Chapter 3

External Working Capital Management

Our main objective in this chapter is to search an answer for the second conceptual research question, which states: “What are the conceptual approaches of external working capital management that can be used to enhance firm value”? This chapter deals primarily with the theories that are useful for developing our research model, but first we present the general introduction and background in Section 3.1. Then we continue with Rappaport’s (1986) value network model (section 3.2), Porter’s (1985) value chain model (section 3.3), Shank’s and Govindarajan’s (1993) value chain linkages (section 3.4), Williamson’s (1985) transaction costs model (section 3.5) and lastly we present the essence of value measurement as it applies to our case studies (section 3.6) and then we conclude the chapter (section 3.7).

3.1. Introduction

Rappaport’s (1986) model is used to explain the logic behind dividing internal working capital management into levels of investment and financing as well as operations of purchasing and sales. Using Porter’s (1985) value chain model we divide the external working capital management into firm-supplier and firm-customer linkages. It is used as a background concept to argue that the management of generic value activities (particularly primary activities) are the basis for firm value creation. We focus on the inbound activities for firm-supplier linkages and outbound activities for the firm-customer linkages (see figure 3-2). We also use it to identify the inbound and outbound activities, which are of relevance for the management of working capital levels and operation (see Table 3-1). Williamson’s (1985) transaction costs model is used to relate Porter’s value chain model and Rappaport’s model of shareholder value network. These theories help us to look deeper into the linkages between the firm and its suppliers and customers. We argue that it is possible to achieve Rappaport’s corporate value objective (shareholder value creation) by reducing transaction costs internally as well as externally. However, we first start with a general introduction on the objectives of the firms.

The objective of a firm The objectives that firms pursue depend upon the stakeholder’s interest. Stakeholders are groups of individuals or organisations that play a role in the survival and success of the organisation and who are affected by its activities (Ancona et al. 1996). They include employees, unions, suppliers, customers, shareholders, creditors, government, local communities and even the general public. Normally, a firm has to satisfy many and at times conflicting objectives of these various stakeholders. Though there are a number of objectives that firms pursue, their main objective is often considered to be, the creation of economic value or profit maximisation to the owners (Rappaport, 1986). This is because when investors bring a firm into existence they do so on the condition that managers will follow their wishes - to make profit and to increase their value in the business firm (Galliger and Poe, 1995). However, there are many reasons why owners may also have objectives other than that of profit maximisation. First, some of the owners may be customers or employees of the firm and may expect the firm not to maximise profit but favour them
with better prices and terms, adapt policies to protect the workers’ jobs, pay higher wages and give on-the-job-benefits. Second, the decision-making stakeholders (owners and managers) may wish to maximise their portion of the flows rather than the total returns to all the stakeholders.

However, there is no universal agreement on the primary objective of firms. Copeland, Koller and Murrin, (1994) argue that shareholder value maximisation is for instance commonly taken as firms’ primary objectives in the USA while balanced stakeholders value is taken as a primary objective in Japan and Europe. To make our research analysis more manageable and for the sake of clarity of focus of objective, we argue that firms engage in activities that create shareholder value. Therefore, it will be beyond the scope of this research to evaluate the management of internal and external working capital levels and operations from the point of view of all the stakeholders. Moreover, it may be worthwhile to minimise the confusion over the meaning of value added and value network by airing out their definition adapted from McGrath (1999). McGrath defines value added as the difference between the total cost of raw materials and total revenue (average price times quantity sold). While value chain is an analytical technique that concerns intra and inter-organisational dynamics of value addition. Value chain analysis is a careful, piecemeal and low level examination of how resources that enter a firm are processed into being valued goods and services. It is used to identify key areas among organisational sub-units and independent organisations. Next we discuss the arguments of the aforementioned authors on how firms can manage their affairs in order to create value.

3.2. The value network model

Rappaport’s (1986) theory on shareholder value network is adapted because it explains the linkage between the corporate objective of value creation and its value drivers. He argues that to be effective, management must be guided by a set of principles that can be applied to decision making in various situations. To this effect, he also developed a number of financial management approaches and basic principles applicable for the management of working capital. Two of the most important of these principles are the objective of shareholder value creation and the cash flow approach to decision making. The objective of the shareholder is value creation according to Rappaport because owners of firms hire managers to act in order to maximise their wealth by generating profit. Therefore, the criterion of shareholder value creation becomes a basic approach to formulate and evaluate firm objectives. As Figure 3-1 illustrates, the main purpose of this shareholder value model is to demonstrate how management decisions on value drivers and valuation components be used to create shareholder value.

*Value drivers* are the variables that create value and are taken as the building blocks by which firms create a product valuable to buyers. Rappaport’s shareholder value network depicts the essential link between the corporate objective and the basic value drivers (or valuation parameters) – sales growth rate, operating profit margin, income tax rate, working capital investment, fixed capital investment, cost of capital, and value growth duration. *Valuation components* - cash flow from operations and the discount rate are the factors used to measure the achievement of the *corporate objective* or firm value created. Firm value is measured in terms of discounted cash flow from
operations (net of cash outflows). Cash flows from operations reflect the result of the firm’s activities and the discount rate estimates the cost of financing.

In order for shareholder value to be created, management has to concentrate on three main decision categories (Figure 3.1) - operating decisions, investment decisions and financing decisions. The changes in a firm’s value depend on the decisions made by management on each value driver. Operating decisions refer to the decisions with respect to the purchase of materials, the production process and the sales of finished goods. Operations also include other supporting activities like promotion, advertisement, distribution, product mix, and pricing. Which alternative operating decision to apply depends on their effect on the amount and the length of the period that sales grow as well as their effect on the profit margin net of tax. Investment decisions refer to managerial decisions on capital tied-up in working capital (cash, receivables, and inventories) and fixed capital (buildings, machinery, equipment etc.). Which investment type to choose depends on the investment’s effect on the cash flows from operations. Financing decisions refer to what financing sources to use - debt (short or long-term) or owners’ equity. Which type of financing source to use according to Rappaport depends on the costs of the components.

Figure 3-1: Shareholder Value Network Model

Source: Based on Rappaport (1986, p.77)

3.3. The value chain model

If firms are to remain competitive, they have to manage costs effectively and this requires a broad approach, internal and external to the firm, that Porter (1985) calls the value chain. The value chain consists of the interconnected value creating activities of a firm, starting with activities related to the purchase of basic raw material sources from suppliers to delivering the product to ultimate consumers. According to Porter the
The objective of a value chain strategy is to increase competitive advantage through cost minimisation, product differentiation, lower transaction costs, improved co-ordination between firms in the value chain, improved performance and/or reduced uncertainty. Porter’s value chain theory considers a firm as composed of discrete but related internal and external activities, including aspects like product design, purchase of materials from suppliers, production and sales to customers. Porter’s value chain model provides a method of breaking down these value creating chains of activities into strategically relevant activities in order to understand the behaviour of costs and the sources of differentiation (see also section 3.3.2).

### 3.3.1. The value chain activities

A firm's success depends on how efficiently it manages its internal and external activities, which Porter (1985) divides into primary and support activities (Figure 3-2).

