:2-4) recommends that purchasing is a major area for potential cost saving. *Hugo et al. (1998:12)* also look at the financial impact of purchasing and materials management on the firm's financial result. He focuses on the most important influence that more efficient purchasing can have on a firm's return on investments: "the profit-leverage effect".

Profit-leverage effect means that a relatively small percentage saving in the purchasing price may develop into a relatively large percentage increase in net income (i.e. more efficient purchasing can help the firm to reduce its costs and increase its profits).

For example: Assume that sales amount to R1000, purchasing costs amount to 50% of sales (R500) and the net profit percentage is 5% (R50).

A 10% reduction in purchasing costs (10% of R500 = R50) will double profits (R100) or results in a 100% increase in profits, to have the

same effect as a 10% decrease in purchasing cost. This could have the following results:

- sales would have to double;
- prices would have to be increased by 5%;
- the operating costs, including salaries, wages, marketing costs and others would have to be reduced by 11% i.e:

$$\left(\frac{50}{450} \times \frac{100}{1} \right)$$

Besides the profit-leverage-effect, the multiplier effect of purchasing cost savings can also be a preference. It shows the amount of additional sales required to effect a saving of R1 in purchasing costs in a particular profit margin.

Secondly, according to *Monczka et al. (1998)*, purchasing and supply management have a major impact on quality. A supplier can make or break a firm, in terms of providing products and services that either exceed their customer's expectations, or fail totally to meet them. A poor quality product can virtually shut down a firm's operations. Most firms are seeking to increase the proportion of parts, components, and services they outsource, in order to concentrate on their own areas of specialization and competencies, and better meet their own customer's expectations. The importance of managing all elements of quality because of the ultimate impact on costs, efficiency and profitability or organization, was first emphasised by leaders such as Deming, Junan, Crosby, Taguchi and Ishikawa (*Coyle & Bardi, 1992:461*).

As will be discussed in the coming chapters, the emphasis on quality management is very important. Total Quality Management emphasise, that

employees must be imbued with an attitude directed towards a continuous striving for improvement and it encompasses all activities of a firm (*Farmer & Van Amstel, 1991:22*).

Finally, purchasing also can improve product and process designs, and help introduce new technology into a firm's offerings of products and services (*Monczka et al. 1998:2-3*).

2.6 CONCLUSION

The nature of purchasing management allows it to be a basic and integral part of the firm's operation. For a business to be successful, all its individual activities must be successful. It is impossible for any firm to achieve its full potential without successful purchasing and its related activities. In the long run, the success of a firm depends every bit as much on the purchasing activities as it does on the individuals who administer the other activities of a firm. The effectiveness of purchasing and materials depends largely on the management of materials and strategies that are in place. Materials management and strategic issues are discussed in the next chapter to illustrate the effectiveness of purchasing for the success of the firm.

CHAPTER 3

MATERIALS MANAGEMENT

It was indicated in the previous chapter that effective purchasing of goods and services contributes to the competitive advantage of the firm. To strengthen this point of view this chapter focus on materials management and strategic issues that are of concern.

3.1 INTRODUCTION

The attention of the management of materials activities crop up in the late 1950's and early 1960's, this trend continued into the 1970's. The critical nature of some materials commanded the attention of managers (owners), and materials generally became a significant element in the firm's strategic planning process. Currently the situation has changed, due to evolutionary changes that are taking place within the firm and the supplier's firms, within macro social economic environment and within the political environment, most of the firms embrace the procurement management concept and integrate it into their day-to-day operations.

The need to effectively manage materials is of paramount importance. To monitor and stay abreast of these evolutionary changes strategic issues are a solution. Purchasing as an activity in most firms around VTMA plays a vital role in the competitive advantage of the firm, especially when one considers that a typical firm may spend sixty percent of its revenue on outside suppliers.

The materials management approach to supply management has been accepted widely throughout many businesses. Irrespective of the systems approach used, experience has proven that integrations of selected materials activities for operating and management purposes typically reduces the total costs associated with acquiring and managing materials. It follows that since purchasing management is the main element of materials management, purchasing itself may be thoroughly influenced by the implementation of materials management because the status of purchasing may be raised by the larger decision-making input accorded to materials management in the firm.

3.2 MATERIALS MANAGEMENT IN PERSPECTIVE

Ericson, one of the early authors on materials management, identified three concepts in the materials management approach that are still useful in explaining related concepts:

- materials management is basically about rationalizing materials supply activities. It is management philosophy with efficient materials supply as a goal;
- materials management is an organizational concept aimed at creating an organizational structure to co-ordinate all materials-supply activities under one management, and
- materials management is a combination of the two concepts - a management philosophy as well as an organizational concept.

The chartered institute of purchasing and supply defines materials management as "the total of all those tasks, functions, activities and routines which concerns the transfer of external materials and service into the firm and the administration of the same until they are consumed or used in the process of production, operations or sales" (Cater & Price, 1993:23).

Colton & Rohrs (1985:2) define materials management as "the planning, directing, controlling and coordinating of those activities concerned with materials and inventory requirements from the point of their inception to their introduction into the manufacturing process. It begins with the determination of materials quality and quantity, and ends with its issuance to production in time to meet customer's demands on schedule and at the lowest costs". *This is illustrated in figure 3.1.*

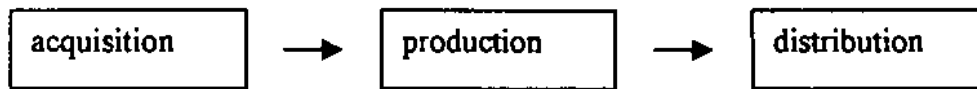
Figure 3.1 Flow of materials to the production process



Source: Own source

Relatively speaking, materials management can be defined as a confederacy of traditional materials activities bound by a common idea - the idea of an integrated management approach to planning, acquisition, conversion, flow and distribution of production materials from the raw materials states to the finished product state. It's management task is to incorporate each of these activities into a manageable system. *This is illustrated in figure 3.2.*

Figure 3.2 Materials supply chain



Source: Own source

The concept "materials management" brings together all the many and varied activities that infringe on the flow of materials through the firm and places them under the direct supervision of one individual, the manager.

This general explanation implies that, the materials management concept advocates the assignment of all the activities which contribute to materials' costs. This includes the primary responsibilities which are generally found in purchasing, plus all other major procurement responsibilities, including inventory management, traffic, receiving, warehousing, surplus and salvage, and frequently production planning and control. Some firms can also include customer service, scheduling, shipping, materials handling, and physical distribution in their definition of materials management.

Materials management may be used interchangeably with concepts such as logistics and it is therefore conceivable that materials management may, in a particular firm, also include the distribution of final products (*Leenders & Fearon, 1993:4*).

{Logistics is the process of planning, implementing, and controlling the efficient, cost effective flow and storage of raw materials, in-process inventory, finished goods and related information from point of origin to point of consumption for the purpose of conforming to customer requirements}

This means that there are three approaches to materials management, namely that its task include the handling of production materials to the finished product state; that materials management is only involved with taking materials into the production process, and thirdly that it may include the distribution of the final product.

To systematize these concepts, *figure 3.3* illustrates the different fields of purchasing management, materials management and logistics management. It shows that logistics management, which includes the physical distribution of the final product, is the all embracing concept.

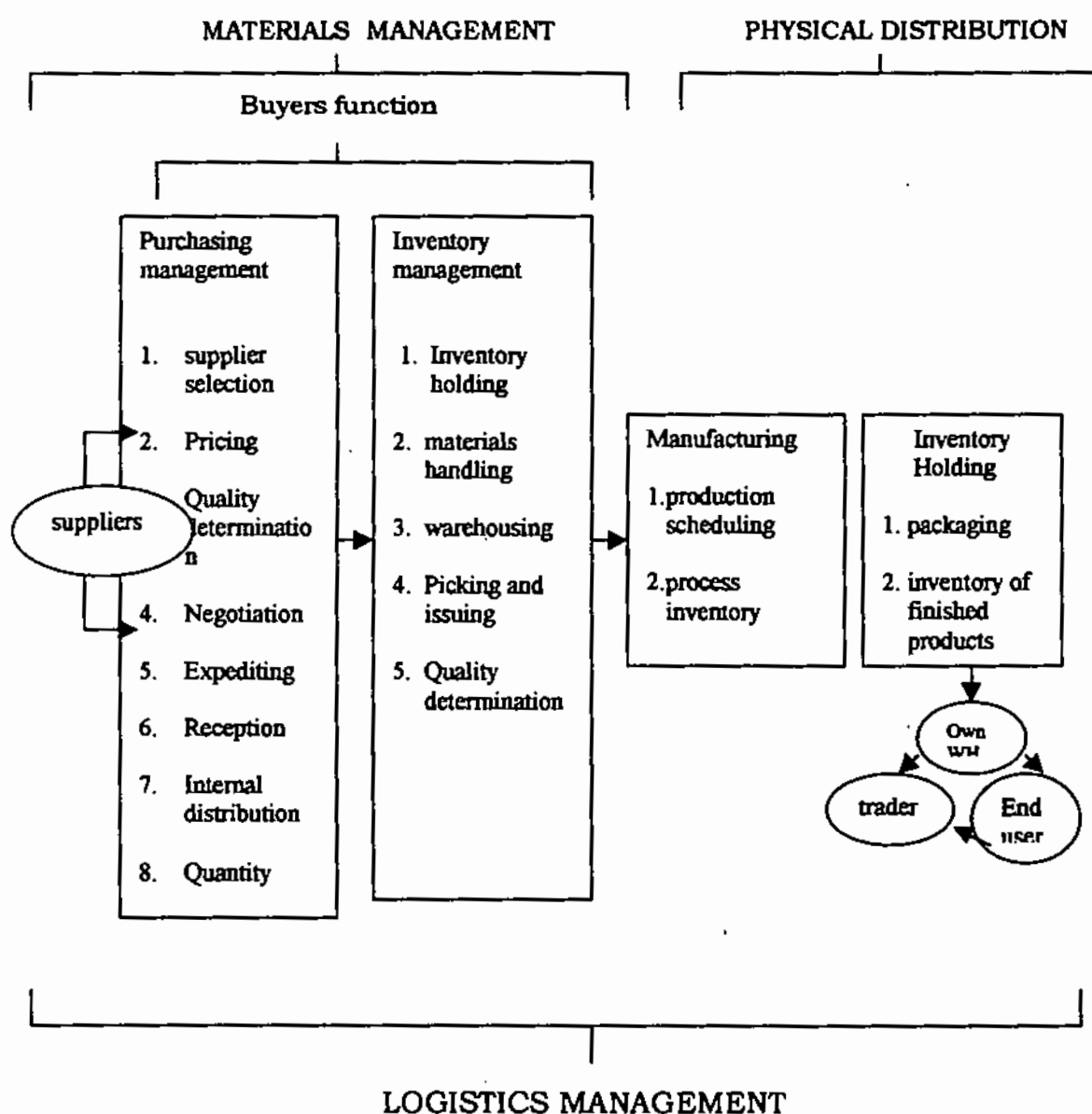
The rationale for the growth of materials management is the realisation that the different interdependent materials-supply activities often have conflicting objectives. Bulk purchasing aimed at low prices is in direct conflict with the aim of low inventory costs. Materials management attempts to find optimal solutions for those conflicting objectives and that is only possible if the entire materials-supply chain is managed as an integrated system. The most important characteristic of the systems' approach is that in the business environment the system is managed to operate optimally, in its entirety. In practice this means that a subsystem could be less efficient, in the interests of the complete system.

The emphasis here is that, the goal of materials management is the elimination of system ineffectiveness. The aim is *system efficiency*, achieving common objectives, not the objectives of individual materials-supply activities.

Most small businesses are normally operating closer to their customers. The relationship between the business owner and his customers is strong, this will enable the owner managers to make future analysis about the demand, as a result they have the advantage of certainty on demand and lead times, thus they do not produce to inventory. Therefore their supply chain is managed as an intergrated system with low inventory cost.

Figure 3.3 is presented on the next page

Figure 3.3: Materials provision activities



Source: Adapted from Hugo et al. (1998:47)

For a materials management to be applied effectively in a firm, it is quite clear that the firm requires a good restructuring and re-engineering of many of the materials-supply processes. The firm can make this

effort only if a substantial amount of advantages may accrue from this move. Some of the most important advantages of materials management are:

- *profit contribution* can be enhanced by integrating various activities and concentrating on a profit centre approach;
- *systems optimising* is easier to achieve since materials management aims to solve all problems related to the inflow of materials;
- *service*, particularly constant control over the level of services is a major advantage. Most important are availability, reliability and speed of service to the users;
- *limiting of inventories* is an important materials-management advantage. Inventories could contribute greatly to the efficiency of the work done, but they involve considerable capital investment, as well as operating costs for inventory holding;
- *medium deviations* form an important system advantage of materials management. Centralised management of activities leads to closer co-ordination and control and ultimately to elimination of errors. Materials management therefore limits to the absolute minimum all deviation of quantities, delivery times, production scheduling or quality in the system;
- *minimum total-materials costs* can be achieved through cost trade-offs between various activities in the supply pipeline. The cost trade-

off is the recognition that cost patterns of various activities of the firm frequently display characteristics that put them into conflict with one another. This conflict is managed by balancing the activities so that they are collectively optimized, and

- *ensuring quality.* The quality of purchased materials products and services largely influence the quality of manufacturing, the quality of the firm's own product and the quality of service in general. Materials management provides the best possible opportunity to ensure that the concept of "do it right the first time" is developed with the supplier, who is, after all, the starting point of the materials-flow chain.

