



LIQUIDITY MANAGEMENT AND THE SUGARCANE OUTGROWER COMPANIES IN KENYA

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Abstract:

Decisions about how much to invest in the customer and inventory accounts, and how much credit to accept from suppliers, are reflected in a firm's cash conversion cycle. Some previous studies have used this measure to analyze whether shortening the cash conversion cycle has positive or negative effects on the firm's profitability. These previous studies have focused their analysis on large firms. This study contributes to literature by focusing on the small and medium-sized organizations like the sugar-cane out-grower companies in Kenya whose unique characteristics include very high levels of current assets, fewer alternative sources of external finance and dependency on short-term finance. Using a descriptive cross-sectional research design, a total of 30 managerial staff members from the ten out-grower companies in Kenya were surveyed by way of completing a semi-structured questionnaire. Secondary data was also collected to supplement the primary data. The study established that the collection period for the receivables is considerably very long due to the long waiting period before cane proceeds are received by the farmers from the factories. The study also found out that over 78% of the out-grower companies settle their trade payables within 60 or less days. Low bargaining power by the out-grower firms vis-à-vis the suppliers was blamed for the short payables deferral period. The study further established that more than 67% of the out-grower companies hold their inventories for more than 60 days before converting them into receivables due to large order sizes targeting economies of scale and bulk discounts. Lack of appropriate skills has also hindered the use of techniques like just-in-time (JIT) for efficient inventory management.

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1. Introduction

The cash conversion cycle can be defined as the net time interval between cash collections from the sale of a firm's products and the cash payments for resources acquired by the firm. It represents the average number of days between the date when the firm must start paying its suppliers and the date when it begins to collect payments from its customers. It also represents the time interval over which additional funds in the form of working capital should be obtained to carry out the firm's operations. The measure of the cash conversion cycle highlights how a firm is performing and reveals the areas where further improvement may be required in terms of working capital financing required for particular level of operations (Padachi, 2006). Decisions about how much to invest in the customer and inventory accounts, and how much credit to accept from suppliers, are reflected in a firm's cash conversion cycle. Management of cash conversion cycle is a fundamental part of the overall corporate strategy to create value and is an important source of competitive advantage in businesses (Deloof, 2003). In practice, it has become one of the most important issues in organizations with many financial executives struggling to identify the basic cash conversion cycle drivers and the appropriate level of cash conversion cycle components to hold so as to minimize risk, effectively prepare for uncertainty, and improve the overall performance of their businesses (Lamberson, 2005).

The cash conversion cycle management practices adopted by a firm determine the length of time a particular element of working capital takes in the cash conversion cycle. Mathematically, the cash conversion cycle (CCC) is defined as the sum of the inventory conversion period (ICP), plus the receivables collection period (RCP), minus the payment deferral period (PDP). Managers need to appropriately evaluate the working capital needs of a firm and identify the basic elements of liquidity in order to decide on the level of operations and to balance between liquidity and profitability (Manoori & Muhammad, 2012 and Jose, Lancaster and Stevens, 2006). Theoretically, the smaller the cash conversion cycle the quicker the firm can recover its cash from the sales of its products, and the more cash the firm will have, the more liquid it will be. On the other hand, if the cash conversion cycle is high, it means that the company takes longer to recover cash back into its system. Thus, a high cash conversion cycle would indicate a liquidity problem. This is in agreement with Gattis (2009) who argues that it is

important to view the cash conversion cycle in a trend; where a downward trend is positive, indicating that the operating cycle is shortening, while an upward trend is negative, indicating that the cycle is lengthening, hence cash is tied up for a longer period.

The three different components of cash conversion cycle (accounts payables, accounts receivables and inventory) can be managed in different ways in order to maximize profitability or to enhance the growth of a company. Sometimes trade credit is a vehicle to attract new customers. Credit policy from suppliers and credit period granted to customers has an impact on profitability. Many firms are prepared to change their standard credit terms in order to win new customers and to gain large orders. Credit can also stimulate sales because it allows customers to assess product quality before paying. Some firms therefore follow a 'marketing' approach in managing the working capital through credit extension. The finance department of such a company will, however, face cash flow and liquidity problems since capital will be invested in customers and inventory respectively. Given the significant investment in accounts receivable by most large firms, credit management policy choices and practices could have important implications for corporate value (Chen, Frank, Wu, 2005).