**Figure 3-2: The generic value chain activities**

<table>
<thead>
<tr>
<th>SUPPORT ACTIVITIES</th>
<th>Firm infrastructure</th>
<th>Human resource management</th>
<th>Technology development</th>
<th>Procurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inbound logistics</td>
<td>Operations (of production)</td>
<td>Outbound logistics</td>
<td>Marketing and sales</td>
<td>After sale service</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Porter, 1985, p.37

**Primary activities:** According to Porter (1985), primary activities are the activities involved in the product's physical creation, sale, transfer and after sale service. Porter divides a firm’s primary activities into inbound logistics, operations, outbound logistics, marketing/sales and after sale services. *Inbound logistics* are activities associated with receiving the raw materials purchased as well as storing and distributing them to production. Examples of working capital related inbound logistics are material handling, freight-in, storing, inventory control, vehicle scheduling, administration and payments to suppliers. *Production operations* refer to transforming material and other inputs to the final product and include machining, packaging, assembly, equipment maintenance, product testing and facility operations. *Outbound logistics* are activities related to collecting the finished product from the production process, storing and physically distributing the products to customers. Specifically the activities include finished goods warehousing and handling, delivery vehicle operation, order processing, freight-out and inventory control. *Marketing and sales* are activities related to convincing buyers and to provide them with information so that they purchase the product. Marketing and sales activities include advertising, promotion, sales force, sales channel selection and pricing. *After sale services* are activities related to providing after sales service to customers in order to maintain values to the product. The after sales service to customers include activities such as installation, repair, customer training, parts supply and product adjustment.

**Support activities:** According to Porter, support activities are activities that help the primary activities and each other. They include firm infrastructure, human resources development, technology/research development and procurement. *Firm infrastructure*
include activities such as planning, finance, accounting, legal advice, and quality management. *Human resources development* activities are related to employee recruitment, hiring, training, development and compensation of all types of personnel. *Technology development* activities are the efforts made to improve the product or the production process such as the creation of know-how, procedures, computer programs and work automations, communications, basic research on product design and servicing procedures. *Procurement* activities refer to the purchasing of inputs used in the firm’s value chain but not the purchased inputs themselves. The final objective of Porters value chain model is establishing efficient and value creating linkages among the chains of a firm’s primary and support activities. This value can be created by minimising costs and becoming a cost leader or by differentiating a firm’s products from the products of competitors and generate profit that competitors cannot.

For the purpose of our research, we concentrate more on the primary activities in order to have a focussed study on the issues related the primary activities. It is also our opinion that the working capital levels and operations are more directly affected by the primary than by the support activities.

### 3.3.2. Working capital and value chains

Rappaport (1986) has established a model were operating expenses are categorised by primary value activities rather than the conventional accounting system. He argues that the conventional accounting system combines costs that belong to different value activities or separate costs that belong to the same value activity. He uses the model to adjust the conventional accounting operating profit to operating profit based on the value chain, which is the cash flow from operations. Cash flow is computed by adding back the non-cash expenses to profit after tax and deducting increases in net working capital and capital expenditures, which according to Rappaport is the more objective measure of value created compared to the conventional operating profit (See Table 3.1).

<table>
<thead>
<tr>
<th>Primary activities</th>
<th>Inbound development</th>
<th>Production Operations</th>
<th>Outbound logistics</th>
<th>Marketing and sales</th>
<th>After sale Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working capital operations</td>
<td>Purchases</td>
<td>Production</td>
<td>Sales</td>
<td>Sales</td>
<td>Sales</td>
</tr>
<tr>
<td>Cost of production and operating expenses of related working capital activities</td>
<td>Materials handling</td>
<td>Processing Assembly Testing Packaging</td>
<td>Materials handling Warehousing Freight-in Administrative</td>
<td>Sales force Advertising Promotion Administrative</td>
<td>Installation Training Maintenance Returns</td>
</tr>
<tr>
<td>Working capital levels</td>
<td>Raw materials inventory</td>
<td>Work-in-Process Inventory</td>
<td>Fished goods inventory</td>
<td>Accounts receivable</td>
<td>Parts inventory Service receivables</td>
</tr>
</tbody>
</table>

Source: based on Rappaport (1986), p. 86

Moreover, Rappaport enriches Porter’s strategy for competitive advantage by incorporating two basic steps involving competitive analysis that have to be
performed before identifying competitive advantage - assessing industry attractiveness and evaluating business competitive position within an industry. Industry attractiveness depends on the bargaining power of suppliers and customers, threat of new entrants and substitutes and rivalry among existing firms. Competitive position within industry is evaluated by studying the industry segmentation, including its characteristics and the firm’s position within it. Thus assessing industry attractiveness and evaluating business competitive position within an industry enables managers to identify the firms’ competitive advantage in terms of cost leadership and differentiation. According to Rappaport (1986), the shareholder value approach that applies value drivers (operating, investment and financing value drivers) management is used to evaluate if the chosen strategies are creating sustainable competitive advantage.

3.4. Value chain management

Porter’s value chain activities are inter-dependent and connected by linkages. Linkages are the relationships between the way activities are performed. They exist when the performance of one activity affects the efficiency and effectiveness of others. According to Trombly (2000) value chain management is managing integrated information about product flow from suppliers to end users to reduce defects and inventories, speed time to market and improve customer satisfaction. Shank and Govindarajan (1993), argue that whether or not a firm can develop and sustain strategic advantage in terms of differentiation or cost advantage or differentiation-with-cost depends fundamentally on how it manages its value chain linkages. Value chain linkages refer to a firm’s management of its value chain relative to the value of its competitors. The value chain linkage concept is based on two directional profit improvement areas, which Shank and Govindarajan (1993), describe as internal (intra-process and inter-process) and external (backward with suppliers and forward with customers). According to Porter (1985), exploiting both internal and external linkages require co-ordination of activities that cut across the conventional organisational lines of authority.

3.4.1. Internal value management

The internal value chain refers to activities within the firm that Shank and Govindarajan (1993) divide into intra-process and inter-process. The intra-process linkages are the connections within a process of activities of a firm's unit and inter-process linkages are the connections across processes of activities producing different products or services. Intra-process linkages within the value chain of a business unit are concerned with increasing the efficiency of primary and support activities within the firm. They deal with handling a firm’s linked processes of purchasing, manufacturing and marketing, such that every process helps the other processes directly connected to it. It recognises that the individual value activities within a firm are mutually dependent to each other and that they have to be managed concurrently. Inter-process value chain linkages within the firm across business units refer to managing the internally independent activities of the firm, which do not have a common process. This approach recognises that developing a competitive advantage through linkages across a business unit’s value chains within the firm can create value.
Developing the internal value chain

Shank and Govindarajan (1993) propose three steps to follow in applying a value chain methodology. First, identify the industry’s value chain and assign costs, revenues, and assets to value activities. Second, diagnose the value drivers regulating each activity. Third, develop sustainable competitive advantage, either through controlling cost drivers better than competitors or by reconfiguring the value chain and/or creating product differentiation.