3.3 IMPORTANCE OF MATERIALS MANAGEMENT

The primary contribution of materials management in daily operations is improved communication, coordination, and control of the interrelated materials activities. Materials management forces coordination between purchasing and production control. Purchasing and production control are both responsible for the on time delivery of production materials. Division of this authority between two different operating units inevitably lead to conflict: delays on the arrival of materials, production control is seldom satisfied to work through purchasing. Frequently, production control personnel proceed to expedite the late materials directly with the suppliers. Since the expediting of purchased materials and negotiation with suppliers are basic purchasing responsibilities, conflict ensues. As it was indicated earlier, to be able to manage materials effectively, strategic focus is a solution. The greatest benefit that a firm receives, is that, managers of

individual materials functions, such as purchasing, inventory, and traffic, usually are compelled to think more narrowly in terms of unique, responsibilities associated with their specific functions (*Dobler & Burt, 1990:23*).

3.4 STRATEGIC ISSUES

For the entire firm to experience a consistent level of success in today's rapidly changing environment, purchasing operations and activities need to be synchronised with the strategy of the firm and attuned to the variable internal and external forces. The question that needs to be considered is whether the purchasing activity can serve the growing firm with ordinary service, utilise methods, procedures of a decade ago, and have one set of approach for all possible tasks. As firms adapt to ever changing situations and move towards more proactive strategic modes of operations, purchasing also needs to progress through various stages of evolution.

The strategic role of purchasing has lagged behind that of other activities. There are several reasons for this lag:

- purchasing is seen only as an clerical function;
- day-to-day operation pressures leave little time for strategic thinking, and
- management view purchasing as a support function, not a profit contributor.

According to *Henritz et al. (1991:600)* there are substantial risks to not having the purchasing function included in the strategic-planning process, including:

- threat to supply assurance;
- improper supplier selection for new products;
- problems with environmental or regulatory constraints;
- lead time uncertainties, and
- price uncertainty.

For these reasons, it is important to include purchasing in the strategic planning cycle. Effective strategic planning by purchasing requires that purchasers constantly scan their external supply markets and be aware of plans for new products, product revisions, and deletion of production lines. Essentially, environmental analysis both internally and externally will lead to the formulation of commodity strategic-action plans.

Environmental analysis consists of searching the environment for signal that may have early warnings of significant change. This is where contacts with key suppliers and reading of market journals in the specific field are useful. The objectives are to provide the firm with a large degree of control over uncertain environmental forces.

In tracing the evolution of strategic purchasing, *Adamson (1991: 10)* suggests that it is only the last decade that purchasing has gained a place within the strategic direction of leading western firms. He asserts that historically there has been a perception in American markets that

procurement and supply issues were rarely strategic in nature, that purchasing only involved short range decision, and that the purchasing function could need to be involved in the firm's planning. However, there was a contention that purchasing strategy first achieved a general level of recognition and interest in the 70's. Since then however, published work has been sporadic, and formal instruction underdeveloped, when compared to areas such as marketing and business strategy. Specific recognition of purchasing's potentially positive role in firm's strategy is relatively new.

All firms need to plan for the future, this involves development of frameworks to allow this process to take place. Once they have agreed to strategic objectives, strategies can be formulated. It is essential that all business structures including purchasing, are involved in day-to-day operational activities, and have made the contribution to business that it is capable of. It must become involved in tactical and strategic decision making.

Strategic purchasing operation, if it is proactive, can give the firm it represents a competitive advantage by reducing waste in the value chain. Purchasing strategies however cannot be developed in isolation, they need to be integrated with firm's strategy to succeed.

Researches conducted on purchasing and materials management have questioned the contribution to be made by purchasing to firm's performance. These researches show that during a time of critical material shortages in 1973, the purchasing function did not move to improve either its role in its impact on firm's strategy. Throughout the

70's purchasing's role in the firm was viewed by many as much more administrative than strategic.

As the level of attention paid to purchasing and supply increases, the work tends to become more strategic in emphasis, concentrating more upon such activities as negotiating longer term relationship, supplier development and total cost reduction, rather than ordering and replenishment.

Researchers had specific suggestions for purchasers:

- thoroughly understand the content of the firm's existing strategic plan and stay in touch with it as it moves and changes. Then come forward with recommendations on ways procurement can invest up-front money for down the-road payback. Look ahead for the next five years to determine whether the purchasing has the power to invest up-front money for down-the-road payback. Look at the present information and management systems in the same way. Examine the firm's structure needed to display those skills and systems for the job ahead.
- contribute to the formulation and reformulation of the strategic plan with the special knowledge purchasing has about suppliers and their effect on make-or-buy plans, future price and their availability trends on components and materials being considered in the design phases of strategic planning, and

- contribute the special knowledge purchasing has on actual or potential competitors (*Henritz et al.1986: 22*).

The status accorded to the purchasing activity in firm is determined to a certain extent by the image the function projects to personnel, tend to have a simplistic view of the purchasing function, and to demonstrate little regard for internal purchasing performance measures which they view as mainly tactical. The advantage between purchasing and the performance by the firm is being established. The firms are beginning to realise the impact of purchasing on their competitive position, and purchasing personnel are gradually shifting their role from tactical to strategic.

Hugo et al. (1998: 68) defines strategic planning, as the planning for the long term that should take place at top management. They also indicated that if strategic purchasing decision is effective enough, it could have a profound influence on the competitive position, profitability and market share of the firm.

Strategic purchasing enables the firm to take a proactive move and move away from the reactive purchasing which is merely aimed at reacting to a purchasing request.

The following factors determine whether the purchasing department plays a proactive or reactive role in the strategic planning:

- the extent, to which the firm depends on purchased products, raw materials and services;

- the extent of the evolutionary development of the purchasing function with the firm;
- the importance that the owner attaches to the purchasing function, and
- the ability of the purchaser clerk to effect a shift in emphasis from tactical to strategic purchasing action.

Lyson (1993:3-5) also defines strategy from the general point of view as an action designed to achieve long-term business and functional objectives. He identified three types of strategy as firm's, business and functional:

- firm's strategy is a comprehensive future orientated continuous process of management, which is implemented within a formal framework;
- business strategy is concerned with how to produced market segment. It is often based on the concept of the product life cycle, which emphasises that all products in their original unmodified form have a final life span, and
- functional strategy refers to strategy formulated by functional departments such as production, purchasing and marketing and are primarily concerned with maximising resources productivity within the function.

{Though this viewpoint is focusing on big businesses, it is also practical in small businesses}

For the success of the firm, these strategies should fit together coherently and primarily consistently. From the purchasing point of view, purchasing strategies should be constrained by business strategies. The product life cycle for example, influences such purchasing decisions as:

- what to buy?
- how to buy?
- how far ahead to place orders?
- the sources from which to buy?, and
- the terms and conditions of purchase.

3.4.1 Growth in the strategic role of purchasing and supply

The main reasons for the growth in purchasing involvement in strategic decision making are as follows:

- purchasing is seen as an area for adding values, not as reducing cost;
- rapid product innovation requires a more integrated management team, involving all operational activities;
- there has been a move to holistic views concerning the integration of material and information flows, both internally and externally;
- active supplier involvement can reduce costs;

- a developing concern with strategic cost of supply rather than short-term price;
- the growth and development of the Chartered Institute of Purchasing and Supply in supporting the role of the activity;
- benchmarking against Japanese firms who for a long time have seen the activity as an important strategic entity, and
- a greater awareness of the growth in bought out materials, expenditure and profit potential in purchasing.

Farmer & Van Amstel (1994:24) recognised that the problem faced by the purchasing and supply activity in many firms has been the failure to take a productive strategic role. they indicate that many firms become more aware of the role the activity could take from the 80's onward. The important point they were not aware of, was in particular the strategic advantage it could have if properly developed. How effective purchasing is, will depend to a large extent on the stage of the department, *i.e.* is it tactical or strategic, reactive or proactive.

3.5 DEVELOPMENT OF PURCHASING STRATEGY

In developing a strategy, the following need to be considered:

- what are target objectives?
- how target objectives are to be achieved?, and

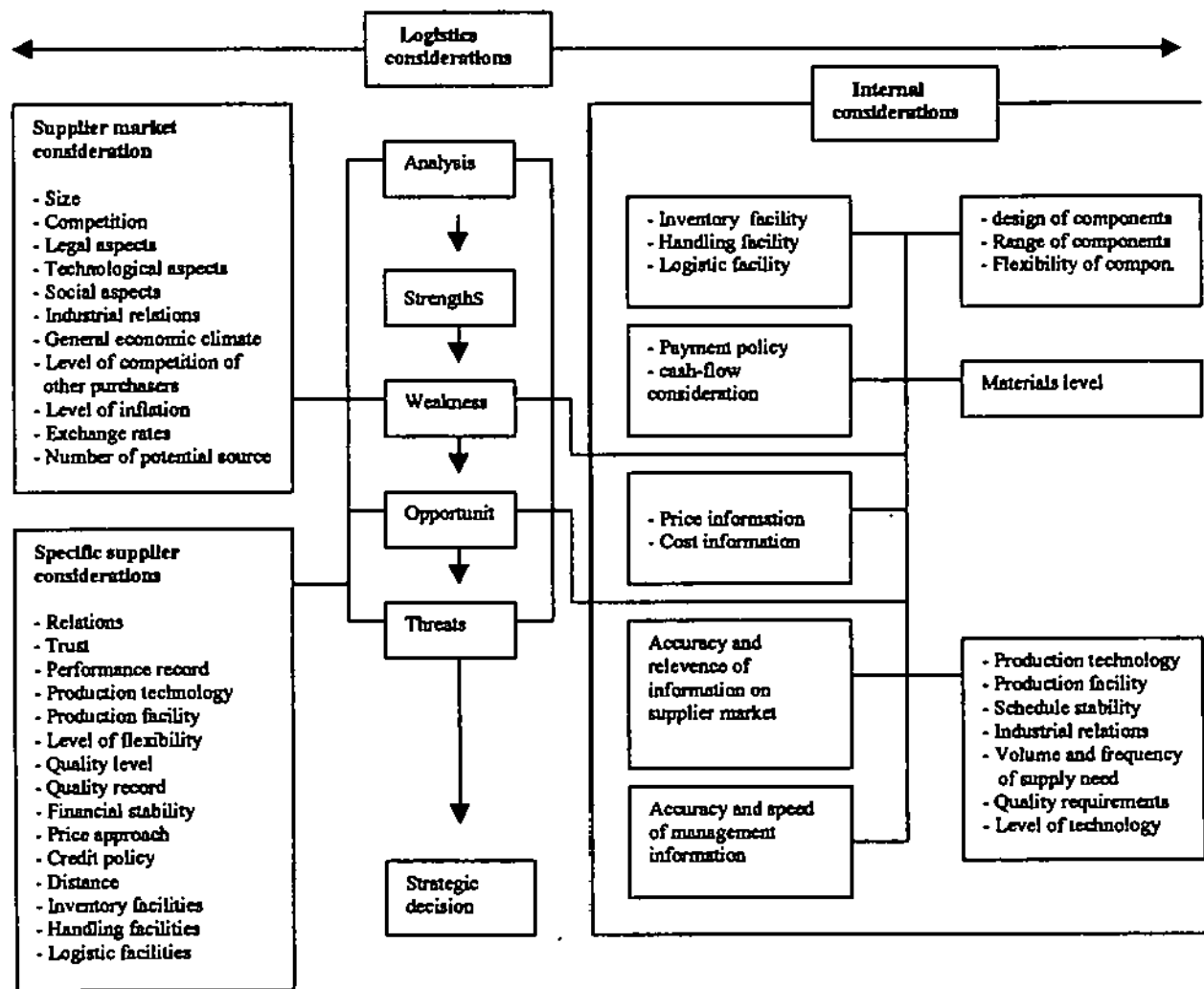
It is important that the firm, before it develops its strategies, is clear as to its intent. That is, defining the business profile and developing a mission statement. Purchasing strategy development can be influenced by both internal and external factors. External environment consideration can be subdivided into two groups, the supplier market and specific supplier considerations.

Factors in the supplier market that should be taken into consideration in development of a purchasing strategy deal primarily more with the size of the supplier market than level of competition in the market, the number of suppliers in the market, technological development, social consideration, industrial relations the general economic climate and the level and the power of other buyers in the market and the exchange rate. The specific supplier consideration comprises the factors that should be taken into account in determining the suitability of a supplier when it comes to choosing one.

The internal considerations that influence the development of the purchasing strategy include the physical facilities of the firm, financial sources, cost aspects, information flow, materials and inventory, and production aspects (*Hugo et al.1998:69*). Figure 3.4 indicates the elements of purchasing strategy development.

Figure 3.4 is presented on the next page

FIGURE 3.4 Framework for the development of a purchasing strategy



Source: Adapted from Hugo et al. (1998:70)

Strategic issues depend on many factors, including such factors as whether the firm is operating under conditions of:

- growth, stability or retrenchment;
- high, moderate or low uncertainty;

- long medium-or short-term time constraints and product life cycle;
- buyers or sellers market;
- many or few suppliers, alternative materials or otherwise, and
- partnership or competitive purchasing philosophies.

There are three aspects where strategic purchasing issues are being taken from:

1. Organisational issues:

- centralisation and decentralisation;
- integration of purchasing through materials, and
- management or logistics management approach.

2. Sourcing issues:

- national or global purchasing;
- single or multiple Sourcing;
- open or restricted i.e. approved suppliers only, buying;
- subcontracting;
- lease or buy strategies;
- making or buying strategies, and
- reciprocal buying.

3. Quantity issues:

- stock replenishment or MRP system;
- stocking of strategic materials and emergency stores;

- stocking strategies arising from factors such as product demand, obsolescence, and falling prices;
- futures buying, and
- just-in-time purchasing.