Provision of trade credit is normally used by businesses as a marketing strategy to expand or maintain sales (Pandey, 2004). According to Lazaridis and Dimitrios (2005) efficient receivables management, augmented by a shortened creditor's collection period, low levels of bad debts and a sound credit policy, often improves a business' ability to attract new customers and accordingly increase financial performance. They point out that lost sales resulting from not granting credit constitute the opportunity cost which decrease when the amounts of receivables are increased. Michalski (2007) and Juan and Martinez (2002), have shown that an increase in the level of accounts receivables in a firm increases both the net working capital and the costs of holding and managing accounts receivables. Lazaridis and Dimitrios (2005) have also argued that firms which pursue increase in their accounts receivables to an optimal level increase their market share and profitability. Sushma and Bhupesh (2007) also agree that putting in place a sound credit policy ensures proper debt collection procedures and is pivotal in improving efficiency in receivables management hence performance of firms.

Effective inventory management practices will enhance a firm's performance. They lead to the reduction of excessive inventory and hence holding costs as witnessed when just-in-time (JIT) inventory management practices are implemented. Fullerton et al. (2003) found out that firms that implement higher degrees of JIT manufacturing practices outperform competitors who do not and also that a positive relationship exists between firm profitability and the degree to which waste-reducing production practices, such as reduced set-up times, preventive maintenance programs and uniform

workloads are implemented. Eroglu and Hofer (2011) argue that inventory leanness is the best inventory management tool.

Kenya is well suited for sugarcane development particularly in the lowlands around Lake Victoria in the western part of the country as well as in the coastal area on the south eastern part of Kenya. However, as Kegode (2010) points out, the sugar industry has been revolving around shortages, inefficiencies, inability to compete with imported sugar, perennial losses and political interferences. These have cumulatively led to a negative bearing on the industry's financial performance. Karekezi and Kimani (2010) agree that full potential for sugarcane development in Kenya is yet to be realized. They attribute this partly to the over-reliance on rain-fed cultivation of sugarcane and also to the rampant mismanagement of the state-owned sugar factories. The mills often owe money to farmers, who cannot be sure if or when they will receive payment. The farmers, as a result, often fail to repay loans made to them for farm inputs and for the development of their farms. Furthermore, farmers are generally paid for the amount of sugarcane they deliver to the mills in terms of weight, rather than sucrose content. This does not incentivize farmers to improve the quality of the cane they produce, which in turn reduces the efficiency of the mills (Ellis, Singh and Ong'olo, 2010).

In order to deal with these challenges associated with the sugar industry, sugarcane farmers have organized themselves into out-grower companies spread across the sugar-belt region in Kenya. Currently, there are 10 out-grower companies with regionally-defined membership (Masayi and Netondo, 2012). Out-grower companies should be understood within the broadest framework of cooperative movements in Kenya following the enactment of the Cooperative Societies Act of 1966. Underlying the enactment of this legislation was the perception by the Kenyan policymakers that such movements could provide viable instruments for integrating smallholders with the modern economy (Wanjare, 2017). In this role, the companies would offer a service network in rural areas which combined input provision, credit and agency services (Kegode, 2010).

The significance of the out-grower companies within the sugar sub-sector cannot be overemphasized since their affiliated farmers supply over 90% of the required cane for processing. Waswa et al. (2011) argued that the out-grower companies have, however, not performed to the expectations of farmers. He attributes many reasons for this state of affairs. First, is the deliberate misuse of the organizations' funds by the officials who use the organizations as platforms for furthering selfish individual objectives. Waswa et al (2011) also point out to the worrying level of illiteracy among the officials of these out-grower companies which breeds incompetence and poor bookkeeping. Masayi and Netondo (2012), on the other hand, concluded that although the reasons for the under performance of the sugar cane out-grower companies are not

very clear, poor financial management is certainly one of them. This study consequently seeks to document the out-growers working capital management practices as an exploratory investigation towards these organizations poor financial performance.