3.4.2. External value chain management

Linkages exist not only within a firm’s value chain but also between a firm’s value chain and the value chain of buyers and suppliers, which can jointly optimise the performance of their activities to create value with synergetic effects. This means that buyer-supplier relationships are not a zero sum game where one gains only at the expense of the other. It is a relationship in which both can gain. According to Heck and Zuurbier (1989), the external value chain is a form of quasi-integration between vertically related firms. It refers to the activities done with the firm’s external environment (between the firm and other firms). It includes backward linkages with suppliers and suppliers of suppliers and forward linkages with customers and customers of customers. The suppliers value chain creates and delivers the purchased inputs used in a firm’s internal value chain, while the customers value chain takes a firm’s products and determines the value created by the firm. Shank and Govindarajan (1993) argue that, by carefully managing the relationship between the firm and its external linkages, transaction costs can be reduced and operational efficiency achieved, thereby creating firm value. External value chain analysis is used to understand the relationships and associated costs between the firm and its external linkages in order to maximise the value delivered to customers. It aims at developing a co-operative advantage through linkages between a firm’s value creating activities (Porter, 1985) and those of its suppliers and customers (Shank and Govindarajan, 1993).

The internal management of working capital levels and operations can have a positive effect on performance if a firm’s try to synchronise their internal management with that of their buyers and suppliers. This external management can eliminate unnecessary costs of working capital operations of inter-firm transactions as well as costs of carrying short-term investments and financing. Inter-firm co-operation can be used to establish value network (Rappaport 1986) and strengthen the value chain (Porter 1985). Inter-firm co-operation with suppliers in purchasing and materials inventory management and with customers in selling and finished goods inventory management can minimise the need to keep unnecessary levels of cash and inventories and eliminate unnecessary purchasing and selling activities. This may result at a reduction of the costs of inter-firm transactional relations and a lowering of the carrying costs of working capital levels. Customers and suppliers can benefit substantially from a knowledge and co-operation with each other, which can be gained by working together over time (Helper, 1987). Customer can benefit from reduced transaction costs, improved quality, speed of communication and process performance (Fuss and Waverman, 1992). Suppliers can realise stable sales and reduced levels of working capital investment and their costs.
Shank and Govindarajan, (1993) compare the traditional treatment of value addition management and Porter’s value chain management. They argue that, in contrast to the value chain linkage approach, the traditional treatment of value management takes the value added perspective and focuses on the internal activities of the firm. The traditional value added approach (see Figure 3-3) starts by managing value from payments to suppliers (purchase), and ends up at charges to customers (sales). It's objective is to maximise the difference between revenues and expenses of the firm in the short term. This value added approach according to Shank and Govindarajan (1993), starts too late, because it begins value management with purchases, missing all the opportunities for exploiting linkages with the firm’s suppliers. It also stops too soon, because it ends-up at sales and misses all the opportunities for exploiting linkages with the firm’s customers.

Figure 3-3: The value creation approach

The traditional approach to value addition

Source: Based on Shank and Govindarajan, 1993 p. 57

**Developing external value chain co-operation** Within the context of business to business co-operation on working capital management, we emphasise here on how firms can use inter-firm co-operation using the concepts of the value chain methodology. Competition has brought about major changes in linkage management, forcing firms into close interaction with both suppliers and customers. The linkages management approach argues that firms establish and develop their supplier and customer linkages firmly so that they position themselves better in a competitive environment. Firms have to manage their connections with suppliers in such a way that the linkage created helps them to streamline their activities by following tactics of cost leadership or differentiation strategies so that both the firms and their suppliers benefit. The argument here is that if the firm and its suppliers co-ordinate their activities they can create value with a synergetic effect on both sides. The approach to the linkages with the firm’s customers should also be in line with its approach to the linkages management with suppliers. Buyers should perceive the competitive strategy of the firm in terms of lower price with equitable quality (cost leadership) or the benefit of differentiation worth of paying a premium price. The achievement of high level performance in terms of cost, quality and time to market becomes ever more dependent on the quality and effectiveness of the firms co-operation with suppliers and customers.

Inter-firm relationships have changed greatly over recent decades because new organisational configurations have emerged like strategic alliances, partnerships and networks of firms. According to Petroni (2000), relationships between buyers and suppliers are usually positioned between two extreme poles “adversarial and collaborative”. However, due to increased inter-firm dependencies on economic, technological and commercial factors, the relationships are moving towards more
collaborative forms. Petroni, attributes the changes towards closer collaborative cooperation due to factors that bring the buyer and supplier closer to each other. These factors include the influence or urgency of the customer and the dependence of the supplier, a firm’s technological and organisational competencies as well as performance in a product’s price, quality, delivery, reliability and flexibility. According to Rubin and Alvarez (1998), co-operations that provide for opportunities for business LINC (learning, information exchange, networking, and collaboration) can determine the difference between success and failure. They present the benefits that smaller and bigger firms get as result of co-operation with each other. The benefits that smaller firms get by co-operating with larger firms include, getting technical advice, enhancing management development, leveraging core strengths, accessing sources of financing and entering into sub-contracts and joint ventures. The benefits that large firms get by co-operating with smaller firms are: reaching new markets, partnering with agile firms, cultivating a world class supplier base, thriving in industries that call for inter-firm collaboration and creating stronger business environment.

Choosing potential partners in external value chain linkages

Rubin and Alvarez (1998) argue that business to business co-operation beginning with existing suppliers and sales channels and extending to new suppliers and sales channels can increase competitiveness. However, before beginning business to business co-operations, firms have to make an analysis of their supply side and market opportunities. On the supply side firms have to look for strategic value that a firm can provide - such as freight-in advantages, small production runs, faster results of research and development, and greater ability to integrate employees and production lines. On the market analysis side firms have to look for firms that have value added role to services - like the ability to service small markets with lower overheads, make introductions to new customers, provide more detailed customer knowledge about niche customer segments, and reach newly expanding customer segments.

External value chain management strategies

According to Rubin and Alvarez (1998) the strategies that firms can use in implementing business-to-business cooperation include: one-on-one technical assistance and consulting, classroom and group training, peer groups and boards of advisors, and sales channel development.

One-on-one technical assistance and consulting can be used to achieve business to business co-operation to fit into the recipient’s unique phase of business growth, sector and location if specific steps are taken between consulting meetings in order to ensure that the relationship is productive. Classroom and group training can be cost-effective to teach groups of business owners. Businesses can open their in-house classroom training to outside firms in the form of firms offering quality management classes for their suppliers and customers. Peer groups and boards of advisors can help business firms to develop skills to solve business problems by drawing on networks of people outside the business. The most effective settings are participatory connections between firms at various levels (from executive to senior staff to shop floor managers), within the same industry, or in complementary industries. Sales channel development can be used to increase the sales of both firms participating in the business to business co-operation. Sales channels refer to any intermediary firm between the manufacturer and the ultimate consumer including dealers, distributors and franchises. According to Rubin and Alvarez, the strategies used for supplier
development such as adapt-a-supplier, joint venturing and executive grooming can also be used for developing new sales channels.