3.5.1 Organisational issues

Centralization and decentralization

As previously indicated, some firms centralise their activity almost completely doing the buying for all plants at a central office. Others decentralise the function entirely, giving each plant full authority to conduct all of these purchasing activities. If a firm approaches purchasing on a decentralised basis, individual buyers will handle their own purchasing. The advantage to this approach is that the user probably knows departmental needs better than anyone else (*Dobler & Burt, 1990:103*).

Integration of purchasing through materials

In chapter one it has been indicated that all institutions whether private, government or community organisation, need the service of purchasing. They require goods such as raw and other materials, machinery and equipment as well as services such as installation, repair and maintenance. Purchasing is not only restricted to business. Various other institutions need goods and services to perform their activities. Logistics also is applicable to both manufacturing and non-manufacturing firms, profit and non profit firms. The term logistics

stems from military firms and was in use in the days of Louis XVI of France. It was clear that the effectiveness of the military activities did not depend solely on the weapons ,the fighting strength and spirit of the soldiers, it was also effected by the possibility of transportation and the supply of ammunition and food. The nationalised consideration of the transport and the supply of materials, food and ammunition were called logistics. The French military success of that time was mainly due to the importance attached to logistics (*Van Weele,1994:164*). Logistics can be defined as the process of planning, implementation and controlling the efficient cost effective flow and storage of raw materials, in process inventory, finished goods and related information from point of origin to point of consumption for the purpose of conformity to customer requirements (*Ballou,1999:6*).

A description of logistics, which covers most characteristics mentioned in management literature encompasses all materials flows from the flows of purchasing materials into a facility, through the manufacturing process and out to the customer. The starting point is the short-term sales plan and the related product plan. The total logistics function therefore involves short-term materials planning, the supply of raw materials and other purchased goods, internal transportation storage and physical distributor. Speed and flexibility demand very close co-operation between these materials related functions. Logistics management therefore applies to a very broad area of activities and is sometimes also referred to as materials management or integrated business logistics.

Hugo et al. (1998:52) explained that the essence of logistics management lies in the following important concepts:

- the movement of goods;
- satisfactory customer services, and
- reasonable costs.

The existence of logistics management depends on these concepts - it creates utility of form, place, time, and possession for the customers. From the firm's point of view, the costs involved should place the firm at a competitive advantage and at the same time ensure its profitability.

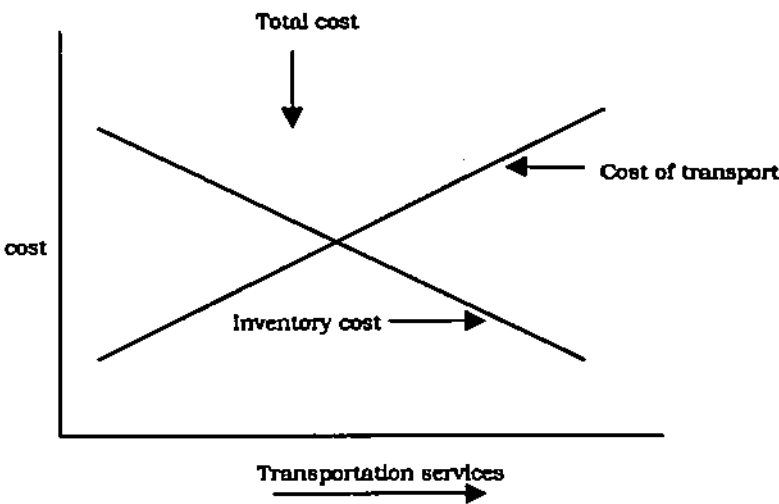
The important task of logistics management is to facilitate the correct level of customer service and to maintain the balance in terms of total logistical cost. This necessitates cost-trade-off between all activities in the logistical system so that the cost of the system in its entirety is optimal.

The cost-trade-off according to *Ballou (1999:3)* is the recognition that cost patterns of various activities of the firm frequently display characteristics that put them in conflict with one another. This conflict is managed by balancing the activities so that they are collectively optimised.

For example: when transportation services are being selected the direct cost of the transport services and the indirect cost effect on inventory levels in the logistic channel, due to different delivery performance of carriers are said to be in cost conflict with one another.

The best economic choice occurs at the point where the sum of both costs is lowest. *Figure 3.5* indicates the generalised logistics system trade-off. The inclusion of the purchasing function in the logistics management system involves purchasing in other logistical activities.

FIGURE 3.5: The generalised cost conflict between transportation and inventory costs



Source: Adapted from Ballou, (1999:39)

3.5.2 Sourcing issues

Effective source decision will be made when all relevant factors have been considered and weighted against the risk and opportunities, which apply. Not all source decision will justify the same level of attention, but major purchasing will always repay careful decision-making. Sourcing involves much more than simply picking a supplier or contractor for each requirement in isolation. It involves continuing

relationships, both with preferred sources which are actually supplying goods and services and with potential sources which may have been passed over for the present but are still in the running. It involves decisions about how to allocate the available business and what terms to do business on.

For its proper performance, sourcing requires supply market research. This is a normal part of buying work undertaken informally by buyers when they talk to representative, visit exhibitions, read trade journals, and investigate the market before placing orders. Additionally it may be undertaken more formally as a support function to buyers. Supply market research identifies the set of actual and potential sources which constitutes a supply market, investigates their capabilities, examines market trends and long-term supply prospects and generally keeps an ear to the ground. It is part of purchasing research, though most of the small manufacturing businesses are not putting enough efforts as far as this area is concerned (purchasing research). It is one of the important things they emphasise.

Another factor, which needs to be kept in mind in marketing key resource decision is, who else should be involved in the process? *Robinson et al. (1967)* identified what they call the "decision-making unit". They categorised the people involved as 'the user' 'the buyer' 'the decision-maker' "gate keeper" and 'the influence'. The writers were concerned with identifying source decision-makers for marketing purpose. They wanted to know who actually made the decision, which person should they try to influence? Many markets have been built from that work.

For our purpose it is interesting to note that one aspect of their findings showed that different people played major role in decision making when it concerned what they call a "new buy" from those who were involved when it was a "modified re-buy" or "a rebuy".

Make-or-buy strategies

For many firms, a strategic decision centres on the issue of make-or-buy. This issue is vital to the firm's productivity and competitiveness. The option to make is a traditional one, which resulted in backward integration. New management trends favouring flexibility and focus on firm's strengths, closeness to the customers, increase emphasis on customer and competitiveness, re-inforce the ideas of buying from outside.

Normally it is unusual if any one firm is superior to competition in all aspects of manufacturing. By buying outside from capable suppliers those requirements for which the buying firm has no special manufacturing advantage, the management of the buying firm can concentrate better on its main mission. This philosophy has already resulted in the divestiture of many divisions of many firms and has created an expanded scope for purchasing in the process (*Leenders & Fearon, 1993: 234-237*)

In a going concern, past managerial decision and the firm's long-range plans establish the current pattern of operations. It dictates that some parts and components of the firm's products will be made internally

and that others will be purchased from outside suppliers. Make-or-buy investigations originate within this framework in one of several ways:

- *new products*: The development of a new product and the major modification of an old one are typical situations requiring make-or-buy investigations;
- *unsatisfactory supplier performance*: Unsatisfactory supplier performance for certain purchased parts and components may trigger make-or-buy investigation. Inability by the supplier to perform certain complex production operations satisfactory or from unstable quality performance may result from poor service or from unreasonable price increase, and
- *changing sales demand*: Period of significant sales growth or sales decline generates situations that initiate make-or-buy analysis. Reduced sales result in reducing production activity leaving plant facility and workers idle. When this happens, management naturally attempts to bring into its own shops work previously performed by outside suppliers. During periods of rising sales management seek external assistance in satisfying the production demand made on its facilities.

When considering the make-or-buy decision, the cost factor and the availability of production capacity factor has to be taken into account. The following consideration influence firms to make or buy the items.

Consideration which favour making

- Cost consideration (less expensive to make).
- Desire to integrate operations.
- Productive use of excess plant capacity to help absorb fixed overhead.
- Need to exert direct control over production and quality.
- Design secrecy required.
- Unreliable suppliers.
- Desire to maintain a stable workforce.

Consideration which favour buying

- Suppliers research and specialised know-how.
- Cost consideration (less expensive to buy).
- Small volume requirement.
- Desire to maintain a stable work force.
- Desire to maintain multiple source policy
- Indirect managerial control considerations.
- Procurement and inventory considerations.

(Dobler & Burt, 1990:151)

3.5.3 Quantity issues

One of the decisions that a buyer must make after determining the right quality to buy is how much to buy. Most requirement can be forecast well in advance with a high degree for accuracy. The forecast can be made on the basis of sales quota, bills of materials for the end

product, protected plant operation schedules, and records of past experience in respect of rates of use. But even if a whole year's needs could be anticipated, it would be impracticable as well as unnecessary to purchase the whole quantity at one time. Long-term contracts involve commitments to buy all requirements for several years in some cases.

This in effect requires that the suppliers be responsible for inventory and make deliveries as required by the buyer after which payment is made. It is the purchaser's responsibility to have sufficient quantities on hand as needed. Purchasing quantities must therefore be balanced with operating needs and with the advantages of value buying aided by a minimum inventory to which current purchases are added and from which needed quantities are withdrawn.

Thus in purchasing, just as the term "right quality" has the special meaning of suitability or quality for a purpose, "so right quality" has the special meaning of quantity to be purchased at a time. Just as there is a most suitable and economical quality of material, there is a most economical ordering quantity.

If one has to make decision about managing an inventory, it is useful to understand the behaviour of the inventory related cost factors. These factors often help a manager determine which items should or should not be carried in inventory, what inventory levels should be carried for specific items and what order quantities are appropriate for given items.

One of the short-term operating question that must be answered is: how much of the item should be ordered? Among the factors that often enter this decision process is a concept known as EOQ - the notion of an economic order quantity, this concept holds that the appropriate quantity to order may be the one to minimise all the cost associated with the order-carrying costs, acquisition costs, the cost of material itself.

By using the computer technology, the MRP system calculates inventory needs per period in the manufacturing chain. By scheduling stock replenishment to coincide closely to the time of need, inventory holding is limited to the minimum, thus to some extent this system is aimed at a just in time approach.

The MRP system was developed in the early sixties by United States pioneers like Orlicky and Wright, since traditional materials-management systems and inventory management systems particularly, could obviously not solve the problem of overstocking in manufacturing firms.

A materials requirements planning (MRP) system consists of a set of logically related procedures, decision rules and records designed to translate a master production schedule into time phased net requirements, and the planned coverage of such requirements for each component inventory item needed to implement the schedule (*Hugo et al.1999: 56*).

It is the master production schedule, which indicates precisely the product to be manufactured during certain periods. MRP system functions as complete production planning and control systems. Its module is an integral part of such a system. Through its bill of materials explosion and aggregation process this element of the system generates on a weekly basis the projected, materials requirements for all the finished products included in a firm's updated master production schedule for the coming two-t-three month period.

The inventory that is carried in the system is a function of three factors:

- the quantity purchased when each order is placed;
- the lead time specified by the buyer, and
- any safety stock that is routinely carried.

The objective of time phasing the order point is to keep the inventory as close to zero as is practical until the material is actually needed for production. Consequently using MRP system, the average inventory levels of most materials are relatively low over the long-term (*Dobler & Burt, 1990:157*).

MRP's influence on purchasing.

It's (MRP) implementation has important implications for the firm's purchasing function. Some positive influence includes:

- raising the status of purchasing with the suppliers;
- a considerable decision in the inventory of purchased parts;

- fewer outstanding orders;
- improvements of relations with suppliers owing to improved planning;
- time available for value analysis, research on purchasing and supplier development;
- greater achievement of purchasing goals, and
- motivation of purchasing staff.

However, there are certain problems that should be taken into consideration that can be caused by MRP:

- purchasing quantities are largely inflexible since the quantities are determined by the system;
- because the lead times have to be short and very reliable, suppliers are placed under pressure. This could damage supplier relations;
- low inventory levels place greater pressure on the purchasing function;
- the reliability of purchasing information on the availability and lead times of stock items has a major influence on the success of the MRP system. Particularly in South Africa, such information is not always readily available, and
- the MRP system demands a greater degree of expertise regarding production processes and alternative products from buyers since purchasing is more clearly involved with decision-making.

Future buying.

Future buying is a commitment of purchases in anticipation of future requirements beyond current lead times. As a result an organisation may buy ahead because of anticipated shortages, strikes or price increases. As the time between procurement commitment and actual use of the requirements grows, uncertainties also increase (*Leenders & Fearon, 1993: 34*).

Just-in-time purchasing

This principle (JIT) means that all materials and products become available at the very moment when they are needed in the production process not sooner and not later, but exactly on time and exactly at the right quantity (*Van Weele, 1994:126*). This means that JIT is a product-oriented management philosophy protected to eliminate all forms of waste - whether of time, labour, raw materials or materials. This according to *Hugo et al. (1998:3)* is achieved with a relatively simple information system (Kanban), ensuring that products of the correct specification are made available in the correct quantities and at the precise time - during manufacturing as well as to the consumer market.

Lyson (1993:155) regards JIT as a 'demand pull' system in which manufacturing planning begins with the final assembly line and work backwards not only through the various manufacturing processes, but also to the vendors and subcontractors supplying materials and components. The aim is that by limiting production and assembly to

what is actually needed, both materials and work-in-progress inventories can be eliminated or significantly reduced.

This strategy or philosophy has significant effects on inventory control, purchasing and suppliers. It does involve effects to reduce inventories to an absolute minimum and to eliminate safety stock. It calls for delivery of components and materials, as they are needed. And it is in some instances, the basics for having suppliers locate plants close to customer's facilities to achieve on time-delivery (*Henritz et al.1993: 307*).