1. Literature Review

A key concern of business managers is the settlement of their firms' obligations as they fall due. This must be done within a framework that also increases profitability and the shareholder's wealth. The dilemma in liquidity management, however, is how to achieve the desired trade-off between liquidity and profitability (Raheman and Nasr, 2007). According to Charitou et al. (2010), management of current assets and current liabilities is important in creating value for shareholders. If a firm can minimize its investment tied up in current assets, the resulting funds can be invested in value-creating projects, thereby increasing the firm's growth opportunities and shareholders' return. Padachi (2006) examined the trends in cash conversion cycle management and its impact on firm's performance for 58 Mauritian small manufacturing firms during 1998 to 2003. He explained that a well designed and implemented cash conversion cycle management is expected to contribute positively to the creation of firm's value. Filbeck and Krueger (2005) also pointed out that the ability of financial managers to effectively manage receivables, inventories, and payables has a significant impact on the success of the business. If capital invested in cash, trade receivables, or inventories is not sufficient, the firm may have difficulties in carrying out its daily business operations. Charitou et al. (2010) emphasized on the trade-off between liquidity and profitability when they argue that liquidity management can play an essential role not only in a firm's profitability and risk, but also in its value.

Van Horne and Wachowicz (2004) consider excessive levels of current assets to have a negative effect on a firm's profitability. They assert that a low level of current assets may lead to lower level of liquidity and stock-outs resulting in difficulties in maintaining smooth operations. They emphasize that the main objective of cash conversion cycle management practices is to maintain an optimal balance between each of the cash conversion cycle components. On their part, Filbeck and Krueger (2005) noted that business success heavily depends on the ability of financial executives to effectively manage receivables, inventory, and payables. Kwame (2007) supports the same position by concluding that an efficient management of the cash conversion cycle can make a substantial difference between the success and failure of an enterprise. According to Deloof, (2003) and Afza and (2007), a strong relationship exists between the cash conversion cycle of a firm and its profitability. A shorter cash conversion cycle would increase profitability, and would show efficiency and effectiveness in the

management of working capital (Zariyawati et al, 2009 and Koliass, Dimelis, and Filios 2011).

Other previous studies also sought to find out whether shortening the cash conversion cycle has positive or negative effects on a firm's profitability. Shin and Soenen (1998) analyzed the relationship between the cash conversion cycle and profitability for a sample of firms listed on the US stock exchange during the period 1974-1994. They concluded that reducing the cash conversion cycle to a reasonable extent increases firms' profitability. Their study also compared the cash conversion cycles of K-mart and Walmart, the two super stores in USA. K-mart had a CCC of 61 days whereas Walmart had 40 days. The differences of 19 days in cash conversion cycle meant an extra \$198.3 million to finance working capital. More recently, Deloof (2003) analyzes a sample of large Belgian firms during the period 1992-1996. His results confirmed that Belgian firms could improve their profitability by reducing the number of days accounts receivable are outstanding and by reducing the inventory conversion period.

Meszek and Polewski (2006) identified three working capital management strategies that determine the length of the cash conversion cycle. Aggressive working capital management strategy is based on a high level of current liabilities and a low level of current assets. Conservative strategy is the opposite with low level of current liabilities and high level of current assets. The third moderate strategy takes a middle ground between the aggressive and the conservative strategies. The study, however, concluded that effectiveness in the management of cash conversion cycle must also consider other perspectives like the investment process, production process and logistics.

Studies by Smith and Sell (2008), Belt and Smith (2001) and Ricci and Morrison (2006) surveyed different practices used by firms to manage the separate components of the cash conversion cycle. These surveys show that many firms have informal policies for the management of their cash and marketable securities, accounts receivables, inventories, accounts payables and short-term loans. Grablowsky (2006) also confirmed the existence of a significant relationship between various success measures and the employment of formal working capital policies and procedures. Managing cash flow and cash conversion cycle is a critical component of overall financial management for all firms, especially those that are capital constrained, though industry and business-type differences may cause some of the variations witnessed (Belt and Smith, 2001 and Peel and Wilson 2006).