The bases of inter-firm co-operation A business inter-firm network includes actors, activities and resources (Hakansson and Johanson 1992). The actors include individuals and organisations controlling certain resources and activities. They make decisions, which is subject to bounded rationality. The activities are inter-connected and make chains with each other forming networks of activities and one activity is dependent on another activity to be performed. Then there are resources, which according to Kock (1992) can be categorised into personnel resources, software resources, hardware resources, organisational resources and capital resources. Personnel resources make the organisation run by making decisions and establishing and maintaining relationships with others both inside and outside the organisation. Software resources include know-how of all functions. The term software resource is used as a common term for knowledge of both hardware and software. It includes technology, knowledge of manufacturing process, machinery, marketing as well as knowledge of buyers and suppliers. Hardware resources include tangible assets such as machinery, buildings, equipment etc. Organisational resources include organisational structure, goals and culture. Organisational structure identifies the firms potential towards interacting with partners, how customer oriented the firm is, how fast decisions can be made, empowerment etc. In inter-firm business networks the partners adopt their organisational structure to each other as mutuality and trust make it necessary. Management goals are very important in managing and directing business activities. They provide individual members of the firms with something to aim at and motivate them. However, goals do not strictly have profit maximisation as a central focus, otherwise transaction partners will probably act opportunistically, which might lead to conflicts with each other. An organisation’s culture (Wheelen and Hunger, 1992) consists of beliefs, expectations and values learned and shared by individuals. Usually, culture is transferred from senior to junior managers in the firm. Very seldom is the culture recorded, rather it is defined according to informal rules or norms. Moreover, culture reflects the goals, strategies and policies of a firm. It is the identity of a firm and can to some extent be explained by its past history. Capital resources mostly from stockholders, financiers and banks are of great importance and usually have to be obtained through long-term relationships because few firms have the ability to internally raise substantial amounts of it.

Key factors in successful inter-firm co-operation strategies Rubin and Alvarez (1998) find that the following factors contribute to the success of inter-firm co-operation. The inter-firm relationship must be mutually beneficial (a win-win) for both firms. The greatest benefits come over a long-term and often in unanticipated ways. The best inter-firm co-operation blends several approaches and sequences them to provide the participants with multiple opportunities to learn. From the beginning, both firms should have a clear definition of their goals and expectations, with honest and frequent communication. The firm must be committed to the relationship at both the top management and staff levels, with appropriate incentives. A firm’s needs assessment, at the outset of the relationship, improves the match of the skills and resources between the firms. Effective business advisory strategies adapted to the firm’s size, industry and phase of growth. Firms should be selective in assuring that their inter-firm co-operation partner is ready, willing, and able to make the relationship work. Intermediary organisations can be helpful in matching and
supporting inter-firm co-operation. Successful inter-firm co-operation ultimately relies on successful personal relationships.

After describing relevant value creation models and issues of inter-firm linkages we do not yet know how working capital levels and operations are affected in the inter-firm relationships. In order to become more specific and study the benefits of the linkages we will here discuss the concept of transaction costs.

3.5. A theory of transaction costs on working capital

This section deals with the theoretical concept of transaction costs as well as its implications for managing working capital operations and levels. We argue that firms can create value by properly managing transaction costs of their backward linkages with suppliers and forward linkages with customers.

According to Coase, (1937) and Williamson, (1985), firms exist because, there are transaction costs of using the price mechanism in the market. Therefore, firms exist in order to reduce these transaction costs by developing distinctive competencies. A transaction is the fundamental unit of economic activity where one party agrees to take an action in return for equitable reciprocal value. According to Williamson (1985) a transaction occurs if a good or a service is transferred across a technologically separable interface and can therefore occur within the firm (hierarchy) or outside the firm (market). Generally, product costs are divided into costs of production and costs of the transaction (Milgrom and Roberts 1992). Production costs are the costs of labour, material and capital, while transaction costs are the governance costs of the transaction, such as costs incurred while negotiating prices, drawing up contracts, monitoring quality and building up trust, (Sako, 1992). In order to remain competitive, firms have to minimise both production costs and transaction costs. Though we give some focus on the production costs, this research will primarily concentrate on the transaction costs because we are concentrating on the inter-firm transactional relations. Inter-firm transaction relations are managed such that the transaction costs created in the process are minimised and value is created. According to Douma and Schreuder (1991) division of labour and specialisation create transactions. Divisions of labour create opportunities for specialisation, which in return necessitate co-ordination of economic activities (Milgrom and Roberts 1992). Specialisation makes producers, sellers, buyers and consumers to be different from each other. This will necessitate some effort and resources not only for producing the goods and for shipping them to consumers, but also for effecting the exchange of transactions. Effecting the exchange of transactions include, identifying potential buyers, describing the goods to them, setting the terms of trade, transferring the property rights and finalising the transaction through an exchange of values.

The basic idea behind the theory of transaction costs is that, the characteristics of a transaction exchange determine the type of efficient governance structure in inter-firm and intra-firm linkages (Heck and Zuurbier, 1989). According to Williamson, (1985), the extent of transaction cost is affected by the prevailing environmental and behavioural dimensions. With regard to their environmental dimensions transactions differ in some basic characteristics such as asset specificity, frequency and volume, complexity and uncertainty, possibility of performance measurement, connectedness
to other transactions and number of potential transaction partners. In addition to the environmental dimensions of transactions, transaction costs theory is also based on the notion that human beings are bounded rational and sometimes display opportunistic behaviour (Williamson 1985). While people aim to be rational, their capacity to do so is limited due to behavioural uncertainty, which concerns the intentions and competencies of transaction partners that may affect the execution of agreements and outcomes of their co-operation. The possibility for this follows the unpredictability of conditions and asymmetric information of transaction partners. Nobody is equally opportunistic, but the possibility of opportunism exists and prior to a relation one does not know to what extent it may arise. In the process of exchange one can distinguish between three stages of a transaction: contact, contract and control or execution (Williamson 1985, Van Der Meer-Kooistra and Vosselman 2000). In section 3.5.2 we focus on the external dimension of firms’ transactional relation and in particular on the costs of contact, contract and control.

3.5.1. Working capital operations from a transaction costs perspective

In order to manage transaction costs, firms have to design the management of value chain approaches in order to efficiently reduce the costs of asset specific transactions. According to Williamson (1985), there are a number conditions that may create the situation of asset specific transactions. For our purpose of working capital management the relevant situation is the asset specificity created due to dedicating assets to a transaction, which refers to the nature of investment that the parties must make with that asset in mind. According to Williamson, an asset is a transaction specific, if it cannot be applied to an alternative use without a significant reduction in the value of the asset. In case of asset specificity, partners to the transaction become dependent or locked-into each other. The producer loses value if the transaction is discontinued after committing to an investment required to produce only a specific product on the demand of a specific customer. The goods produced for a particular customer may not have any other use for the firm’s other customers. Therefore, the products’ value will be highly diminished if the customer decides to discontinue the relation. By the same logic, where a firm produces for the general market, first they may have inter-firm transactional relations with many alternative partners. However, frequently transacting for an extended period of time with one of the customers creates an asset specific relation due to the characteristics of small numbers transacting (Williamson 1985). Breaking up with this relation and starting a new one results in transaction costs of switching and this prohibits them from breaking-up their relations. In order to minimise this potential loss firms may have to incur transaction costs of ex-ante screening and ex-post safeguarding measures.