It is designed to eliminate inventories of raw materials and purchasing products, sub-assemblies and work in process, and inventories of final products ready for marketing to the customer. This objective is achieved by closely synchronising deliveries from suppliers, deliveries to users and final products to the customers with the time when these items are needed.

According to *Wallace (1990:40-42)* JIT is the name commonly used to describe a manufacturing system where necessary to the assembly site as needed. By this, the manufacturing facility will be able to yield high volume output at the lowest per unit cost.. He defined it as an approach to achieving excellence in a manufacturing firm based on continuing elimination of waste and consistent improvement in productivity. Continuous monitoring of production process within the goal of eliminating all forms of waste is a key point in understanding JIT (*Omachonu et al.1994*).

The just-in-time production and innovator philosophy coupled with manufacturing automation in the form of computer integrated manufacturing (CIM) and its related focus are considered by many as great competitive weapons. The birth of JIT and its positive influence on the global strategic posture of Japanese firms is well documented. In the 1980's many US manufacturers regarded JIT manufacturing as a peculiar Japanese contrivance suited only to the oriental culture. However, as more firms with ever more diverse manufacturing environment successfully applied its principles, manufacturers recognised its inherent wisdom. Today most US manufacturers both big and small have come to regard JIT as vital to their survival. This part examines the problems associated with implementation of JIT and attempts to identify hindering factors to its success. An implementation strategy is proposed so that the firms will achieve the benefits of JIT and ultimately improve its strategic posture (*Omachonu et al. 1994*).

JIT continuously tackles and solves manufacturing bottlenecks within and interfaces problems between consecutive steps in the manufacturing processes. Its management implies that nothing is produced if there is no demand. The production process is pulled by customer orders. The customer is in fact the firm's entity, which is next in line. The JIT system depends in practice on short and reliable delivery time, short adjusting times for equipment, group technology high quality standards and extremely reliable workers and suppliers. It actually co-ordinates purchasing with manufacturing, the manufacturing process internally, and manufacturing with consumer

demand, so that inventories of raw materials, work in progress and final products are eliminated.

This system mostly influences the purchasing function in three main areas:

- pipelines management;
- quality assurance, and
- inventory management.

Pipelines management is a term used for the total management of the supply pipeline to create absolute co-ordination with the firms needs but also with the needs of all firms involved in the supply pipeline.

JIT buyers treat suppliers as if they were an extension of the transformation process aimed at creating value for the ultimate customer. The JIT buyer's task to ensure quality could hardly be overstated. It includes motivating suppliers to join in with programmes such as quality assurance, quality certification and zero defects. Quality has a high priority in the JIT system precisely because below-par products have a severe influence on the functioning of the system. Thirdly, it influences the inventory management. It is often called stock less purchasing. It is actually true that inventory is completely eliminated, so that buyers have to learn to operate without the comfortable cushion provided by inventories. This system demands special expertise in handling the planning and control of the purchasing function.

Leenders & Fearon (1993:212) identified these advantages of JIT purchasing:

- *lower inventory levels* are achieved by a large number of small deliveries demanded by JIT. The speed of inventory turnover is increased considerably, resulting in lower working capital needs and a higher cash flow;
- *smaller buffer stock* is achieved by JIT's demand for short and reliable lead times. Theoretically the system operates without buffer stock, but in South Africa manufacturers are obliged to keep some stock, due to the nature of the supply market;
- *short and reliable lead times* improve the adaptability of the production schedules;
- *quality improvement* - the higher the quality of products purchased, it translates into an improved quality of products produced. JIT purchasing has the added side effect of increased quality awareness among workers, this in turn may influence the firms quality-assurance programme, and
- *cost savings* - the long-term business relationships between purchasing firms and suppliers resulting from JIT greatly encouraged suppliers to reduce costs.

These benefits of JIT do not just happen. Before the firm enjoys the fruits of JIT it must accept JIT as an firm's philosophy. This requires the firm to change or modify its operating procedures, production

system and its culture. Plant layouts have to be adjusted, relationships with suppliers and customers have to be modified, quality circles have to be installed and accurate demand forecast has to be achieved (*Bowman,1991 and Vorkuka & Davis,1996*)

Research has documented some factors that can break or make the implementation process of JIT. Management involvement and proper employee training are essential factors for successful implementation of JIT (*Minahn,1996; Prasad,1995 and Vora & Jayant,1990*). *Vickery (1989)* noted the importance of the presence of a logistical planning system. *Billesbach & Schniederjans (1989) and Zhu & Merdith (1995)* advocated educating and training administrative as well as production workers to facilitate the success of JIT. *Francis (1989)* stressed the importance of accurate data, especially demand forecast for JIT to operate smoothly and the significance of strong working relationship with vendors, while significant strides have been made to clarify elements critical to JIT implementation.

The objectives of this discussion are to identify factors that hinder the implementation success of JIT philosophy in manufacturing environments. Identifying such factors is seen as a crucial first step towards formulating strategies and managerial action plans to remove such factors thus allowing the firm to fully achieve the benefits of JIT and improve its strategic competitive position.

The research has further shown that a JIT philosophy has the potential to increase firm's efficiency and effectiveness (*Ansari & Modarress,1990; Arogyaswammy & Simmons, 1991:56-60 and*

Brownwich & Bhiman,1991:31-40). On the other hand if JIT is not properly implemented desirable benefits are not realized (Prasad,1995). In theory it is easy to understand the concept of JIT in terms of eliminating waste and improving productivity. In reality especially from the small business point of view the concept is difficult to implement because of the need for fundamental organizational changes.

It is thus clear that JIT is a mixture of a high-quality working environment, excellent manufacturing practice and a healthy focused firm's attitude that operations are strategically important. The order and discipline is achieved through management that pulls materials through the operation rather than pushing it through.

JIT could also have an important influence on materials management in the firm. For these reasons, several firms in the United State and in Europe have implemented this JIT philosophy. In South Africa the JIT system also has its support, but owing to the limited local supply market, adaptations have to be made in order to benefit to the system's advantages.

3.6 BENCHMARKING

The management of materials and purchasing is responsible for minimising the resources efforts expended in acquiring the products and services that the firm needs. *Hugo et al (1998)* stated that it is not always easy to objectively determine whether effectiveness and efficiency are attained in all the activities of the supply pipeline . Benchmarking is a management technique aimed at providing an

objective measure of the performance of activities and process in the supply pipeline.

De Villiers (1995) regards benchmarking as a management tools which enables the firm to improve key variable in their product procedures. It can be approached from different angles and fit into different strategies. *Garvin (1993:86)* regards it as the technique that a learning firm should master. *Sherman (1993:46)* in contrast is of the opinion that benchmarking should be done to ensure a firm's survival. It could also be seen as a tool to be used to ensure continuous improvement.

Substantial improvement can be achieved with the use of benchmarking. If a firm which is experiencing problems could develop new products at a fast pace or reduce the number of their quality problems it may survive or gain a competing edge. As such benchmarking is the process of comparing one's product, services and one's product against those of world-class leaders to guide continuous performance improvement towards "best in class" status (*De Villiers,1995*).

Carter (1997:12) described the effective strategies for managing different categories of purchase using the approach based on the product portfolio matrix idea developed by Peter Krayjix. Matrix has the idea that management must have the supply strategy for its purchasing if it has to succeed in the market, considering risks such as long term scarcity due to technological change or economic and political instability. Some form of prioritisation is needed and the

matrix approach achieves this prioritisation by considering two factors for each purchase:

- the importance of purchased items, and
- the complexity of the supply market for the item.

The importance of purchased items

Purchased items should be ranked according to the order of their importance for a particular purpose. Several factors can make an item important:

- the item is used to make products that may be fewer in number but that together contribute a major part of sales and profit;
- the item is used to make a large number of products;
- the item is used on a bottleneck where failure in availability or quality can potentially stop the entire factory's output;
- the item is used in new products that are vital to the future growth of the firm, and
- the cost of non-availability is high.

The complexity of the supply market for the item

In analysing the complexity of each product, the following questions should be asked:

- is the product or service in scarce supply?
- is the pace of technological change rapid?
- is it impossible to use alternative product or service?

- are the barriers for a new supplier to enter the market high? and
- are the logistic costs of acquiring the product or service high?

If the possibility of these situations is high then the supply market will be complex.

3.7 CONCLUSION

The approach of materials management to supply management as widely used in manufacturing firms has proved to reduce the total costs associated with acquiring and managing materials. A decision or action taken at any point in the materials chain usually impact a number of other activities or decision points in the chain. Clearly, these activities make one or more subsystems, which are part of a firm's operation system. Consequently most firms find it necessary to co-ordinate the various materials activities very strategically.

It can be seen that there has been a steady flow of ideas regarding the strategic development of purchasing and materials management and the profession is undergoing a period of transition as the new possibilities are absorbed. Firms are showing increasing interest in the integration of functional strategies into the broader framework of business and its strategic plans.

Greater recognition is being given to the need to have a clear focus through purchasing, and to manage internal operations and the supply chain as a whole in order to be competitive. The next chapter discusses the effectiveness of good decisions to allow competitiveness.

CHAPTER 4

EFFECTIVE PURCHASING AND MATERIALS DECISIONS

This chapter discusses the considerable issues for effective decision making in purchasing and materials management.

4.1 INTRODUCTION

When the firm need goods or services the first step is to determine when they are required in terms of its intended purpose. This means considering and deciding on the most economic inherent characteristics of requirements and also determining the "right" quality of the goods to be purchased. The highest quality is not automatically the preferred quality for a particular purpose. The item's price usually rises with its quality so the real question is. What should the quality be in terms of relative cost and intended use? It should be clear therefore that two divergent issues are present here - high quality and the lowest possible cost.

Key decisions on quality and price have to be combined for an indication of the relative value. It is important for the firm to maintain the quality which it desires, since this will largely determine its relative position in the market and therefore the profitable marketing of its product.

Making exact decisions is important because decision making will affect the cost and return on investment, have marketing implications, *for instance* in respect of selling price, choice of target market. Competition and the choice

of point of sale can directly affect the other purchasing and materials activities.

4.2 PRICE HISTORY AND FORECASTS

Obtaining materials at the right price is important; it may mean the difference between a firm's success and failure. Reasonable buyers interpret the right price to mean a price that is fair and reasonable to both the buyer and the seller. The right price for one supplier is not necessarily the right price for any other supplier, either at the same time or at different points in time. To determine the right price for any specific purchase, a number of constantly changing variables and relationships must be evaluated.

Determination of the price to be paid is a major purchasing decision. The ability to get a good price is sometimes held by the prime test of a good buyer. If by good price is meant greatest value, broadly defined this is true. While price is one aspect of the overall purchasing job, it is extremely important. Basically, the purchasing department exist to satisfy the firms purchasing requirement at a lower overall cost than could be accomplished through decentralised purchasing. The purchaser must be alert to different pricing methods, know when each is appropriate and use skill arriving at the price to be paid.

There is no reason to apologise for emphasising price or for giving it a place of importance among the factors to be considered. The purchasers rightly, are expected to get the best value possible for the firm whose funds are spent. Any price quoted may be analysed irrespective of who the supplier is

or what the item may be. The price paid by the purchasing firm is as much a factor in the final decision on what is the "best buy" as are the technical properties of the product.

Van Weele (1994: 218) considered that the price paid for materials is the result of environmental factors both internal and external.

- internal factors bring about a change in the material before the finished product is placed on the market. They could be logical, technical or organisational in nature, and
- external factors are those factors that change the availability of a product in a given market and they can be divided into economic, socio, political and technological developments.

Conditions of competition affect the buyer and the seller equally as far as the negotiation of better prices is concerned. *Dobler & Burt (1990: 242-246)* speak of competitive scale that includes three fundamental types of competition: pure, imperfect and monopoly:

- under conditions of pure competition the forces of supply and demand alone determine price;
- under conditions of monopoly one seller controls the entire supply of a particular commodity and as a result, is free to maximise profit by regulating output and forcing a supply-demand relationship that is favourable to the seller, and

- imperfect Competition is where the oligopoly exist which takes two forms - market characterised by few sellers, those in which many sellers operate.

There are certain factors that may influence pricing decision. Most of the owners who were interviewed indicated that financial institution, may alter rates of interest, suppliers may increase their prices, trade unions may demand higher wages or the government may change the legal framework.

Purchasing may provide other users of information with essential information for tracking and forecasting materials prices. The available data on materials and component cost can enable the firm to update the pricing of products to protect profit margins. This information can set cost standards and update them more rapidly and accurately. The owner gets greater flexibility in planning cash flow. Forecasting is an essential element of purchasing as may be seen in the next section.

4.2.1 Methods used for forecasting

- *price tracking* - Prices actually paid or contracted for representative items are monitored periodically;
- *consensus forecasting* - Twice a year buyers estimate the price change that will occur on representative items during the coming three years compared to previous periods, and
- *forecasting by regression* - This analysis forecast future trends of a key dependent variable on the basis of what is expected to happen in

other determining or independent variable: (*Henritz et al. 1986:218-219*).

In making decisions in his purchasing activities the purchaser should make an analysis of the price. *Lyson (1993:179)* defines price analysis as "the breaking down quoted price into its constituent elements for the purpose of determining the reasonableness or otherwise of the proposed charge".

Constituent elements relate to cost and profit. The reasonableness of the proposed charge is an appraisal of the quoted price to ensure that it covers the direct and indirect cost of an efficient producer and allow a fair profit commensurate with the risk involved in undertaking the work.

Price analysis can be based on:

- cost experience of the buyers undertaking;
- cost estimates prepared by purchaser, and
- cost information provided by the vendor.

This analysis is beneficial in the sense that it provides the buyer with a guide as to how much is to be paid, highlights the possible mistake in quoting on the part of the vendor and provides a basis for subsequent negotiation that can often benefit both vendor and buyer, i.e. cost reduction leading to price reduction and thus efficiency.