A study by Ricci and Morrison (2006) concentrated on international cash management operations, financing vehicles of international sales and foreign exchange activities. It concluded that companies prefer reliable and least-risky vehicles in their

foreign exchange and vehicles such as factoring, currency swaps, leading, lagging and futures. Howorth and Westhead (2003) studied the cash conversion cycle management practices of small firms in the UK. They found four types of firms: companies which concentrate on cash management routines; companies concentrating on inventory management routines; companies emphasizing revenue management routines; and firms which are less likely to utilize any working capital management routines.

Melita, Maria and Petros (2010) investigated the effect of the cash conversion cycle on a firm's financial performance in an emerging market. Their data set consisted of firms listed on the Cyprus Stock Exchange for the period of 1998 - 2007. Using multivariate regression analysis, their results specifically indicate that the cash conversion cycle and all its major components namely - days in inventory, days' sales outstanding and creditors' payment period – are associated with the firm's profitability. Vida, Seyed, and Rezvan (2011) studied the relationship between the cash conversion cycle and corporate profitability of 101 listed companies on Tehran Stock Exchange (TSE) during the period of 2004-2008. Multivariate regression and Pearson correlation were used to test hypotheses. Findings revealed that cash conversion cycle, a key measure of working capital management, has a relationship with corporate profitability.

In the Kenyan context, Bowen, Morara and Mureithi (2009) carried out a study on the challenge of cash conversion cycle management within small and micro enterprises in Nairobi. The study found that cash conversion cycle management is one of the serious challenges facing these enterprises. Kotut (2003) also carried out a study on the cash conversion cycle management practices by Kenyan firms using listed firms at the Nairobi Securities Exchange. The study concluded that cash conversion cycle management practices influence corporate profitability in variant proportions depending on the sector the firm operates in as well as the size of the firm.

2. Research Methodology

The study adopted a descriptive cross-sectional research design. This design was considered appropriate because the study focused on the data relating to cash conversion cycle management practices at the time of the study for all the 10 sugar out-grower companies in Kenya. To ensure comprehensive examination and inter-firm comparison, both secondary and primary sources of data were adopted. According to Wanjare (2017), the use of both secondary and primary data sources is helpful in enhancing reliability of findings due to minimal inconsistencies from the respondents. The secondary data was collected from financial statements and inventory records with the aid of predesigned desk review checklist. On the other hand, primary data

collection was accomplished by use of a semi-structured and self-administered questionnaire. The questionnaire was given to respondents drawn from representatives of top management, finance and procurement sections. Hence, there were three respondents from each company with top management represented by managing directors, finance by head of accounts, and procurement by head of supply chain sections. Data collected was subsequently presented and analyzed using descriptive statistics including percentages, measures of central tendency, and measures of dispersion. Out of the 30 questionnaires distributed, 28 were completed and returned. This translated to a response rate of 93%.

3. Findings, Discussion and Conclusions

The cash conversion cycle management practices were investigated under each of the components of receivables, payables and inventory. Under receivables management practices, the study established that receivables were mainly from three key areas of short-term notes, sales of farm inputs and machinery and subscriptions due from the members. Table 4.1 shows the distribution of receivables by type.

Table 4.1: Receivables by type

Type of Receivables	Frequency	Percent	Cumulative Percent
Loans and Interests	12	42.8	42.8
Sale of farm inputs and machinery	15	53.6	96.4
Subscriptions and Other Charges	1	3.6	100
Total	28	100.0	

Source: Out-Grower Sugarcane Companies (Kenya), 2015

More than 53% of the out-grower companies' receivables resulted from the sale of farm inputs and machinery. Receivables from loans and accrued interest accounted for 43% of the total receivables. The high demand for loans by members was explained to be resulting from the high cost of farm preparation and the difficulties in accessing loans from the traditional sources including commercial banks. The study established that the average receivables collection period for the out-grower companies is relatively very high as shown in table 4.2.

