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Introduction

In this book we go into the concepts of internal and external working capital management. The research focuses specifically at the government, transition and privatised manufacturing firms in Eritrea. The objective of this research is to study the working capital management practices of these firms and to forward possible areas of improvement.

We have categorised this book in to five parts: introduction, literature review, conceptual framework, empirical study and conclusion. Part I contains chapter 1 and introduces the research. Part II contains chapters 2-4 with the literature review. Part III contains chapter 5 where we present our research approach and develop a conceptual framework. Part IV incorporates chapters 6-9 in which we analysed the empirical data in view of the literature reviewed and the conceptual framework developed. Part V includes chapter 10, which concludes the research and forwards future research implications.

Literature reviewed on working capital management

We reviewed literature on relevant research methods, approaches of working capital management and related theories that can be used as a background. We introduced our research by highlighting the relevance of working capital management and the benefits and costs of internal and external working capital management.

The literature on internal working capital management focuses on the management of working capital levels of investment in cash, receivables and inventories as well as on operations of purchasing and selling. We highlight the need for designing and implementing proper objectives for holding the optimum levels based on transaction, precautionary or speculative purposes. In order to maximise the benefits of working capital firms can plan their periodic requirements using budgeting approaches, optimality models and by hedging for uncertain outcomes. There are also control mechanisms that the firms can apply in order to safeguard against the physical decay and improper handling. An important objective of working capital management is therefore to determine and maintain an optimum level. The level of raw material inventories can also be improved by co-ordinating a firm’s purchases and production and that of finished goods by co-ordinating the operations of production and sales.

External working capital management focuses on the management of inter-firm co-operation among firms, their suppliers and customers. Efficient management of working capital levels and operations would depend not only on co-ordination between the firm’s internal operations but also between the firm and its suppliers and customers. If there is a close co-operation between the firm and its supplier, a small raw materials inventory could be maintained more easily while production needs could still be met. With closer firm-supplier co-operation, it is also possible for the firm to get credit purchase, which minimises cash needs. It may then, moreover, receive both quantity and cash discounts. With a close co-operation between the firm and its customers, it is possible to know early when goods will be needed. Therefore,
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a small finished goods inventory could be maintained and customers’ needs could still be met. Close firm-customer co-operation also enhances credit sales and may increase revenues, while at the same time it may minimise uncollected receivables and increase cash levels. A co-operation among a firm, its suppliers and its customers can also minimise their inter-firm transaction costs.

The achievement of firm objectives can be measured and evaluated using internal financial performance measures and non-financial measures, such as supplier and customer evaluations on various inter-firm activities.

Theoretical background

According to Rayan, Scapens and Theobald (1992), theory is useful as a background to decide on what research approaches to follow and what data to collect. Having this objective in mind, we used three interconnected theories as a background: Rappaport’s (1986) value network model, Porter’s (1985) value chain model and Williamson’s (1985) transaction costs theory.

We applied Rappaport’s (1986) value network model to explain the relation between the corporate objective of value creation and its drivers. This model helped us to focus on how value can be created with particular reference to working capital levels and operations. Based on Rappaport’s argument we divided the conceptual framework of our study into internal and external working capital operations of purchases and sales as well as levels of investment and financing. We used Porter’s (1985) value chain model to study the management of value drivers in an inter-firm co-operation. Porter divides value drivers into 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 study inter-firm transactional relations useful to create value. Exploiting the benefits of value chain approaches require that firms co-operate with each other so that all players connected to the chain apply well co-ordinated and cohesive management of working capital. 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. This requires that the transaction costs that originate as a result of inter-firm transactional relations be properly managed. We used Williamson’s (1986) theory on transaction cost to argue that the managerial approaches designed to efficiently reduce these costs primarily contribute to the creation of value. We argue that if firms co-operate on activities related to working capital operations and levels, they can minimise the inter-firm transaction costs and create value more than they would create individually.