The other factor in pricing decision is how customers value the offering. A suppliers market offering may include the product itself, such things as reliability, durability, good service and prompt delivery. Perceived-value pricing is based on the customer's perception of relative value rather than a

cost: Different customers have different orders of priorities and some are willing to pay more than others for given products.

Quite a different pricing policy sets a low price from the outset to achieve maximum market penetration. This leads to low cost of production through economies of scale and establishing a dominant market position which competitors will find difficult to attack.

Any reduction in the purchasing price will show in the accounts of the firms as an equal increase in profits. Hence the pressure is on buyers to get the lowest price possible. No one will argue against this principle. However there are other costs to bear in mind when purchasing goods and services.

Typical services of additional cost for many firms include:

- purchasing systems for generating purchase requisition, orders, acknowledgements and processing supplier invoice;
- material handling cost for unloading, storing, and moving goods that are not required immediately;
- checking the supplier by counting goods received and sorting the good ones from the bad ones, and
- poor quality results in scrap rework or return transportation to the supplier.

Therefore the buyers task is to reduce the overall cost not just the purchase price. Getting the right price can mean the difference between success and failure for many firms. What constitutes the right price can change over time and so the approach to pricing must be continually received. In the long term all firms must recover their entire cost if they are to stay in business (*Carter, 1997:56-80*).

4.3 SUPPLIER CAPABILITIES AND STRATEGIES

Selecting the right supplier is considered one of the most important activities of purchasing management. The right supplier will determine whether the purchasing goal of the right product at the right time at the right price in the right quantities and in the right condition is achieved. (*Bailey et al. 1994:122*). Selecting the right suppliers might sound simple, but it is a complex decision because these purchasing activities (product, time, price, quality, and place) influence this decision.

The right supplier is important because the wrong decision may have certain implications. Selecting the wrong supplier may result in the following:

- out - of - stock situations and consequent interruptions in production and sales;
- unnecessarily high prices and consequent high costs with an adverse effect on the firm, profitability;
- a weaker competitive position, and

- the firm has to forfeit attractive business opportunities because of reduced suppliers.

Knowledge of the sources of suppliers is a primary qualification for any effective buyer. Some buyers rely solely on their experience and memory for their knowledge of sources. Perhaps in a very limited numbers of instance this practice may be satisfactory when requirements are exceedingly simple or obtainable from a limited number of suppliers, it may not be worthwhile to maintain elaborate supplier records, The normal principal sources consist of catalogue, trade journals, purchase record, sales interviews, advertisements, publications of organised trade and industries, guides such as the yellow pages and telephone directories.

It is interesting to note that the extent to which a buyer's search for suppliers has received considerable attention in the literature of marketing. It is impracticable here to do more than briefly indicate the finding of research in this field.

Robinson & Faris (1980:42) draw attention to the fact that all purchasing relates to three distinct situations:

- *straight rebuy* where repetitive purchasing of similar items is carried out from the same supplier;
- *modified rebuy* that is products that have been purchased before but when certain alterations to an existing product have to be made, and
- *new task* this product being purchased for the first time.

They distinguish characteristics of the purchasing situation as:

- the newness of the problem;
- the information requirements, and
- the extent to which a new alternative is considered.

Howard (1963:28) presents a problem-solving approach to the buying process with three stages of complexity, involving:

- automatic response behaviour where no problem is involved in the repeat purchase (correspond to straight rebuy);
- limited problem solving behaviour, and
- extensive problem solving behaviour.

Hill and Hiller (1977:34-36) states that a major factor in determining the search stimulus within any consumer organization is the degree to which satisfaction is being obtained from existing suppliers. "If the professional buyer feels that his goals are being attained then he is unlikely to undertake any search process except on a routine basis to collect and update information. Other factors listed includes:

- changes in the requirements of the ultimate consumer;
- changes in the supplier product;
- the possibility of finance saving;
- technological improvement in production process, and
- change in product requirements including the need for new equipment.

Most of these factors apply to modified rebuy.

Brand (1982:40) has noted that when buying for the first time two common factors are present at the search stage regardless of the wide variations in the practices of individual firms:

- a higher degree of preference is given to potential suppliers either known to personnel inside the purchasing firm or to professional colleagues employed in other firm, and
- the pressure of limited time between the decision to go ahead with the design of a new product and the scheduled production date contribute to a need to restrict the search to known suppliers rather than extend investigation in the expectation of a better purchase in terms of technical quality or price.

From this research it is clear that for many items the need to search will not be extensive. This will be true of low cost items, standard components, and those with only a few suppliers:

- for bought out components or part assemblies especially where new task situations apply, the search will be market extensive, and
- buyers need to be alert to the need to review the market not only in new task situations but also in straight and modified rebuy.

According to the study source decision making will only be made when all relevant factors have been considered in a particular instance and weighed against the risk and opportunities which apply. Not all source decision will

justify the same level of attention but major purchases will always repay careful decision making.

Suppliers should be selected within certain broad policy guidelines. These policy guidelines enable the purchaser to make division more easily and give greater direction to their actions. Policy guidelines should be approved by the owner because they should support the policy of the firm.

Aspects of the policy should include:

- buying from local, national or international suppliers;
- whether purchasing should be made direct from the manufacturer or from a distributor;
- purchasing a product from one or more suppliers, and
- the policy should indicate what requirements are to be bought from small firms and what is to be obtained from large suppliers.

This depends on the size of the purchasing firm, the nature of the requirements and the size of the need for the product. Smaller businesses usually supply only the local markets, which are characterised by flexibility, but usually at a higher price. Large businesses is more suitable for large volumes and high-value items where technology, quality, and total cost are crucial (*Leenders & Fearon, 1993: 258-259*).

4.4 TECHNOLOGICAL CHANGE

New technology provides the firm with the opportunities to gain competitive advantage and to produce products and provide services at a relatively lower cost. It is therefore of significant strategic interest to most firms.

Changing technology almost always implies new equipment and new process.

Technology has presented management with increased flexibility in the strategic position available. *Porter (1996)* argues that technological developments have been viewed as opportunities to increase productivity rather than to shift the firm's strategic direction. An increasing application is of value as a customer's requirements have resulted in a firm's value as a proposition: a statement of how superior value is to be created and delivered. Operations strategy has typically been described as being supportive or exceptionally as a major element of the firm's competitive advantage (*Waters, 1999*).

Firms need to keep themselves abreast with the changing technology to be able to penetrate large markets. These expansions provide good opportunities for firms to leverage the value of their assets (*Bartlett & Ghoshal, 1992; Caves, 1971:1-27; Dunning, 1973:155-177; Prahalad & Doz, 1987 and Teece, 1980:242-261*). However such an expansion does not always result in desired outcomes. The management of a firm may find difficulties in implementing organisational resistance (*Hannon & Freeman, 1984:149-164*) or organisational inertia (*Darling & Taylor, 1989:34-41 and Taylor, 1988:12-15*) and national differences (*Hofstede, 1980 and Kogut & Singh, 1988:411-432*) are the main cause of such difficulties. A firm can benefit from its local expansion if the management overcomes these difficulties and effectively co-ordinates its national business operations.

4.5 OUTSOURCING

Outsourcing is defined as the procurement of production or services from sources that are external to the firm. For services, this usually involves the transfer of operational control to the suppliers. In the current environment of right-sizing with a renewed focus on core business activities, firms no longer assume that all firm's services must be provided and managed internally. Competitive advantage may be gained when products or services are produced more effectively and efficiently by outside suppliers. The advantage in the outsourcing can be operational, strategic or both. Operational advantages usually provide for short-term trouble avoidance while strategic advantages offer long-term contribution in maximising opportunities.

A firm, for example, may contract with outside suppliers to supply certain types of materials. As a result it can reduce costs by taking advantages of economies of scale and the expertise of the outside suppliers, rather than producing the materials in house. Also, outside firms that specialize in specific areas usually provide better services in those areas.

A survey was conducted and 87% of respondents said that they outsource some of their activities. The type of activities they outsource are shown in table 4.1

Table 4.1 is presented on the next page

TABLE 4.1 Kinds of activities outsourced

Activity	Percentage of respondents
- Taxes/accounting/auditing	50%
- Equipment maintenance	44%
- Payroll/ benefits administration	37%
- Manufacturing/processing/assembling	29%
- Marketing or sales	6%

Source: Adapted from Longenecker et al. (2000:445)

It is established that every fortune 500 firms will consider outsourcing during this decade and that 20% of them will enter into a contract by the end of the decade. A variety of firms have already exhibit this trend.

There are however different views of outsourcing. Managers often owners find outside firms to be more cost effective. Others claim they can hire labour to do the work cheaper. Others look at things differently. They know the job will be done on time and in predictable fashion, and if it is not they can get somebody else without going through the hassles of hiring and firing employees. It is vision, function and economics that drive the need for outsourcing (*Harkins, 1996:126*).

A recent study indicates that the outsourcing operation is the trend of the future and firms already outsourcing activities are pleased with the results. Half a decade ago the study was conducted and the economist intelligence unit finds that 93% of firms interviewed planned to outsource in future. Of

those that already outsource 91% are satisfied with the results (*Struebing, 1996:20*).

Firms should consider outsourcing when it is believed that certain support functions can be completed faster, cheaper, or better by an outside firm. Tasks that are not core competence of the firm are candidates to be contracted out. However any skill or knowledge that allows you to serve your customer base better, that deals directly with the product or services you are trying to put out of the door that must remain in house.

Today the outsourcing of selected firm's activities are an integral part of a firm's strategy. For the firms, the benefits of outsourcing are substantially reduced cost, expanded services and expertise. It allows firms to refocus their resources on their core business. Firms can buy technology from a vendor that would be too expensive for them to replicate internally.

4.6 QUALITY CONSIDERATION

There is an expression that value equals quality divided by price. This is true since value varies directly in proportion to the price paid. It stresses the fact that the amount of investment in materials is less significant than what is obtained in terms of the investment. If quality increases more rapidly than price in a series of offering, the value is greater at the higher price up to the point at which the buyer would be paying for quality in a specification so that it can be considered as a constant. In this equation, the comparison of value can be made in terms of prices alone and the lower price would represent the greater value. It should be noted however that

this attention to price comes after quality has been fully considered and decided upon.

It is purchasing's responsibility to keep the firm in a favourable competitive position in its field as far as materials cost is concerned. This implies that there are prevailing market prices and that the purchaser must be familiar with market conditions to buy at or below their levels. Purchasing managers will find differences of price between various suppliers in the same field. They will also find differences according to customer's classification and qualities discounts.

They must therefore exert themselves to be sure that they are in the most favourable customer's classification and qualify for the most favourable discounts.

After the product specifications have been released the purchaser must assure that they will be met by the suppliers.

The products that are to be manufactured must remain within these specifications. In addition purchasers have to ensure that the suppliers will honour their agreement on other points, such as delivery time, delivery quantity and price.

In this way the purchasers make a contribution to total quality management (TQM). The importance of managing all elements of qualities because of the ultimate impact on cost, efficiency and profitability of the firm, was first emphasised by leaders such as Deming Junior, Cosby, Taguchi, and Ishikawa (*Coyle & Bardi, 1992:461*). The philosophy of TQM is

that every employee must be imbued with an attitude directed towards continuous striving for improvement and it encompasses all activities of a business (*Farmer & Van Amstel, 1991:22*).

TQM therefore stresses the importance of the fact that all individuals and team working towards a customer's satisfaction should endeavour to provide fault free products and services. It is important that the customer in this context means all the activities within the firm. Purchasing must endeavour to provide a fault free service to all users. The concepts of "do it right the first time" and "quality free" which were the cornerstones of the original philosophy of TQM still prevail in firms today. TQM is more than a concept or procedures, it is a way of life for every individual in the firm. Workers and their inputs are necessary build to total quality awareness and it is essential to empower the workplace to control and reduce variations. TQM is also the basis for the success of materials supply concepts such as MRP and Kanban. The impact of TQM on purchasing and materials management can be summarised in the following brief statement (*Buddress & Raedels, 1992: 368*):

- *consumer focus*- Purchasing is a prime example of a demand supplier and therefore needs to be aware of the needs of two customer groups: internal customers and external customers;

Internal customers demanding timely processing of the demand signal on time delivery and excellent quality service and products provided by the external suppliers. On the other hand external customers demand reliable suppliers in order to ensure product quality availability and quick response time to demand;

- *process mapping*- It is aimed at ensuring that internal processes in the supply department are performed in such a manner that the quality of services is continually improved and measured against present quality standard;
- *performance measurement*- For purchasing materials management the implications is that supplier performance measurement and in particular quality improvement must be part and parcel of relationships with suppliers, and
- *employee involvement*- Involving all employees in the supply pipeline in quality management procedures enhanced the problem-solving capacity of all the pipelines.

It is acknowledged that small firms cannot compete with large organisation in terms of economies of scale, investment in research and development (R&D) or major promotional expenditures. Small firms are therefore particularly vulnerable to large competition unless they are able to exploit their inherent strengths such as flexibility and speed of response to customer requirements (Zeithmal et al.1988:35-48 and Smith,1990). Formal customer care policy is introduced to redress this imbalance and assure a quality of services, which will maintain good customer relationships. Small firms however tend to be regarded as implicitly in close contact with their customers and therefore issues surrounding customer care and service quality in the context of the small firm is overlooked.

Since the 1980`s service quality has been identified with increased profitability and it is seen as giving an important competitive edge by

generating repeated sales positive word-of-mouth feedback, customer loyalty and competitive products differentiation (*Zeithmal et al.1988: 25-32*).