Purchase decisions and transaction costs economics Purchases can create asset specific relations with the firm’s suppliers. After repeated purchase from the same supplier it creates habituation and so the control over the purchase can be loosened. Purchases from the same supplier affect a firm’s inventory management (timing of orders, safety level held, order levels etc.) due to the confidence of the firm in the efficiency of its supplier. After a certain number of transactions, the supplier will build confidence and will not apply the stringent controls over credit validity due to trust having been built. If these attachments are going to be discontinued there will be certain switching costs incurred by the firm and suppliers. The routine ordering,
purchasing and receiving process may create trust and it may decrease the transaction costs in the firm’s purchasing, receiving and storing departments. If the purchase is to be made from a new supplier, the purchase procedure of collecting information, processing the comparison among the potential suppliers, negotiating the terms of sale as well as inspecting the goods upon arrival will take time, money and effort. These activities increase the transaction costs of switching the purchase from another supplier. So, firms will normally not shift from one supplier to another, because it will mean increasing transaction costs. Similar explanations could also apply to the firm’s relation with its bank as a financial supplier.

**Sales decisions and transaction costs economics** Routine and repetitive sales of goods connect the firm and its customers so much that not only asset specific transaction conditions but also the habitual management through co-operation results in trust. Once the firm establishes such a close connection, the routines of sales, particularly credit sales, such as ex-ante transaction costs of negotiating, drafting and safeguarding the credit sales agreements will be by-passed and will decrease related transaction costs. Once the firm becomes confident of its customers’ credit worthiness, it will respond to a customer with favourable credit terms. It will provide its customers higher discounts (in terms of both quantity and cash) and longer credit periods. It will use the informal open account as instrument for the evidence of credit granting and outright ownership transfer rather than consignment or conditional sales. The information needed to evaluate the future credit application by the buyer will be less and it comes from cheaper sources. The firm can use its own experience with the buyer and analyse the buyers financial statements, rather than using expensive information sources like customer visits or buying information from credit information supplying firms. The cumulative effect of all these positive experiences will be that repeated transaction relations of a firm and its customers create conditions of asset specificity and trust as well as potential costs of breaking the relationship.

3.5.2. The phases and costs of effecting transactions

In line with the phases in which they occur (Table 3-2) transaction costs under a market system are divided into three parts (Williamson 1985, Nootenboom 1992, Milgrom and Roberts 1992, Knorringa and Knox 1992): costs of contact (or ex-ante costs), costs of contract and costs of control (or ex-post costs). Though other distinctions can be made [Sako 1992] this research adapts the categorisation of transaction costs by Williamson.
In the **contact phase**, transaction partners search for an opportunity to meet because before the arrangement of a contract one must find a partner. They encounter each other and create mutual relations of a transaction partnership. This phase helps transaction partners to determine why they meet, how they meet, and what their mutual status is (Knorringa and Knox, 1992). In order to get together and transact, potential buyers and sellers need to know each other’s existence and location and in the mean time they create *ex-ante costs of contact*. These are the costs that occur before the transactions take place and they include search costs for the buyer and marketing costs for the supplier (Nooteboom, 1999). Search costs of a buyer are associated with becoming aware of a need and the possibilities of fulfilling it, searching for fitting solutions and alternatives and evaluating them. Marketing costs for a seller form the other side of the search costs. They include the research of latent needs of a potential customer, investigating market needs, possibilities to satisfy them, development of specifications, tests and search for entry to customers. Milgrom and Roberts (1992) also call these costs of contact as costs of co-ordination and they claim that the costs arise because of the need to determine prices and the other details of a transaction, which they further specify in the contract phase.

*The contract phase* refers to the settlement of the transaction. An agreement is made on the exchanged values. This includes agreeing on what is given for what price, in what quantities and by what criteria. The exchange proportions can be expressed in terms of agreement either by an arms length market price or by an intra-company transfer price. The phase of contract involves costs of preparing implicit or explicit agreements in order to reduce the risks of opportunism in conditions of uncertainty that may arise during execution. Sako (1992) says these are costs of drafting and negotiating agreements once trading partners are identified. So, they include costs paid to lawyers and the time spent by purchasing or marketing personnel in negotiating the terms of price, quality, delivery and payment.

*The execution phase* refers to agreements made to curb opportunistic behaviour of transaction partners and the future potential of the transaction. Transaction costs of control (ex-post costs) occur once the transaction agreements start to be implemented. They include costs of monitoring transactions, performance measurement, judging conformance to the agreement, identifying and solving any disagreement, renegotiations and adjustment of the agreement, enforcement and application of sanctions, litigation and possible loss of specific investments and hostages if the relation breaks (Nooteboom, 1999). Williamson (1985) also refers to these costs as

<table>
<thead>
<tr>
<th>Transaction phase</th>
<th>Activities of transaction</th>
<th>Category of transaction costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact</td>
<td>Finding the market and searching for a partner, identifying a potential partner, describing the offer to a potential partner, advertising in the media, attending trade fairs and exhibitions.</td>
<td>Ex-ante costs of contact (searching costs)</td>
</tr>
<tr>
<td>Contract</td>
<td>Negotiating prices, setting the terms of trade, writing and evaluating a proposal, credit investigation and discussion, setting-up governance structures.</td>
<td>Costs of contract (costs of negotiating drafting and signing contract)</td>
</tr>
<tr>
<td>Execution (Control)</td>
<td>Bonding secure commitment, monitoring quality, building-up trust and customer confidence, collection efforts, taking legal measures.</td>
<td>Ex-post costs of control (cost of safeguarding agreement)</td>
</tr>
</tbody>
</table>

Source: Based on Williamson, 1985, Sako, 1992, Knorringa and Knox 1992
the adaptation costs incurred when a transaction costs get out of alignment and haggling costs will be incurred when bilateral efforts are made to correct ex-post mishaps. In every phase of effecting a transaction the firm-supplier-customer linkages increase some transaction costs and decrease others. Identifying those costs that increase with closer firm-supplier-customer linkages and using mechanisms to reduce these costs can help in creating firm value. We call this the management of transaction costs and discuss about it in the next section (section 3.5.3).

3.5.3. The management of transaction costs

Transactions are often organised in order to economise on bounded rationality while simultaneously safeguarding against the hazards of opportunism (Williamson 1985). According to Williamson two remedies (ex-ante screening and ex-post safeguarding measures) can be taken to protect against opportunism, otherwise those who are less principled (more opportunistic) will be able to exploit those who are more principled. Ex-ante screening measures include stringent control in selecting transaction partners and designing all-inclusive contracts. Williamson argues that ex-ante screening is a weaker form of managing opportunism compared to ex-post safeguarding measures and it is less effective because of the existence of bounded rationality. Because of uncertainty there are more unforeseeable conditions during contract execution of a transaction relation. There is more room for opportunistic behaviour when the ability to acquire and investigate information is limited. Therefore, in order to reduce transaction costs, governance structures are used with an effect on bounded rationality and opportunistic behaviour of transaction partners. According to Williamson [1985] governance structures of transactions are grouped according to the level of asset specificity associated with them, namely market governance, hierarchy governance and a hybrid of the two.