Lastly, we covered the debate on ownership and operational efficiency based on the theoretical arguments of Shirley and Walsh (2000). The arguments of Shirley and Walsh helped us to categorise our study into government, transition and privatised firms. We compared the potential for operational efficiency between government and private firms and discussed the characteristics of privatised and transition firms. We centred our discussion on the effect of ownership on competition and value creation. We argued that, it is the competition that determines how firms can efficiently create value. However, ownership determines the potential for competition and managerial efficiency, therefore the ability to create firm value.
The conceptual framework

Our conceptual framework takes the issues of internal and external working capital management in the Eritrean context. Using the insights of Rappaport’s (1986) value network model we argued that for a firm to create value, management decisions have to concentrate on three main decision categories, operating decisions, investment decisions and financing decisions. Operating decisions include the decisions on the purchase of materials, production process and sales of finished goods. Investment decisions refer to capital tied-up in cash, receivables and inventories. Financing decisions are concerned with the sources and the management of financing.

The conceptual framework of this research study uses these internal working capital management categories also as building blocks for the analysis of external management of working capital, which firms may implement in co-operation with their suppliers and customers. Inter-firm co-operation can create a tripartite value network with the firm and its suppliers and customers making a chain. It can help firms, their suppliers and customers to decrease the common transaction costs of working capital operations and the carrying costs of their working capital levels. If the firm’s purchase and suppliers’ sales operations are co-ordinated their inter-firm transaction costs and amount of cash needed by the firm as well as the carrying costs of suppliers’ inventory of finished goods and the firm’s inventory of materials can be minimised. Co-operation with the supplier can also help a firm to increase the use of payables as a financing source. The firm’s sales operations and customers purchase operations can also be co-ordinated so that their inter-firm transaction costs and the carrying costs of customer’s inventory of materials and the firm’s levels of finished goods inventory, receivables and cash are minimised. The cumulative effect is that all three parties - the firm, its suppliers and customers can enhance their respective value more than they could without co-ordinating the management of their operations and levels.

The main factors of our conceptual framework may not explain everything and other factors may determine the way the internal and external working capital operations and levels are managed to create firm value. To take care of these eventualities we have considered the influences of ownership, government regulations, management-potential, and cultural factors.

Finally, we highlighted the importance of performance evaluation of working capital decisions. Performance evaluations are made to check if the firm's internal and external management of working capital operations and levels are creating value. There can be financial and non-financial performance measurements and evaluation systems. The financial performance evaluation is using the accounting based financial information and the non-financial uses the evaluations of managers and –for the external aspects- the evaluations of suppliers and customers.

The research methodology

Yin (1994) described five alternative research approaches: case research, experiment, survey as well as history and analysis of archival information. Because of the differentiating characteristics we argued that the case research method properly fits
into our research problem and objective. Accordingly, we sub-divided the design of the case research into overall case study, the field research or data collection, data analysis and criteria used to ensure the credibility of the findings.

We have focused on the descriptive and explanatory case study approaches. We have described and explained the cases of the government, transition and privatised firms. We have used the qualitative and quantitative data analysis. Our research approach requires us to use the qualitative data analysis, which according to Miles and Huberman (1994), refers to essences of people, objects and situations and is expressed in terms of words based on observations, interviews and documents. Our quantitative data analysis refers to the evaluation of working capital decisions using financial performance ratios.

The empirical findings

We have used the empirical data to analyse the practices of internal and external working capital management in the government, transition and privatised firms.

Internal working capital management

Overall working capital management policy Government and transition firms lack a clear objective and vision of managing both internal and external working capital. Though the managers believe that managing working capital operation and level plays a very significant role in creating value to their firms they are not empowered due to the imposition of government regulations. According to the managers, government regulations, implemented under the supervision of the Ministry of Defence in the government and NASPPE (National Agency for Supervising and Privatising Public Enterprises) in the transition firms restrict their managerial power. Other than the problem of managerial empowerment working capital investment and financing, production capacity and labour are also constraints. The problem with the privatised firms is not managerial empowerment but management potential, culture and clarity of objectives and lack of skilled labour, which are the major constraints.