Services quality has most emphasised for service companies, particularly in sectors such as financial services and health as a way of controlling performance and overcoming the intangible of service. Consequently it has tended to focus on the unique characteristic of services and especially on the role of the firm's employees in the production and delivery of its services (*Wasmer & Bruner,1991:132-139*).

It is generally acknowledged that service quality is of prime concern in the manufacturing sector and that for firms to be successful whether in service or manufacturing, they must keep in touch with their customers and provide a high quality service or risk losing them to the competitors. This emphasis has meant that a growing importance has been placed on customer care and its related elements to overall marketing performance (*Keiser & Smith,1994:5-9*).

At this point it is worth noting that although often used as synonymous with the term customer care, service quality is in fact a distinguishable aspects of this more encompassing term. *Christopher (1986:63-71)* defines quality services as referred to the firm/ customer interference and relationships focusing on the customers experience during the process of the transaction. *Lewis (1993,4-12)* emphasises that it is not only the focus on meeting customers needs and requirements but also how well the service matches the customer's expectations. Service quality is therefore an important focus for any strategy. It is determined by the interaction of all those factors that affect the process of making products and services

available to the buyer. If there is a shortfall then a service exists, which needs rectifying in order to ensure customer loyalty to develop the firm successfully.

4.7 COMPETITIVE ENVIRONMENT

To achieve persistent superior performance a firm needs competitive advantages, a constellation of them. Nurturing and involving a constellation of multiple advantages and undertaking timely renewals help carry their firm through competition over time. To maintain healthy dynamics of a firm's constellation of advantage, the following task should be carefully attended to: establishment of dominant advantages which defines the firms core purpose and identity; accumulation of supporting advantages to complete the constellation, amplification of complementary advantages for maximum performance; trade off among competing advantages for long-term viability and renewal of both dominant and supporting advantages, in adaptation to changes in the firm, competition and the general environment. Knowledge of the relationship between and interaction of multiple advantages is essential for managing a firm's advantages constellation (*Hao Ma, 1999:2*).

The essence of strategy is about winning. In business terms winning means creating superior performance on a persistent basis. Well-conceived and successfully implemented strategies help a firm achieve such persistent superior performance, and they do so by providing the firm with competitive advantages over other players in the field, current and potential. To be winners it is not enough that you view your firm as merely a collection of product-market activities (*Porter, 1980*) or as a blend of

resources. You must also view your firm as a host or constellation of competitive advantages (*Barney, 1997*).

The winning mentality fuels the buying desires to be the best. This winning perspective facilitates the definition of the mission (*Hamel & Prahalad, 1989:63-69*), the fundamental reason of your firm's very existence in business and its identity, your firm's institutional image in society (*Collins & Poras, 1994*). The firm is in business precisely because it can deliver certain customer value better than others can. The firm's image and identity derive from your unique contribution to the society in economic and non-economic ways, which makes yours a winning team.

A typical constellation comprises dominant advantages and supporting advantages. Dominant advantages are the centrepiece of a constellation while the supporting ones make it more complete and effective. Some advantages are complementary and can amplify each other. Some advantages are competing ones, that sometimes require trade-off. In addition to sustaining existing advantages, creating new advantages is needed to assure the long-term viability of the constellation (*Hao Ma, 1999:4*).

To help firms systematically analyse how to harness competitive advantages and win, an analytical framework can advance for understanding the dynamics of the firm's advantages as a constellation. Advantages in various shapes and sizes they evolve through time. Analysing the constellation of a firm's advantages in action (i.e. how individual advantage emerges, interact and vernish, how the constellation changes and renews itself and how its changing composition affects the firm's performance.)

"Constellation of advantages" is defined as a host or system of competitive advantages, which are of various causes and sustainability. It is an evolving system. Its composition changes over time as existing advantages are eroded and new advantages arise.

4.8 GOVERNMENT REGULATIONS AND CONTROL

Some distressing incidents about product contamination have resulted in a variety of governmental rules and regulations - such as the Pure Food and Drug Administration designed to protect the user of this product. Thus the firm must keep it abreast with these governmental actions and forecast how they might impact on the operation. Purchasing should monitor developing trends, forecast the outcomes and potential ramifications and suggest ways the firm can adjust to because, these regulations will affect the types of materials and equipment required. Should purchasing be aware of new developments, technologies and suppliers of such packaging process, it will be able to understand and be part of a team approach assisting in making the strategic decision necessary to cope with these developments (*Leenders & Fearon, 1993:634*).

4.9 CONCLUSION

For those business owners who wish to create a prosperous and thriving business, a clear understanding of the basic purchasing principle and techniques is important. It should be emphasised that, this does not mean complex theories or sophisticated procedures.

In large business the complexity of the firm's structure may warrant formal procedures, lines of communication and decision-making roles. This is not the case in small businesses. Small business owner managers and workers have a much closer working relationship, they spend much time making viable decisions about the future of the business.

Certainly, purchasing principles and issues can help the business owner-managers to think strategically about where the business is heading.

A detailed discussion on the empirical study towards the effectiveness of purchasing and materials management in small manufacturing firms within Vaal Triangle Metropolitan Area will be discussed in chapter 5.

CHAPTER 5

RESEARCH FINDINGS

This chapter gives an analysis of the empirical research findings.

5.1 INTRODUCTION

The target group for this empirical research is the small business firms in the manufacturing sector within Vaal Triangle Metropolitan Area.

5.1.1 Survey technique

The sample frame was identified on the basis that, it represents all elements and all the strata of the population, it is up to date, it is accessible and the information is arranged in such a manner that a sample can be drawn from it.

The total number of 400 small manufacturing businesses were identified and a random sampling method was used for the survey. A research questionnaire was developed to collect data from the respondents. The questions were selected and adjusted to support the literature review. Consideration was more on the necessity of the question in view of the research study, that the respondent will be willing and able to provide the information, and that the question adequately covers the content area for which it is responsible. Its structure and contents were evaluated on the basis of relevance and non-bias and the format was finalised after the questionnaire was presented.

The questionnaire is designed to collect the following information from the respondents:

- information regarding the nature of the firm as well as the labour force.
- information regarding the objectives and the activities of the purchasing and materials management;
- information regarding the personnel and the management;
- the extent to which the department is efficient;
- the effect of electronic data interchange and technology in making good decisions, and
- information pertaining to strategic issues for efficient purchasing and management.

5.1.2 Data collection

The researcher personally distributed and collected questionnaire. The personal details of the respondents were not recorded to ensure anonymity and confidentiality of the results. The questionnaire was prepared in English. In case where there was any misunderstanding enough efforts were made to enable the respondents to understand. Regular follow up was made to improve the response.

5.2 FORMS AND LABOUR FORCE OF THE BUSINESS AS WELL AS THE ORGANIZATION OF THE DEPARTMENT

This section of the questionnaire analyses the form and labour force of the business as well as the organization of the department.

The following questions were used to collect data:

Question 1: Which form of a firm is your business?

Question 2: What is the size of your labour force?

Question 3: How is purchasing structure organised?

Question 4: How is your purchasing function related to other functions
within the firm?

The data collected is presented in table 5.1

Table 5.1 Nature of the firm and organization of the activities

VARIABLE	NUMBER OF RESPONSES	PERCENT
FORM :		
Trade & manufacturing	42	78
Manufacturing	12	22
SIZE OF LABOUR FORCE :		
20	42	78
40	9	17
60	-	-
80	-	-
100+	3	6

VARIABLE	NUMBER OF RESPONSES	PERCENTAGE
ORGANIZATION OF THE ACTIVITIES:		
Centralised	36	67
Decentralised	3	6
Both	15	28
RELATIONSHIP WITH OTHER FUNTIONS		
Not related	1	2
Related	15	28
Closely related	36	67

Source: own research

This table indicates that most of the businesses undertake their activities both as trade and manufacturing and employ less than twenty people. Most of the activities are closely related and their conduct their purchasing activities as a centralized structure.

5.3 OBJECTIVES AND ACTIVITIES PERFORMED BY THE PURCHASING AND MATERIALS SECTIONS.

This section of the research questionnaire analyses the objectives as well as the activities of the department.

Questions selected for this section are:

Question 5: What is the basic objective of the department?

Question 6: Are these activities covered in your purchasing function?

Question 7: Which of the following activities are included in the materials management in your organisation?

Analyses is presented in table 5.2

Table 5.2: Objectives and activities of purchasing and materials management

VARIABLE	NUMBER OF RESPONSE	PERCENTAGE
OBJECTIVE OF PURCHASING		
Ensure continued supply of production means	9	17
Ensure good quality of the items	15	27
Provide best service	18	33
Develop staff, policies and procedures	3	6
Maintain sound relationship with suppliers	10	18
ACTIVITIES OF PURCHASING :		
Locating suitable supplier		
Purchasing research		
Determination of requirements		
Holding and controlling inventory		
Are they covered?		

VARIABLE	NUMBER OF RESPONSE	PERCENTAGE
YES	51	94
NO	3	6
ACTIVITIES OF MATERIALS MANEAGEMENT		
Anticipated materials require- ment	6	11
Sourcing and obtaining materi- als	12	22
Introducing materials into the firm	-	-
Determining materials specifi- cation	3	6
Monitoring the status of materi- als as current assets	-	-
all of the above	33	61

Source: own research

From this table (5.2) it is encouraging to see that 77% of the purchasing objectives ensures continued supply and good quality of requirements that would result in the best service. This is justified by the overwhelming percentage of the activities of purchasing and materials management.

5.4 COMMITMENT OF PERSONNEL AND MANAGEMENT OF THE DEPARTMENT

This section focuses partly on the Total Quality Management.
Questions that cover this section are:

Question 8: How committed is the purchasing personnel in achieving the objectives of the department and that of the firm?

Question 9: Do purchasing personnel understands and assumes their responsibilities?

Question 10:How often are you doing performance evaluation on purchasing and materials supply activities?

Analyses is presented in table 5.3

Table 5.3: Personnel commitment and the extent of management

VARIABLE	NUMBER OF RESPONSES	PERCENTAGE
LEVEL OF COMMITMENT:		
not committed	-	-
less committed	-	-
fairly committed	-	-
Committed	24	44
very committed	30	56

VARIABLE	NUMBER OF RESPONSES	PERCENTAGE
ASSUMPTION OF RE-RESPONSIBILITIES:		
Do they assume :yes	54	100
:No	-	-
HOW OFTEN IS PERFORMANCE EVALUATION?		
not at all	3	6
Sometimes	12	22
Frequently	21	39
Regularly	18	33

Source: own research

Table 5.3 shows that 100 percent of the personnel is committed to their work, this is justified by a 100% indication, that they do their duties. The regularity and frequency of performance evaluation is a contributing factor to such commitment.

5.5 EFFECIENCY OF THE DEPARTMENT

This section of the research questionnaire explores how efficient is purchasing.

Questions used to collect data are the following:

Question 11: Your purchasing decisions are made in the context of...

Question 12: It is concerned with those factors that the business is engaged upon, to ensure efficiency.

Question 13: To maintain competitiveness the firm...

Question 14: In your firm purchasing account for what percentage of the total expenses?

Question 15: In keeping abreast to the changing business environment, does purchasing and materials management play a role?

Question 16: How efficient is your purchasing function?

Analyses is presented in table 5.4

Table 5.4 Efficiency of purchasing function

VARIABLE	NUMBER OF REPOSE	PERCENTAGE
PURCHASING DECISION IS BASED ON:		
Uncertainty	-	
Need to standardise	3	6
Negotiation	3	6
Certainty	36	66
Short delivery times	12	22
FACTORS ENSURING EFFICIENCY:	YES	NO
Adequate and uninterrupted flow of goods or services	54	100

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VARIABLE	NUMBER OF RESPONSES	PERCENTAGE
Buying required quality at lower price	54	100
Continuously finding and developing sources of supply	21	33
Ensuring sound lasting relations with supplies	54	100
Training developing and maintaining capable and motivated personnel	54	100
Ensure that administrative cost of purchasing are kept to a minimum	54	100
MAINTENANCE OF COMPETITION :		
Hold down fixed costs	10	19
Determine the fashion trends	-	-
Deliver products that customers wants	12	22
Keep material cost as low as possible	12	22
All of the above	20	37
EXTENT OF EXPENSES PURCHASING ACCOUNT FOR :		
33% - 39%	12	22

VARIABLE	NUMBER OF RESPONSES	PERCENTAGE
40% - 49%	3	6
50% - 59%	10	19
60% - 69%	15	28
70% or more	14	26
DOES PURCHASING AND MATERIALS MANAGEMENT PLAY A ROLE IN CHANGING BUSINESS ENVIROMENT?		
Yes	51	94
No	3	6
CONTRIBUTION ON THE FIRMS RETURN ON INVESTMENT:		
5%-10%	6	11
15%-20%	6	11
25%-30%	33	61
35%-40%	9	17
45%-more	-	-
LEVEL OF EFFICIENCY		
Inefficient	-	
Less efficient	6	11
Efficient	33	61
More efficient	15	28

Source: own research

The last column of table 5.5 shows that 89% of the respondents regard purchasing as efficient. This can be justified by the following observations from the table:

- 66% of the respondent's decisions is based on certainty;
- 100% of the respondents ensures efficiency by means of adequate and uninterrupted flow of goods and services, they buy required quality at the lowest price, ensuring sound lasting relations with supplies, training and maintaining capable and motivated personnel, ensuring that administrative cost of purchasing are kept to a minimum and only 38% look for alternative sources of supply;
- 59% maintain competitiveness for the firm;
- Contribution to the firms return on investment is sound if we take the extent of expenditure by the department, and
- 94% of the respondents regards purchasing and materials management as a role player in keeping business abreast to changing business environment.

5.6 THE IMPORTANCE OF ELECTRONIC DATA INTERCHANGE AND TECHNOLOGY

This section focuses on the importance of electronic data interchange (EDI) and technology in making good decisions.