Within the hybrid governance, transactions can have differing degrees of control. Van der Meer-Kooistra and Vosselman (2000) have developed a model of alternative governance patterns. They argue that inter-firm transactional relations can have different control patterns: (market, bureaucratic and trust based). Within the control patterns different control mechanisms can be at work depending on the contingency factors that prevail in a given transaction relation. A control pattern depends on the existence of three possibilities or contingency factors namely, transaction characteristics, transaction environment and transacting parties. The characteristics of the transaction refer to the degree and type of asset specificity, frequency and repetition, length of the transaction period and measurability of activities and outputs. Characteristics of the transaction environment include uncertainty about future contingencies, degree of market risks, institutional environment (rules, systems and organisations). The characteristics of the transacting parties are described by the information asymmetry, reputation, risk attitude and bargaining power.

Management control patterns and the transaction phases According to Van der Meer-Kooistra and Vosselman (2000), the alternative management control patterns that could be applied in inter-firm transactional relation differ not only with alternative contingency factors.
With a transactional relation based on a market control pattern, a meeting of potential partners on the basis of competitive bidding characterises the contact phase. In the contract phase there will be no detailed contracting and payment will be based on standardised activities or output. Control is imposed during the execution phase through a periodic ex-post competitive bidding. When an inter-firm transactional relation occurs on a bureaucracy based control pattern, the contact phase is identified by the contact on the basis of pre-selection of potential partners using detailed bidding procedures and selection criteria. In the contract phase there will be detailed and comprehensive contracting. Payment will be made on the basis of the evaluation of real activities or output. Control is imposed during the execution phase through close supervision, performance measurement and evaluation, detailed ex-post information processing, direct intervention as well as periodic ex-post-competitive bidding. When inter-firm transactional relation occurs on a trust based control pattern, the contact phase is identified by the contact of potential partners on the basis of trust stemming from friendship, former contractual relationships or reputation. In the contract phase there will be intentional contracting, framework contracts, contractual trust, loose links between payment activities and output. Execution is imposed through personal consultation and co-ordination, development of competence and goodwill trust, while control will be process oriented and culture based. Van der Meer-Kooistra and Vosselman (2000) also propose especially to look further into the importance of organisation’s culture and historical situational factors. We consider this to be a relevant addition that we can apply with regard to the management of working capital levels and operations in inter-firm relationship in government, transition and privatised firms, given their historical background and organisational set-up. However, before going deeper into the historical backgrounds and the three ideal types of control systems we will address aspects of transaction costs related to purchases and sales and see what they might imply for working capital management.

3.5.4. Working capital operations from a managerial controls perspective

After having discussed the creation of asset specificity and trust from frequent transactions with the same partner within a linkage, we will here relate the managerial control patterns of Van der Meer-Kooistra and Vosselman (2000) to the working capital operations of purchasing materials and selling finished goods. The inter-firm working capital operations have transaction costs, which can be minimised if prevailing contingency factors are managed within the appropriate managerial control pattern. The idea is that transaction governance structures (management control patterns) and the characteristics of the transactions contingency factors have the “best fit”, in which case transaction costs are the lowest. If managers are able to determine and apply the best fit transaction costs are low otherwise they are high.

Van der Meer-Kooistra and Vosselman assume that management is able to know the contingency factors that can possibly occur in an inter-firm transactional relationship. Based on this knowledge management can find the “best fit” among the contingency factors and appropriate type of transaction control pattern or governance can be designed. Though this may be a valid academic argument as a research model, it is quite difficult practically for the management to find and evaluate all factors that determine the best control pattern and contingency factor match-up. This may be
worse particularly in situations of underdeveloped countries that this thesis takes as a context.

**Market based control patterns and working capital operations** Under the market based control pattern, the *contact phase* of inter-firm-transactional relation of working capital operations presume no previous contact between the buyer and the supplier. So, both buyers and suppliers do not have readily available potential partners. In this situation the buyers and suppliers are forced to search for partners in the open market. The buyer starts by preparing documents for competitive bidding, announces it publicly or conducts marketing research to collect data on sellers. Buyer then compares alternative suppliers based on some yardstick and then start negotiating with the prospective supplier. The seller may also advertise his/her products publicly or search potential buyers through various channels.

At the *contract phase* of the market control pattern, the *transaction characteristics* are identified by first time contacts between buyer and supplier who are competitively chosen from many alternative suppliers. This results in a weak asset specific investment and a short-lived inter-firm relation, which may not be repeated again. A partner has no means of ex-ante measuring the efficiency of the other in performing the contract. The *transaction environment* is characterised by the buyer’s dependence on the price of the product as a reflection of its quality. The established institutional and social factors have little role in making an impact on the transacting parties. *Control* during execution is imposed by a reference to how efficiently the previous transaction was implemented. The purchases and sales are effected on cash basis. Since there are many buyers and suppliers in the market, partners will not expect their relations to continue and will not opt for incentive measures like transacting on a credit bases.

**Bureaucracy based management control pattern and working capital operations** At the *contact phase* the potential suppliers are pre-selected and invited to take part in a bidding competition whose procedure and criteria of selection are known to both. The usual purchase procedures like preparing purchase requisition, preparing bid documents and processing bid competitions will be applied. The *contract phase* is characterised by detailed and comprehensive contracting and payments based on real activities or output. Both the buyer and supplier will resort to checking the authenticity of sources of information and quality of products and services. At this phase the parties will conduct rigorous verification of the information before the contract is agreed upon and install strict safeguarding measures of control that will protect the parties during contract execution. Control in the *execution phase* is identified by the parties strict supervision, performance measurement and evaluation, detailed ex-post information processing and direct intervention.

The close but cautious interaction may result at transacting on a credit basis albeit on stricter terms because it needs writing notes and bank guarantees rather than using the open credit or cash transaction. Suppliers give incentives like cash and quantity discounts. Buyers follow-up the purchase with regard to the quality and quantity as well as the timing and means of shipments.

**Trust based control pattern and working capital operations** The *contact phase* of a trust based management control pattern starts from a trust as a result of relational development of buyers. Transaction will be effected on a credit basis with very relaxed
standards and terms that resembles a hierarchy approach of transaction governance. So, the buyer needs to send a very informal purchase order to a seasoned and reliable customer. The usual purchase procedures like preparing purchase requisition, preparing bid documents and processing bid competitions will not be applied. The *contract phase* is characterised by intentional contracting, framework contracts and loose links between payment activities and output. Both the buyer and supplier will not resort to checking the authenticity of sources of information or quality of products and services. At this phase, the contract can be implied without any documents or documents exchanged after the transaction. The interacting party’s personal consultation and co-operation generate control in the *execution phase*. The buyer spends less time and effort in the follow-up of purchases with regard to the quality and quantity as well as the timing and means of shipments which can be conducted on the basis of f.o.b. destination. It is also possible for the two parties to use the just in time approach of inventory control and use other contingency factors for emergency needs. This decreases the efforts, the time and the resources that both buyers and suppliers need for the transaction and therefore it reduces the transaction costs.