Investment and financing Both government firms that we have studied have excessive levels of cash and receivables. However, inventories of material are kept to a lower level due to the close relationship of inter-government firms. The inventory of finished goods is also minimised due to the excessive demands of the Ministry of Defence and monopolised food market in both firms. The government firms have no problem of financing their working capital levels and operations because of their profitable operations as a result of the subsidised costs and monopolised market. All transition firms except Keih Bahri Tannery are in a serious problem of liquidity. The firms have financed their working capital needs with overdraft facilities. The level of receivables is high because of the slow paying related (government) enterprises. While inventory balance is also increasing due to mainly lack of sales. The owners of the privatised firms have borrowed heavily from the government banks in order to buy the firms. So, they reported that they are getting problems of liquidity because there is very little left for other purposes. The lack of investment and financing opportunity due to the absence of markets for financial titles is also a main factor that contributes to the inefficient management of working capital in the privatised firms.
**Operations of purchases and sales** The sales of both government firms are driven by the Ministry of Defence, which is also their supervising body. The Ministry of Defence simply forwards purchase orders based on which the firms supply whatever is requested. Both government firms have very little to do with how to purchase their materials and to produce and sell their finished goods. The purchase and sales policies of the transition firms are more or less dictated by government regulations though they have relatively more relaxed government policies applying to them in comparison to government firms. Because the firms are supposed to be privatised any time, management is not encouraged to plan into long-term period and so long as a buyer is not found, the management of their operations is crippled. The privatised firms’ management of working capital operations is also found to be restricted only to the application of clerical procedures of purchases and sales. Analysis of purchase and sales operations showed that there is no mechanism of enhancing the important aspects of purchase and sales transaction operations.

**Performance evaluation of working capital management** Analysis of performance evaluation has indicated that though most firms claim to use accounting and customer satisfaction based performance measurement, practically they rarely use any for managerial decision making purposes. We, nevertheless, computed accounting based performance analysis to study the firms’ asset composition, liquidity position as well as efficiency of their working capital activities and overall profitability. The evaluation based on the data collected from the financial statements reveals that the government firms have excessive surplus cash balance, marginal profits and liquidity as well as very low turnovers. Except for Keih Bahri Tannery, the transition firms’ financial analysis reveals that they have excessive liquidity problems, very low turnovers and poor cash positions. The financial analyses of the privatised firms indicate that they have liquidity problems, low asset turnovers and marginal profits (except for Asmara Sweater Factory).

**External working capital management**

**Firm-supplier linkages – the firms’ point of view** The response of the government firms indicate that they co-operate with their suppliers only on the inbound activities, particularly, shipment and storage. Privatised firms co-operate on inbound activities and on production operations but to a lesser extent compared to that of the government firms. The transition firms revealed the weakest firm-supplier co-operation. Their response shows that they have moderate firm-supplier co-operation only on the inbound activities particularly shipment. Generally, all firms have very weak firm-supplier linkage on all marketing/sales and after sales services. Both government and transition firms traced the reason for the lack of firm-supplier co-operation to government regulations, which they believe are beyond their control. The reason for the lack of firm-supplier co-operation according to the privatised firms is for two reasons. First, they have not established proper policy on firm supplier co-operation and second, their suppliers do not co-operate.

**Inter-firm linkages – suppliers’ point of view** The suppliers of all firms reported that they have very little co-operation on all the primary activities. The suppliers indicated that the only co-operation they have with the firms is on the outbound activities’ order
processing and particularly providing goods when just needed. The response of the suppliers of the privatised firms on inter-firm co-operation with regard to all primary activities is very low. The main reason for this lack of co-operation according to all the suppliers is that the central firms’ lack the willingness to co-operate. Comparing the responses of the privatised firms and their suppliers indicate that the privatised firms have exaggerated their firm-supplier co-operation on their inbound activities in comparison to the opinion of their suppliers.

**Suppliers’ evaluation** The suppliers of both government and transition firms nevertheless believe that their partners are very efficient in their purchase order processing, bilateral communication, explanation to inquiries, courtesy and cash payment habits. The transition firms, according to their suppliers, are good only at their payment habits. The suppliers of the privatised firms evaluated the firms on marketing approaches as less efficient.

**Firm-customer linkages – the firms’ point of view** The government firms revealed the weakest firm-private-customer co-operation. Their responses show that they have no firm-customer co-operation on any of the primary activities. The responses of the transition firms indicate that they moderately co-operate with their customers only on the outbound activities, particularly, finished goods warehousing and materials handling. According to the privatised firms’ co-operation with their customers on all activities of outbound activities and production operations is very strong. As it is the case with the firm-supplier linkages, all firms have very weak firm-customer co-operation on the activities related to marketing/sales and after sales services. The reason for the lack of firm-customer co-operation according to all the firms is that their customers do not co-operate. The government and privatised firms’ reason for non-firm-customer co-operation was moreover reportedly due to a lack of policy on firm-customer co-operation and they also do not see benefit in co-operating with their customers.