Questions that covers this section are:

Question 18: How do you regard the electronic data Interchange [EDI] for improving effectiveness and efficiency?

Question 19: Does technological change directly affect purchasing decision?

Analyses is presented in table 5.5

Table 5.5 Electronic data Interchange and technology

VARIABLE	NUMBER OF RESPONSE	PERCENTAGE
EDI, IS IT IMPORTANT FOR IMPROVING EFFECTIVENESS AND EFFICIENCY?		
Not important	3	6
Less important	-	
Fairly important	3	6
Important	33	61
Utmost important	15	27
DOES TECHNOLOGICAL CHANGE DIRECTLY AFFECT PURCHASING DECISION?		
Yes	33	61
No	21	39

Source: own research

From the table above 88% of the respondents say electronic data interchange is important for improving efficiency and 61% regards technology as a critical factor that should be taken into account since it directly affect decisions.

5.7 STRATEGIES EMPLOYED FOR PURCHASING AND MANAGEMENT OF MATERIALS

This section of the research questionnaire focuses on the role and nature of strategies that are in place.

The following questions were used to allocate data.

Question 20: Is your purchasing department pro-active or re-active in strategic planning?

Question 21: Your firm's success is as a result of...

Analysis is presented in table 5.6

Table 5.6 Role and extent of strategies

VARIABLE	NUMBER OF RESPONSE	PERCENTAGE
EXTENT OF STRATEGIC PLANNING		
Pro-active	51	94
Re-active	3	6
FIRM'S SUCCESS IS AS A RESULT OF :		
Strategies that are in place	-	-
Joint decision making within departments	6	11

VARIABLE	NUMBER OF RESPONSE	PERCENTAGE
Reliable suppliers	10	19
Best quality offered	15	28
All of the above	23	43

Source: own research

- As a result of the size of the business most of the strategic plans are proactive [i.e. long term plans that take places at management level] this is indicated on table 5.6;
- though most of the respondents regard the successes of their firms being as a result of number of factors such as:
 - strategies that are in place;
 - joint decisions within departments;
 - reliable suppliers, and
 - best quality offered.

The strategies that are in place are not major concerns to them.

5.8 CONCLUSION

This chapter provided the general view of the effectiveness of purchasing and materials management in the Vaal Triangle. In the next chapter evaluation will be made on the data collected in comparison with the theory discussed earlier. A conclusion and recommendations will be made.

CHAPTER 6

6.1 INTRODUCTION

This dissertation provides an overview of as well as an insight into the effectiveness of purchasing and materials management in small manufacturing businesses within Vaal Triangle Metropolitan Area.

Aspects related to the study were discussed in different chapters. In this chapter, the focus will be more on the evaluation of the data collected, to check whether the objectives set in chapter one were achieved and of course recommendations will be made.

6.2 SUMMARY

It should be emphasized that too often large firm models are taken as large firms in terms of economies of scale and the small firm is assumed to be a "scale-down" version of large firm. In the context of studying the small firms, however, it is important to realize that small firms are not just "little big businesses" and that each small firm is unique and very much reflects the personal characteristics of the firm's owner.

Correspondingly, purchasing practice in small manufacturing firms is different and it is not appropriate to apply the purchasing concepts and practices developed in large manufacturing firms scenarios to the small manufacturing firm situation. This difference arises because of the limited expertise among owner managers of purchasing techniques and methods and because their inherent limitations in terms of resources.

Frequently their purchasing activities emphasize the locating of suitable suppliers, determination of exact requirements and holding as well as controlling of inventory, their materials activities cover anticipating materials requirement, sourcing and obtaining materials, determination of materials specification. These are the basic activities they emphasize because of lack of resources and expertise.

The strategic role of purchasing has lagged behind that of other departments because of the way purchasing is viewed. (i.e. it is viewed as a support function and not as a profit contributor). However this perception has changed, the linkage between the purchasing and the performance by the firm is being established. Firms are beginning to realize the impact of the purchasing function on their competitive position, and the purchasing personnel are gradually shifting their role from factual to strategic.

The best way of acquiring goods and services that the firm need, is by determining when they are required in terms of its intended purpose (i.e. considering and deciding on the most economic inherent characteristics of requirements and to determine the right quality of the goods to be purchased).

Making exact decisions is important because decision making will affect the cost and return on investment, have marketing implications; for instance in respect of the selling price; choice of target market; competition and the choice of point of sale; directly affect the other purchasing and material activities.

6.3 ACHIEVEMENT OF OBJECTIVES

Both the fundamental and the supporting objectives of the study were achieved. Each and every firm wishes to obtain the highest possible return with the lowest possible use of production resources, that is, to function as productively as possible.

It is purchasing function that is also bound by the idea of increasing productivity especially in respect of the inputs of firms. If this function is performed efficiently, it serves the objective of a firm, *namely* to ensure the highest possible return on the capital invested by the firm by satisfying the needs of consumers and it also enables the firm to attain competitive advantage.

In general the effective and successful purchasing is the one regarded as buying the right requirement in the right quantities at the right time and at the right price from the right sources, and with delivery at the right place.

6.4 RECOMMENDATIONS

It worth noting that most of small manufacturing business owner managers are “generalists” and it would be totally wrong to suggest that they should become “purchasing specialists”. This means that complex theories or sophisticated formal processes are inappropriate for small manufacturing businesses – they would not aid any greater understanding of the markets in which manufacturing firms operate and quite simply the owners would not have the time or patience required to digest, let alone implement, them.

As a result of this situation it is important that those critical problematic areas that affect purchasers be researched for effective management of purchasing and materials. Even though research on purchasing and materials management is not a new concept in South Africa, various factors contribute to the fact that information based on scientific research has become essential to South African purchasing and materials managers. *Such factors as:* commodity markets, technology, awareness of quality, the supply markets in South Africa, geographical and transport factors.

Technological development is distinctively the most important reason why a purchasing and materials management division has to undertake research. New products and technologies mean that sources of supply have to be found, new markets have to be investigated, expertise in price structures has to be acquired.

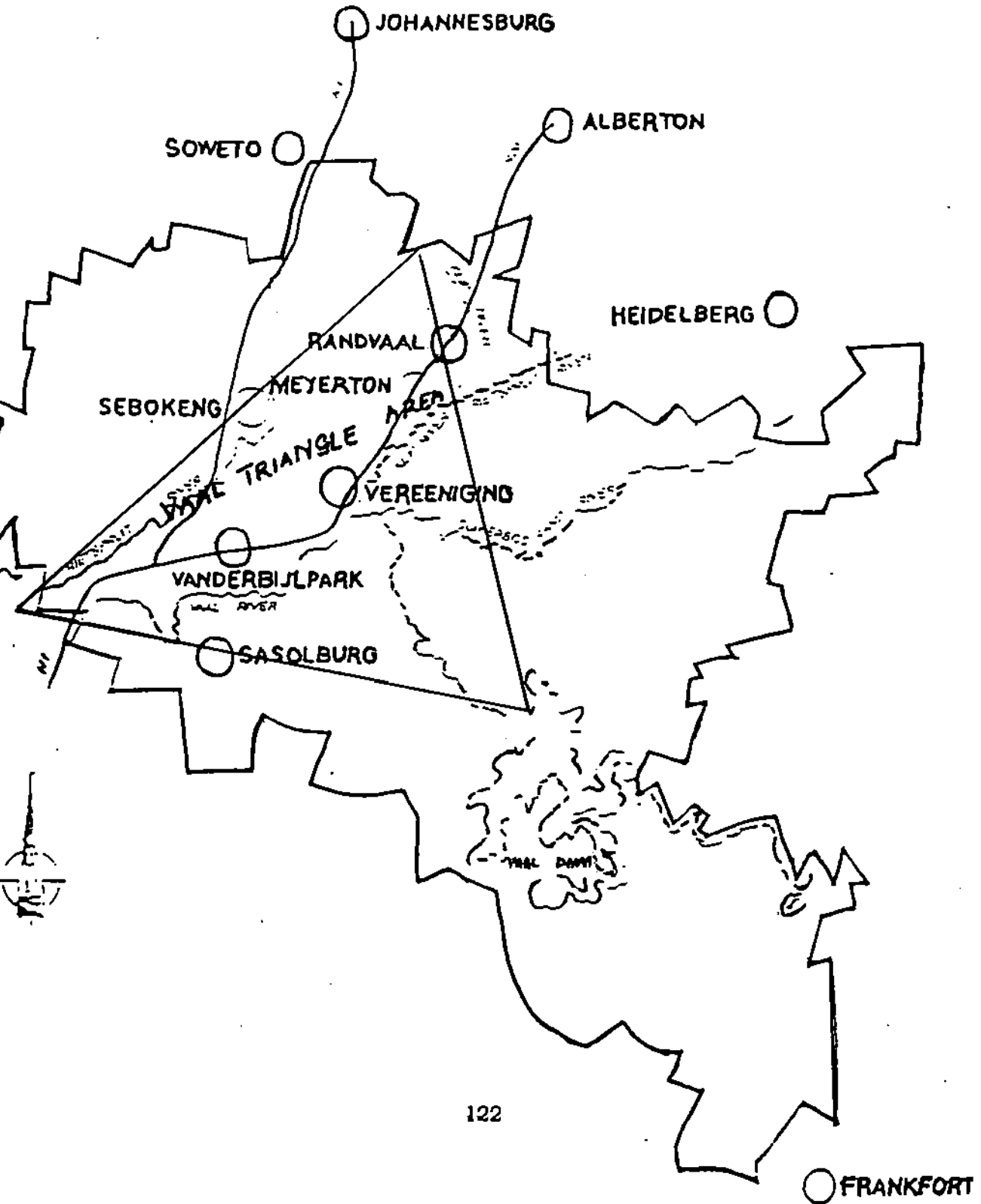
It is important that purchasing efficiency be evaluated, the aim behind this evaluation should be to obtain an indication of the efficiency with which the resources of the purchasing function are utilized.

A greater understanding is required of how services can be integrated into the purchasing which is actually practiced by small manufacturing firms in this area, which has often been pinpointed as critical to growth development and effectiveness. This study forms a basis for further research in purchasing and materials management.

ANNEXURE A

LOCALITY MAP

GAUTENG MAP



ANNEXURE B

RESEARCH

QUESTIONNAIRE

To whom it may concern

This questionnaire is aimed at collecting data necessary to enhance the validity of the research focusing on the effectiveness of purchasing and the materials management in small manufacturing businesses within Vaal Triangle.

The information collected will be treated with the highest degree of confidentiality.

Your response and full participation will be highly appreciated.

Thank you

QUESTIONNAIRE

1. Which form of business is your firm?

- Trade and manufacturing

☐

- Manufacturing

☐

2. What is the size of your labour force?

- 20

☐

- 40

☐

- 60

☐

- 80

☐

- 100

☐

other (specify)

.....

3. How is purchasing structure organized?

- centralized

☐

- decentralized

☐

- combination of the two

☐

4. How is your purchasing function related to other functions within the firm?

- not related

☐

- related

☐

- closely related

☐

5. What is the basic objective of the department?

- * to ensure the continued supply of production means ☐
- * to ensure good quality of the items purchased ☐
- * to provide best service to other departments ☐
- * to develop staff, policies, and procedures ☐
- * to maintain sound relationship with suppliers ☐

6. Are these activities covered in your purchasing function?

- * locating of suitable suppliers
- * purchasing research
- * determination of exact requirements
- * holding and controlling of inventory

- Yes ☐
- No ☐

7. Which of the following activities are included in the materials management in your firm?

- anticipating materials requirement ☐
- sourcing and obtaining materials ☐
- introducing materials into the organization ☐
- determining materials specification ☐
- monitoring the status of materials as a current assets ☐
- all of the above

8. How committed is the purchasing personnel in achieving the objective of the department and that of the firm?

- not committed ☐
- less committed ☐
- fairly committed ☐
- committed ☐
- much committed ☐

9. Do purchasing personnel understands and assume their responsibilities?

- Yes ☐
- No ☐

if yes elaborate

.....

.....

.....

.....

10. How often are you doing performance evaluation on purchasing and materials supply activities?

- not at all ☐
- sometimes ☐
- frequently ☐
- regularly ☐

11. Your purchasing decisions are made in the context of.....

- uncertainty ☐
- need to standardise ☐
- negotiation ☐
- certainty ☐
- short delivery times ☐

other (specify)
.....
.....
.....
.....

12. Is this what you are engaged upon in ensuring efficiency in your department? Tick the right answer.

- | | Yes | No |
|--|--------------------------|--------------------------|
| - ensuring the smooth functioning of business activities through adequate and uninterrupted flow of goods and services | ☐ | ☐ |
| - buying required quality competitively and at the lowest possible price. | ☐ | ☐ |
| - continuously finding and developing alternative sources of supply. | ☐ | ☐ |
| - ensuring sound lasting relations with suppliers. | ☐ | ☐ |

- training, developing, and maintaining
capable and motivated personnel ☐ ☐

- setting policy, procedures and systems
that will ensure that administrative costs
of purchasing are kept to a minimum. ☐ ☐

13. To maintain competitiveness your firm

- hold down fixed costs ☐
- determine the fashion trends ☐
- deliver products that customers wants ☐
- keep materials costs as low as possible ☐
- all of the above ☐

14. In your firm purchasing account for what percentage
of the total expenses.

- 30%-39% ☐
- 40%-49% ☐
- 50%-59% ☐
- 60%-69% ☐
- 70% or more ☐

15. In keeping abreast to the changing business environment, does
purchasing and materials management play a role?

- Yes ☐
- No ☐

16. What percentage does purchasing contribute on the firms return on investment?

- 5%-10% ☐
- 15%-20% ☐
- 25%-30% ☐
- 35%-40% ☐
- 45% or more ☐

17. How efficient is your purchasing function?

- inefficient ☐
- less efficient ☐
- efficient ☐
- more efficient ☐

18. How do you regard the electronic data interchange (EDI) for improving effectiveness and efficiency.

- not important ☐
- less important ☐
- fairly important ☐
- important ☐
- utmost important ☐

19. Does technological change directly affects purchasing decision?

- Yes ☐
- No ☐

if yes elaborate.