### 3.5.5. Working capital levels from a managerial controls perspective

Based on the insights of the Van der Meer-Kooistra and Vosselman model, we continue the argument that if appropriate managerial control patterns are applied the costs arising from inter-firm working capital relations can be reduced.

**Market based control patterns and working capital levels** In a market based control pattern the asset specificity is low and the duration of the transactional relation is short, while the need for performance measurements is high. The parties will not commit themselves to investment in asset specific transactions and they will interact frequently over a short period of time. Managing working capital levels in a market based transaction environment takes place within potentially many alternative partners and the buyer relying on the price as a reflection of the product's characteristics. Since the other party knows all the contingency factors s/he will not be motivated to remain loyal to one or a few partners. This makes the inter-firm relationship loose favouring the transaction to be managed by a market based control pattern. The influence of the institutional and embedded social norms and rules will have little effect on the manner of the transacting parties because they may shift immediately when these factors are not to the liking of one partner. In a market based management control pattern the characteristics of *transacting parties* are not important because there are many parties with the same characteristics and because switching costs are low.

With respect to the working capital aspect, we would suggest that in the market based pattern of buyer-supplier interaction, the parties need to maintain high levels of liquidity because the inter-firm relation is loose while the transactions will take place on a cash basis. The level of accounts receivables is expected to be low and so is short-term credit financing, since the firms will not have the level of trust in each other to settle transactions on a credit basis or to allow short-term finances. The investment in cash and inventory for transaction, precaution and speculation purposes will be quite high. Moreover, because investment in working capital levels remains large, the related costs increase.
**Bureaucracy based control patterns and working capital levels** A bureaucracy based control pattern is more prevalent in situations where individual contact, detailed contract and strict control is relevant.

In a bureaucracy based control pattern the transaction characteristics of asset specificity, repetition of inter-firm transaction and the duration of interaction increase while performance of activities and outputs can be measured by agreed upon standards and rules in the contract. Under the bureaucracy based control pattern, the *transaction environment* reveals a decreasing number of partners and the market price gives little information about the characteristics of the product. This fact forces the buyers and suppliers to be closely bonded by commonly agreed ex-post control mechanisms. This interaction necessitates the use of well designed institutional factors and a strong socio-cultural dependence. The *transacting parties* understand that they have asymmetric information and they keep closer to each other by establishing detailed contracts and imposing strict control. They will keep a good reputation in order to continue their relationship. If one of the parties fails to do its share, institutional and social control measures are applied. This includes mechanisms of contract enforcement by the court of law, revenge in the form of disallowing any further transaction when the opportunist party wants it most or by socio-cultural consequences like making public the bad experience which might result into a bad reputation for the failing party.

Overall, the management of working capital levels of investment and financing under bureaucracy based control pattern reveals a close but cautious relationship. This close but cautious interaction keeps the investment in working capital levels for transaction, precautionary and speculative purposes at medium levels. While the levels of receivables and payables may increase, the effect of reduced inventory levels decreases the related costs compared to a market based management control pattern. The possibility of financing working capital investments with the “interest free” trade credit also increases. This is because there is a higher possibility that suppliers will grant credit but require some legal assurances from the buyer in the form of promissory notes or the buyer’s bank in the form of letters of credit.

**Trust based control patterns and working capital levels** With a trust based control pattern the transacting parties are convinced that they can trust each other and there is no need for a bureaucratic control as revealed by the detailed contract and stringent control mechanisms.

Under a trust based management control pattern the transacting parties enter into asset specific agreements repeatedly for a long-term period and see no need to measure the performance of activities and output of each other. However, the fact that they trust each other regarding their professional competence, contractual seriousness and reputation decreases the opportunistic behaviour and the need for the imposition of strict control mechanism. The *transaction environment* under a trust based control pattern shows few transacting partners bonded tightly together and influenced by socially embedded factors with an institutional network. The trust based control pattern implies that the *transacting parties* prior experience of close co-operation proved their reputation and both sides know that there is no asymmetry of information and bargaining power. They are willing to share any forthcoming possible risk.
Under this management control pattern the working capital level of investment needed for transaction, precaution and speculative purposes are not important. A credit transaction is made on an open account basis with no guarantee from the buyer or its bank. So, the accounts receivable balance remains quite high while the cash and inventory balances are low and transfer of inventory could be made on terms of consignment. The investment in working capital levels is the minimum and so are the related costs. It is possible also that trade credit financing is high increasing accounts receivable and bank loans such as short-term debts and overdrafts.

We conclude the discussion on the working capital operations and levels versus managerial control patterns with a description of Table (3-3).

<table>
<thead>
<tr>
<th>Working capital</th>
<th>Market based</th>
<th>Bureaucratic based</th>
<th>Trust based</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levels</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>H</td>
<td>M-H</td>
<td>L</td>
</tr>
<tr>
<td>Receivables</td>
<td>L</td>
<td>M-L</td>
<td>H</td>
</tr>
<tr>
<td>Inventories</td>
<td>H</td>
<td>M-H</td>
<td>L</td>
</tr>
<tr>
<td>Payables</td>
<td>L</td>
<td>M-L</td>
<td>H</td>
</tr>
<tr>
<td>Bank loans</td>
<td>L</td>
<td>M-L</td>
<td>H</td>
</tr>
<tr>
<td>Operations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repetitions/reputation</td>
<td>L</td>
<td>M-L</td>
<td>H</td>
</tr>
<tr>
<td>Trust</td>
<td>L</td>
<td>M-L</td>
<td>H</td>
</tr>
</tbody>
</table>

Key: H (high), L (low), M (medium), M-H (medium to high), M-L (medium to low)

As Table 3-3 reveals, in a market based transaction control pattern the levels of cash and inventories are normally expected to be high. This is because there is high risk of liquidity for the purposes of day to day transaction and payment of maturing debt. In addition the precautionary and speculative needs cannot be financed with the help of inter-firm linkages. The levels of accounts receivable, accounts payable and short-term loans are expected to be low because there will be no trust and firms will not transact on credit basis. On the operation side inter-firm repetition and reputation is low because firms will shift frequently from one partner to another and therefore trust will not develop. For these reasons inter-firm transaction costs remain at a high levels.

In a bureaucracy based transaction control pattern the levels of cash and inventories are expected to be medium to high because there is risk of liquidity for transaction purposes as well as that precautionary and speculative needs may not be financed with the help of inter-firm linkages. The levels of accounts receivable and short-term debts are again medium to low because trust among transacting partners is not fully matured and firms may or may not transact on credit basis. In the transaction operation among partners, repetition and reputation is medium to low because firms may sometimes shift from one partner to the other and therefore trust may not develop. For these reasons inter-firm transaction costs remain medium to high.