**Inter-firm linkages - customers’ point of view** The customers of all firms reported that they rarely have any co-operation agreement on the primary activities, working capital levels and operations except the transition and privatised firms’ co-operation on the outbound activities’ of order processing. The main reasons for this lack of co-operation is that the central firms lack the willingness to co-operate. The managers of the privatised firms –again- have exaggerated their firm-customer co-operation on their inbound, outbound and production activities in comparison to the opinion of their customers.

**Customers’ evaluation** All firms are evaluated by their customers as efficient on their product quality, bilateral communication, impartiality with other buyers and cash collection habits. In addition the customers of privatised firms rated their partners as efficient on sales processing, delivery and knowledge of customers. The government and transition firms were evaluated as efficient on their cost of products while the government and privatised firms were rated as efficient on their explanation to inquiries. On the other hand, all firms were rated as inefficient on their marketing approaches and on their use of customer services.
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Future research implications

Consequences for the conceptual framework The conceptual framework helped us to define a broad approach to working capital management, particularly to understand the relationships among the factors of internal and external working capital management, to design the data collection approaches and analyse the case study. The aim of our conceptual framework is to have a case study of the government, transition and privatised manufacturing firms with regard to three main issues - the internal working capital management, the external working capital management and overall Eritrean context. Practically, our findings reveal that the government, transition and privatised firms have more similarities than differences and that the managers concentrate on the control aspect of internal working capital levels and operations while they disregard the financial management aspect of working capital investment and financing. With regard to external working capital management the empirical findings show close co-operation on side of inter-government and transition firms, while the co-operation of all the firms with their private suppliers and customers is very weak. Empirical findings reveal that the issues related the overall Eritrean context have more impact on how the firms manage their internal and external working capital. The factors including government regulations, managerial empowerment, management potential and culture have primary role in how the firms manage their working capital. Because of these factors working capital management is not underpinned by the idea of value creation expected under conditions of developed western world. The general theoretical implication of our empirical findings for the conceptual model is therefore that the design of new conceptual framework for a case study in developing countries should strongly consider the legal, historical, institutional and managerial background in the countries under study.

Policy implications for the managers and the government In the light of our conceptual background and practical findings, the following points can be recommended at the firm and government level. At the firm level managers have to try to be as efficient as possible at the internal working capital management by establishing new policies and improve existing ones. They should not only concentrate on the custody but also on the value creation aspect of working capital management. Managers in the government and transition firms) have to be empowered to make decisions on working capital on behalf of the firms that they manage. Managers have to identify and then initiate new inter-firm relationships and strengthen existing ones. They must have a policy of co-operation with commitment based on negotiation, co-ordination and mutual adjustment instead of by power and by enforcing government rules and contracts as well as manage inter-firm co-operation by relationship development than by strict and formal mechanisms of control. Government can play a significant role in creating and improving institutions that reduce inter-firm transaction costs. So we have the opinion that the government remove its regulations on the government firms and enable their managers to do business with full authority and responsibility. The government can also be instrumental in stimulating inter-firm contacts and facilitate opportunities for inter-firm co-operation and networks. It can also remove the protection it renders to the government firms so long as they are competing with the private business sector and create a conducive environment for competition through appropriate investment policies, liberalising the market and establishing efficient financial institutions. In co-operation with countries in the region, it can also find ways to enhance investment
opportunities and financing sources by establishing a common financial system and regional stock market similar to –for example- the BRVM in West Africa.

Limitations of the study and future research directions: In order to further the study of internal and external working capital management we would propose that:

(a) Future case research be preceded with a survey in order to get a more complete picture of the Eritrean situation.

(b) The firms’ record on inter-firm transaction be used to identify transaction partners and research could be conducted to find the opinion of partners both inside and outside the country.

(c) The responses of more suppliers and customers could be researched.

(d) The privatised firms post privatisation development, that is, if the privatised firms have adapted to the new private status.

(e) Similar research be made in other countries in order to have the possibility of comparison.

(f) Further research be made on the speed and method of privatisation of the transition and privatised firms, because it may also affect their internal and external working capital management.

(g) When it refers to developing countries, it may not be true that government firms are less desirable for operational efficiency compared to private firms. This can therefore be studied further.