Table 4.2: Receivables collection period

Duration	Frequency	Percent	Cumulative Percent
0 - 30 days	4	14.3	14.3
31 - 60 days	6	21.4	35.7
More than 60 days	18	64.3	100.0
Total	28	100.0	

Source: Out-Grower Sugarcane Companies (Kenya), 2015

Table 4.2 shows that out-grower companies' debtors met their payments obligations within varying durations ranging from zero to more than 60 days. At the high end, management allowed 64.3% of the receivables to be collected after a period of 60 days or more from the transaction date. This delay was explained by the fact that the member-debtors expect recovery of their payables from the proceeds of cane delivered to the factories. The payments have, however, for many years been characterized by long delays. The cumulative 35.7% of the receivables were remitted to the companies within 60 days. The study, therefore, established that the collection period for a higher percentage of the receivables is considerably very long. This is due to the long waiting period before cane proceeds are received by the farmers from the factories.

The study also analyzed the sugar cane out-grower companies' payables. Various deferral periods for accounts payables were noticed as presented in table 4.3.

Table 4.3: Payables deferral period

Deferral Period	Frequency	Percent	Cumulative Percent
0 - 30 days	10	35.7	35.7
31 - 60 days	12	42.9	78.6
More than 60 days	6	21.4	100
Total	28	100.0	

Source: Out-Grower Sugarcane Companies (Kenya), 2015

Table 4.3 illustrates that 78.6% of the out-grower companies settle their trade payables within 60 or less days. The explanations given blamed the relatively low bargaining power by the out-grower firms vis-à-vis the suppliers for the short deferral period. The out-grower companies are forced to accept the payment conditions imposed by the suppliers or else face the prospects of not being supplied at all.

There were two key forms of inventory that the out-grower companies were required to manage. These included farm inputs such as fertilizers, spray chemicals and cane seedlings and farm machinery. The average age of inventory was analyzed and presented in table 4.4.

Table 4.4: Average age of inventory

Age of inventory	Frequency	Percent	Cumulative Percent
0 - 30 days	2	7.2	7.2
31 - 60 days	7	25	32.2
61 - 90 days	6	21.4	53.6
More than 90 days	13	46.4	100.0
Total	28	100.0	

Source: Out-Grower Sugarcane Companies (Kenya), 2015

The table shows that more than 67% of the out-grower companies hold their inventory for more than 60 days before converting them into receivables. Reasons advanced in support of this position included economies of scale in ordering large quantities of farm inputs. Also the need to take advantage of bulk discounts based on large-size orders. It was also established that the lack of appropriate skills hindered the use of techniques like just-in-time (JIT) for efficient inventory management.

The study found out that out-grower companies' receivable periods were longer than the payables period. Atrill (2006) attributes low receivable collection potential among the small businesses to lack of proper debt collection procedures such as prompt invoicing and sending out regular statements. This increases the risk of late payment and default. On the contrary, the out-growers' payables deferral period was very short. According to Christopher (2009), the longer the accounts payables period the more advantageous for the firm as such fund can be put to other uses. In this study, the trade payables period was found to be substantially shorter than the receivables collection period. This meant that the out-grower companies were accelerating their payables more than their receivables. Atrill (2006) found that less than half of small businesses view accounts payable as a source of finance for their businesses. Davidson (2002) also found a positive relationship between payable period and firm profitability.

This study found that out-grower companies held their inventories for relatively very long periods. The average age of inventory for about 68% of the out-grower companies was more than 60 days. Padachi (2006) examined trends in working capital management and the impact on a firm's performance. He found out that a high investment in inventories is associated with lower profitability. Further, he showed that inventory holding period had a negative relation with profitability. Deloof (2003) also analyzed a sample of Belgian firms and found that firms can raise their performance by shortening the periods for inventory conversion.

Deloof (2003) investigated the relationship between working capital management and firm profitability by using Cash Conversion Cycle (CCC) as a measure of working capital management. He found a negative relation between gross operating income on

one side and the receivables collection period and inventory turnover period on the other. Mathuva (2009) also conducted a study on impact of working capital on productivity using firms listed in NSE using data between 1993 and 2008. The study found a negative relationship between the time when the cash is collected from the customers and the firm's productivity. Thus, when cash conversion cycle is shorter, firm's profitability is most likely to be higher. Atrill (2006), in his study, found out that many small businesses are not very good at managing their working capital and this has been cited as a major cause of their high failure rate compared with that of large businesses. He asserted that small and medium enterprises often lack the resources to manage their trade debtors effectively.

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