In a trust based transaction control pattern the levels of cash and inventories are low because there is low risk of liquidity for transaction purposes and precautionary and speculative needs can be financed with help of inter-firm linkages. The level of accounts receivable, accounts payable and bank sort-term loans and overdrafts are high because of inter-firm trust, firms transact on credit basis and banks offer short-term loans if firms require it. On the operation side inter-firm repetition and reputation
is high, firms will not shift from one partner to another and trust develops. For these reasons inter-firm transaction costs are expected to be low.

3.6. Value measurement

*Alternative approaches to value measurement* The main objective of business firms as it has been disclosed in section 3.1 is the creation of value. However, the term value has been used by both researchers and practitioners in different ways, three of the commonly used terms according to (Stewart, 1990) are – accounting earnings, economic value added and net cash flows. The accounting earning takes the accrual accounting into consideration where income earned is considered as value created and expenses incurred as offsetting the value created. The difference between the income earned and expenses incurred is the net profit (after tax), which is used as a final measure of value created. The economic value added approach measures value by taking the difference between the net accounting earnings (or operating profits) and the cost of all the capital employed to produce those earnings (Stewart, 1990 p. 2). This approach considers the time and risk taken in the process of creating value. Under the net cash flows approach, income is considered to be realised only if cash is collected from the goods sold or services rendered and expenses are recognised only if cash is paid for the goods bought or services received. The net cash flow is considered the final measure of value created or destroyed. Therefore, firms can be evaluated not only by the net accounting profit that they earn but also by the net cash flows (net accounting profit adjusted for the changes in working capital investments and finances as well as non-cash expenses).

Without going into details about the pros and cons of these approaches we can safely conclude that the economic value added gives a relatively accurate measure of value but is relatively difficult to measure particularly in developing conditions. The accounting earning and the net cash flows are easily measured (given the standard and widely used accounting practices). For this reason we only consider accounting earnings and cash flows as measurable variables in the analysis of our study.

We therefore have used mainly the accounting earnings because information regarding the accounting earnings is widely and easily available from the all the firms so it was easy to compare the value of the firms. Moreover, we could not get cash flow statements for all the firms for the seven years that we have covered in our study. Therefore, it was not possible to make a comparative study of the firms, so we have tried to study the cash position of the three main firms for at least three consecutive years and evaluated the effect of each working capital item on the net cash flows of the firms and thereby we study the role of working capital in the creation of value in terms of net cash flows.

*The meaning of value for the purpose of our case study* The notion of value in the developed (western) countries is based on the shareholder value maximisation (Rappaport, 1986), which can make sense only if there are efficient financial institutions and capital markets. This notion of the shareholder value cannot be easily adapted to the study of value creation in the developing countries where there are no efficient financial institutions and capital markets. For example in Eritrea there is no stock market and therefore there are no companies whose shares are publicly traded.
and all the relatively larger firms (in terms of size of capital and sales volume) were government owned. The government slated these firms for privatisation only in 1996 through direct sales and not through public share offerings. Because of these facts, we applied the meaning of value in terms of its accounting sense and we believe the meaning of value and value creation given by Porter is appropriate in this case. Porter (1998 p. 38) describes value as the amount buyers are willing to pay for what a firm provides them, which is measured by the total revenue, as reflected in the price a firm’s product commands and the units it can sell. He further provides that a firm is profitable if the value it commands exceeds the costs involved in creating the product.

We have opted for this option of the meaning of value so that to be applied in the study of internal and external working capital management, in a developing context, particularly in the government, transition and privatised manufacturing firms in Eritrea. Value according to this definition can be observed by the amount of sales, costs of sales, operating expenses and the resultant net profit or loss (or margin according to Porter) reflected in a firm’s financial statements, particularly the income statement. As it is indicated in Appendices 6.1, 7.1 and 8.1, we have obtained the managers’ opinion on the role of working capital management on the value creation on the basis of this definition.

3.7. Conclusion

This chapter has covered the theoretical background for the research study on the external working capital management. According to Rayan, Scapens and Theobald (1992), in case studies the use of background theory is important. Theory is used as a background to decide on what research approaches to follow and what data to collect in order to analyse the research and to arrive at a conclusion about the study. Having this objective in mind, we use three interconnected theories as a background: Rappaport’s (1986) value network, Porter’s (1985) value chain and Williamson’s (1985) transaction costs.

We applied Rappaport’s (1986) value network model to explain the relation between the corporate objective of value creation and its drivers. His model is useful to demonstrate the creation of firm value by managing value drivers and value components. Rappaport’s value network model helps us to focus on how value can be created with particular reference to working capital levels and operations. Based on Rappaport’s argument we divide the conceptual framework of our study into working capital operations of purchases and sales as well as levels of investment and financing. The ensuing proposition is that if firms manage their internal and external activities related to the working capital operation and levels they can create value to the owner, which can be measured and realised on the basis of Rappaport’s assertions.

We used Porter’s (1985) value chain model to help us find answers to issues of value drivers. Porter divides value drivers into specific primary and support activities which are inter connected by internal linkages to each other and external linkages to buyers and suppliers. We used this value chain linkage model as an input to describe inter-firm transactional relations useful to create value. The main drivers of this value creation are activities inside the firm (the primary and support activities) and outside the firm (supplier and customer linkages). The external value drivers with regard to firm-supplier and firm-customer value chain helped us to understand that the efficient
management of a firm’s internal value drivers alone cannot enable a firm to exploit its value creation potential to the maximum possible. There is value chain that starts with suppliers, connected to the firms and continues to customers. Exploiting this value chain pre-supposes that firms co-operate with each other such that all players connected to the chain apply well co-ordinated and cohesive management in their internal and external value chain linkages. Therefore, value creation can be enhanced if a firm manages its internal activities efficiently and co-ordinates it with its external supplier-customer value chains. However, for value to be created tangible managerial decisions and actions have to be taken.

We used Williamson’s (1986) theory on transaction cost to argue that efficiently reducing these costs (along with income increasing approaches) contribute to the creation of value. We use Williamson’s transaction costs management approaches to study the transaction costs characteristics of working capital levels and operations and Van der Meer-Kooistra and Vosselman’s (2000) model on managerial control patterns. Van der Meer-Kooistra and Vosselman [2000] argue that inter-firm transactional relations can have different managerial control patterns - market, bureaucratic and trust based. Within these managerial control patterns different control mechanisms can be applied depending on the contingency factors (transaction characteristics, transaction environment and transacting parties) that prevail in a given transaction relation and in every transaction phase (contact, contract and execution). Their model helped use to relate the management of working capital operations and levels to the approaches of transaction cost management.

Before starting to formulate our conceptual framework in chapter 5, that we use to design our information retrieval from a field study on the government, transition and privatised manufacturing firms in Eritrea, we need to answer the following theoretical question. “Does ownership matter for creating value by managing a firm’s internal and external working capital levels and operations”? This is a topic that we cover in the next chapter (chapter 4).