.....

.....

.....

.....

20.Is your purchasing department pro-active or re-active in the strategic planning ?

Elaborate.

.....

.....

.....

NB. Strategic planning is the long term plan that takes place at management level.

21. Your firms success is as a result of

- purchasing strategies that are in place ☐
- joint decision making within departments ☐
- reliable suppliers ☐
- best quality offered ☐
- all of the above ☐

ANNEXURE C

LIST OF FIRMS

LIST OF FIRMS USED IN CONDUCTING A SURVEY

A

A&W ENGINEERING SUPPL
ABACUS MICRO SYSTEM
ABIES ROK MATERIALS
ABIES DREAM FABRIC**
AC WELDING
ACRO ENGINEER
ACTION BIKES
ADVANCE COMPUTER SUPPL.**
AE PRODUCTS
AFRICAN ART & SKIN
AFG FIBRE GLASS
AFMAC*
AFRICA GLASS
AIR PRODUCTS
AKLIE GLASS ALUMINUM
ALBOU BUILDERS*
ALCO BETON
ALGIM ENGINEERING
ALBIKE & BOUT
ALL BOLT AND NUT**
ALL CHEM
ALL IN ONE SRAP
ALMATA CONSTRUCTION
ALMEGA DEVELOPMENTS*
ALIMBA WATER PROOFING
ALL METAL
ALL STEEL
ALL-IN-ONE ENG**
ALL ROUND PROFILING
ALPHENHORN WURSTBUDE
ALTERNATIVE DESIGN
ALTOCRETE*
AMAZING GLAZE PROTECTION
AMERICAN INDOOR KARTING
AMOR SCREENING
AMT CONSTRUCTION**
ARM ENGINEERING
ANCO ENGINEERING
ANDRE BAM AUTO CLINIC
ANDREWS PANELBEATERS*
ANGEES TOMSTONE
ANYTHING SOFT
APEX FOUNDRY
APEX IMPLEMENT**
APPLIANCE ACE
APPLIANCE MASTERS
AQUA POOLS
AR AUTO ELECTRICAL*
ARCHER PLUMBERS
ARM ENGINEERING
ARTS AND CRAFT CERAMIC
AW PLASTICS**
AUTO SPRAY VDBP
AUTO FIX
AZORES KNTT & WEAR

B

B&M PAVING**
BABCOCK ENGINEERING
BACCHUS PJ & KIE
BAO WORLD
BALDWIN'S STEEL**
BARATEIRO
BAROAIN WOOL

BEEKMAN SUPER
 BELMON FRUIT GARDEN**
 BERNINA SEW & KNT
 BESTOO FORGING
 BIOWHEELERS
 BLAST & SPRAY*
 BLITZ INOENEURSWERKE
 BOND EQUIPMENT
 BOPHELONG TOMSTONES
 BOTHA SHELVES**
 BOUTIQUE RIANDI
 BREDIES CENTRE
 BREIWOL & HOBBY SENTRUM
 BRIC KINO*
 BRITTON CONSTRUCTION
 BRYAK ENGINEERING
 BUILD, PLUMB AND TILE

C

CABELEC JW**
 CALSICRETE
 CAMDOMS
 CANE CENTRE FRAMES
 CARAVEL MAINT & ERECTIONCARPET OFF CUT**
 CARLOS AUTO CENTRE
 CEMID CONSTRUCTION
 CELLOS PIPINO CONSTRUCTION
 CHROME CRAFT**
 CILMA SYSTEMS
 CITY LIFE WOODWORK
 CLENCOR
 CLOTAN STEEL**
 CN VENTER ENGINEERING
 COETZEE PROPSHAFT
 COLLECT A CAN
 COLLUDE CONSTRUCTION*
 COLTS DYNAMIC
 CONPAVE
 CONSOLIDATED WIRES
 CONVEYOR KINO**
 COSTA & JOPE GEN. MECHANICS
 CRAFT CONSTRUCTION
 CRAZY PAVING
 CROCAM OUTDOORS**
 CROWN INSTRUMENTS
 CUPBOARD CRAFT
 CURTAIN PALACE
 CV CITY*

D

D & F CONSTRUCTION
 D & S ENGINEERING
 DAI ELECTRICAL
 DAIRY FARM HOUSE*
 DAIRY MAID ICE CREAM
 DAVIDSON WOODCRAFT
 DAVSTEEL
 DB AUTO ELECTRICAL*
 DC TECHNICAL
 DE ABREU ENO.
 DE AUTON ELECTRICAL
 DECOR WOODWORK**
 DELTA SRAP METAL
 DI -TECH ENGINEERING
 DICKIES CARDS OIFTS
 DICKS ENGINEERING**
 DIMA BOUTIQUE
 DYNAMIC SOAP
 DIVPAC

DJR CONSTRUCTION**
DM STEEL WINDOWS
DONAN ENGINEERING
DU PROJECTE
DURO BLINDS*
DUVEEN

E
EAOLE POOLS
ELECTICS
ECONOFLECS*
ECONO MILK
EDHAMS PLUMBLINO
EFF EMM WOODWORK
E & O VALET CENTRE*
EMS ELECTRICAL
EKONOMILK
EL SHADDAI BOUTIQUE
ELCON ELECTRICAL*
ELECTON ELECTRIC
ELECTRONIC TECHNIQUE
ELBEN ENGINEERING
ELCA ENGINEERING**
ELFAB ENGINEERING
ELMA AIRCON
EMCOR ENGINEERING
EMDEE CEILINGS*
EMFULENI BLINDS
EMMIES AUTO REPAIR
EMS MECHANICAL
ENEROO INVEST*
ENSCO ENGINEERS
ENSLIN TRAILERS
ERD ENGINEERING
ERICA KWEKERY*
ESNIC FABRIK
EVERYDAY SUPPLY PRINTERS
ERNEST LOUW HYDROTUBE
EXCEL ELECTRICAL*
EXECUTIVE TOOLING
EXPERT HUISVERBETERING
EXPRESS OUTFITTERS

F

FACTORY OUTFITTERS**
FAIR LADY BOUTIQUE
FAIRY TALE ICE CREAM
FAMONA INTERIORS
FANCRAFT**
FANIE DE JONGH STEEL
FANTISI
FARSONS WALLS
FASHION AND FANTASY*
FASHION MAKERS
FASTAB
FAST LANE PRINTERS
FELIX SCHUH**
FERROSTEEL
FERROUS ENGINEERING
FINE FORMS
FLASH AUTO ELECTRICAL*
FLEETRENT
FLEXI VALVE
FLORAL WORKSHOP
FOUR WHEELER**
FRAGLEY & BEKKER
FRAMES'N DECOR
FRAMING CENTRE

FRAMING PICTURES**
FRANKE STEEL
FREDDIE'S ICE CREAM
FULL FLOW HYDROLOGICS

G-H

G WINDERS**
G A CARDIN
GAUTENG TOMSTONES
GENERAL PROJECTS
GETLAS BOUTIQUE**
GIBSON CARAVAN CLINIC
GIROS
GLASFT
GOUTRE WELDING*
GRAPHICS FRAMED
GWT CONSTRUCTION
HABEL ENGINEERING
HARPER ENGINEERING*
HARRY'S AUTO ELECTRICAL
HC POOLS
HENCOR SCRAPYARD
HENCOR RECONDITIONED*
HENDRED FRAUHAUF TRAILERS
HOBBIE HUT
HOME FIX
HOME CARE POOLS*
HOUSE WARES
HT KIT
HYDRO OIL COOLING ENG.
HYDRO PRECISION ENG**
HYPER CAR BAR

I-L

ICU BEARING
INCH BY INCH
INDOTECH*
INO -TECH
INNOTMET
INSTRELEC
INSULATION & SHEET METAL**
INTROCHEM
ITU'S WORKSHOP
J & B PROJECT
J & L ENGINEERING**
J DESIGN ENGINEERING
JABULA KITCHENS
JABULA PAVING
JAKES STEEL**
JAN'S LAWN MOWER
JANSEN HOUTWERKE
JAY-CEE BINDS
JD HOUTWERKE**
JIT PACKAGING
JJ'S GLASS
JULIES GLASS
JUST ONE LEADER CONSTRUCTION*
K & L MANUFACTURING CONSTR.
KALOELIE MELKERY
KAROLIA PRINTERS
KEUR PRODUKTE**
KENNY SHOESMAKER
KNOP ENGINEERS
KOMBUIS HOUTWERKE
KOORTS WAREHOUSE*
KRAPP BIETJIE
KROMMENALD
LANGSTON
LCP SYSTEMS*

LEBALLO UNITS
 LEWDEKKERS
 LEKKER BOUSTENE
 LEKKER GROEIE KOMPOS*
 LIMA CONSTRUCTION
 LIND LEE BOUTIQUE
 LINDIE LOE ARTS
 LISTER FURNITURE**
 ORRAINES NAIL BOUTIQUE
 LUBCO ENOINEERINGO

M

M.R.S PRODUCTS
 MAC'S WORKSHOP**
 MAKARIOS LINE BORINO
 MANA ENOINEERINGO
 MANCO FABRICATIONS
 MANN'S MACHINERY*
 MANN'S OUTFITTERS
 MARBLITE POOL
 MAROUARITE NATURAL PRODUCTS
 MEDIA PAINTS*
 MEKLO WOODWORKS
 MEL'C ENOINEERINGO
 METAL CREATIONS
 METRO CYCLE*
 METWUD MANUFACTURINGO
 MIDWEST BODY
 MINI MAIZE PRODUCTS
 MITRE'S TIMERLAND**
 MOLANTOA WOODWORK
 MORAPEDI WOODWORK
 MULTIFACTURE
 MYSTEK ENOINEERINGO**

N-Q

NANEEK ENOINEERINGO
 NAUMA HOUTWERKE
 NELBET PAVINGO
 NESSA ENOINEERINGO**
 NIC RAS CONSTRUCTION
 NUMBER PLATE CENTRE
 OFFICE WARE DECORATORS
 OLIENHOUTWERKE**
 P & W ENOINEERINGO
 PAINTERS TIMBERLAND
 PARMSPRINOS DESIGNER
 PANTHER PAVINGO*
 PEACO ENOINEERINGO
 PIETDUP PLUMBERS
 PLUMBINO CENTRE
 POHO TOMSTONES**
 QUALITY PLUMBINO
 QUILT & CURTAIN

R

RAOBAO BOUTIQUE
 RALNA ENOINEERINGO**
 RAPID SCALFOLDING FRAMEWORK
 RASKA MATERIALE
 RCN CONSTRUCTION
 RECON ENOINEERINGO**
 RECYLING WASTE
 REFRITECH
 RELIANCE ENO. TOOL
 REM CONSTRUCTION*
 RHINO LININOS
 RIAAN POOL EQUIPMENT

RIG GRAFSTENE
ROBAK ENG. SUPPLIES*
ROXOUND ENGINEERING

S-W

S&E ENGINEERING
SA MECHANICAL
SANTON FLOORING**
SASOLBURO METAL
SCREEN ARTS
SD BLINDS
SEMBO *
SEW & KNT CLINIC
SEWING CENTRE
SOB SCAFFOLDING
SIGMA PAVING*
SIGMA WALLS
SIGN & DESIGN
SIGN SCREENING
SIONTECH**
SOLID BUILD
SOOT CONTROL EQUIPMENT
SPEEDY PRECAST WALLS
SQUARE ONE**
STAMP ART & CRAFT
STAINLEY & DE KOCK
STARKING FRUITERS
STEEL ENGINEERING**
STRUCTURE FABRIC
SWAN POOLS
SWEET CRAFT
SWIFT ELECTRONICS*
SWIM TIQUE POOLS
T & H CONTRACTS
TAKE TWO JUICES
TECHNIGRAPHICS*
THAT MANS PAVING
THE ICE RANCH
THE MALL PLASTIC
THE QUILT & CURTAIN**
THEO'S AUTO CLIN
THOMSON LEATHER
THYS STRUWIO
TME TECHNO MICRO SYSTEM*
TMS TOMSTONE
TRANSVAAL BLINDS
TRANSVAAL POMPE
TRI-PAVE*
TRIANOLE ENG
TRIPLE M ENGINEERING
TRIFLEX BLDG
TUBULAR ENGINEERING**
UCUS
ULTRABLITZ
U-TRAIL
UNIEKE HOUTWERKE**
UNIFLORA BLOEMISTE
UNISHADE & STEEL
UNIVERSAL RECYCLING
URBUS TECHNOLOGIES**

V-Z

VAAL MIG
VAAL METAL
VAAL PLASTIC
VAAL SEALING TECHNOLOGY*
VAAL TRIANGLE TIMBER
VALENCIA KOMBUISE
VAALMEC ENGINEERING

VAAL WOOD WORKS**
VAC-O-TECH
VANDA PRODUCTS
VANDERBLIJL BOLD & NUTS
VERIKO PLASTIC**
VITASOL
VOSBETON
VT CONSTRUCTION
VUMA CONSTRUCTION*
WELD TECH
WELDCO METAL WINDOW FRAMES
WILRO PLUMBERS
WOODPECKERS**
WOODWORKS
Z & R ENGINEERING
ZOZO

* questionnaires were sent to these firms

** questionnaires were received from these firms

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