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## **Belief Control Practices and Organizational Performances: A Survey of Sugar Industry in Kenya (Pp. 1-17)**

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### **Abstract**

*The sugar industry has experienced poor performance attributed to industry deregulation, poor management and political interference. Adopting the Simons' Levers of Control framework, this study sought to establish the relationship between belief control practices and organizational performance in the sugar industry in Kenya. Using a census survey of the 45 firms in the*

*sugar industry value-chain in western Kenya registered by the Kenya Sugar Board as at 1<sup>st</sup> January 2008, data was collected through self administered questionnaires sent to chief executive officers, finance managers and marketing officers of the target companies. The main finding of the study was that belief control systems are moderately prevalent in firms in the sugar industry and that belief control has a significant positive relationship with organizational performance ( $\beta = 0.288, p < 0.05$ ). The findings of this study underscore the need of management to incorporate employees in the company core values and design of strategic control systems to cope with changing internal and external operating business environments. The study advances the extant theory of strategic management control practices by providing evidences from emerging economy and on a focused single lever of management control.*

**Key words:** *belief control practices, organizational performance sugar industry, Kenya, Ojera*

### **Introduction**

The recent developments in many business sectors in both developed and developing nations has led to the need for businesses to focus on sustainable strategies. This includes strategic control practices. A number of models have been proposed to guide the practice of strategic control (see Lorange, 1980; Preble, 1992; Feigner, 1994; Simons, 1995; Ittner & Larcker, 1997). However, Simons' levers of control framework has been regularly used in the management control literature because the dynamic relationships between management control systems and strategic change is an attempt to offer a coherent and comprehensive body of management control theory (Bruining et al., 2004). In other words, Simons' levers of control framework depicts the basis for a coherent strategic control model. This study adopts this framework though focusing on a specific lever of control: belief.

There is are little studies in emerging economies on strategic control practices or their performance consequences (Hoskisson, 2002). A major shortcoming of the strategic control literature is that, despite extensive studies, evidence is scarce regarding actual as opposed to perceived effectiveness, overall usefulness and performance consequences of strategic control practices. Initial studies in the area explored the direct relationship between strategy and organizational performance. These studies found that despite the widespread acceptance of strategic management practices, only a tenuous link existed between strategy and organizational performance (Greenley,

1994) This tenuous link enigma extends to studies that seek a direct link between strategic control systems and organizational performance. Clearly, the study of the direct relationship between use of strategic control systems and organizational performance, in yielding inconclusive outcomes, has not advanced strategic control theory (Tucker and Thorne, 2010; Bisbe and Otley, 2004; Henri, 2006). Some evidence, however, exists supporting an indirect connection between management control system and organizational performance, (Mundy, 2009; Peljhan and Tekavcic, 2008; Kober, et al., 2007; Widener, 2007; Henri, 2006; and, Bisbe and Otley, 2004).

With strategic control theory considered still at embryonic stage, most research has been done in western countries (Aragon-Sanchez & Sanchez-Marin, 2005; O'Regan and Ghobadian, 2006; Hassan, 2010). Business firms in developing countries, particularly in the sugar industry in Kenya are beset by environmental turbulence heralded by the deregulation of the sugar industry, would benefit from strategic control practices. Neither the strategic control practices nor their performance consequences are known in Kenyan sugar firms.

Sugar industry was chosen as a context of the since it has a great potential for impacting the overall economy of Kenya. It is one of the largest contributors to the agricultural Gross Domestic Product (GDP), (GOK, 2006). Secondly, with the substantial state holdings, the sub-sector is a key policy initiative area for the Government of Kenya. Thirdly, the sugar sub-sector is currently undergoing fundamental change occasioned by liberalization and deregulation in the operating environment, the business consequences of which are: increased competitors, saturation of key market segments, the downward price pressure, and consequent the lower levels of return on equity. In fact, there is an impending threat arising from the free trade Common Market for Eastern and Southern Africa (COMESA) arrangement which has hitherto shielded Kenya from regional competition.

Beginning in the late 1980s, the future of Kenya's sugar industry became a growing cause of concern (Mireri et al, 2009; Wanyande, 2001). During this period the country adopted economic liberalization and industry deregulation, concomitant with policy reforms intended to convert economies from centrally planned to market economies. However, the freeing of sugar prices and marketing, the elimination of agricultural subsidies and placing the parastatal entities under expatriate management to prepare them for privatization, did not elicit the positive outcomes intended in the production,

operations and marketing activities in the sugar industry in Kenya, (Ojera, 2001; Mulwa et al., 2009). A major source of competitive disadvantage is the high cost of producing sugar in Kenya. Wanyande (2001) and Mireri et al, (2009) attributed the poor performance in the sugar industry on poor management, corruption and vested political interest. This can be traced to inefficiencies at both farm, factory and market level (Odek, et al., (2003).

As part of public sector enterprises reform, the government has guided the sugar industry through Kenya Sugar Industry Strategic Plan 2004-2009, Kenya Sugar Board Strategic Plan 2007-2012 and Strategy for Revitalizing Agriculture (SRA). These initiatives have seen most of the sugar firms have adopted strategic plans and performance contracting. The ultimate aim is lowering costs of production, higher efficiency and global competitiveness.

Despite such significant strategic activity, the industry still faces several challenges as evidenced by incessant court legislation, labour strikes and resultant factory shutdowns. Opportunistic behaviours relating to corruption and bribery have been cited as widespread in the sugar industry in Kenya, suggesting weak institutional infrastructures to support a market-based system (KACC, 2010). These and other factors could easily erode envisaged performance gains. Concerns have been raised by academics and industry stakeholders on how grapple the business consequences of the impacts from the liberalization and deregulation which have given rise to competitors, the saturation of key market segments, the downward price pressure, and consequent the lower levels of return on equity. All these concerns highlight the importance of effectively managing the internal firm and external environmental interfaces. In such a situation, strategic control systems, with their focus on strategy implementation, are deemed invaluable because of their ability to allow managers to monitor performance and redirect organizational action (Muralidharan, 2004). Yet, strategic control has generally suffered theory impoverishment exemplified by lack of consensus over the conceptualization and dimensionality of the key constructs. The result has been its limited use as an explanatory variable in organizational performance, despite its acclaimed role in strategy implementation. The lack of theory development has led to the concern that practicing managers have little in terms of guidelines by which to design and manage their strategic controls.

Clearly, further research is needed to advance strategic control theory. This study, therefore, seeks to establish the strategic control practices in the sugar

firms in western Kenya and, thereby, enhance a sound theoretical basis for a consolidation of a theory of strategic control. The Kenyan sugar industry, in spite of its importance in improving the livelihood of up to 20 percent of the population, and also having adopted strategic management, has nonetheless featured perennial sub-optimal performance. Furthermore, there has been no research on Simons Levers of control and it is hoped, therefore, that the study will contribute to documentation of strategic control practices in Kenya, and thereby make contribution towards calls for research in strategic management practices in emerging economies (Hoskisson et al., 2001).

### **Conceptual Framework**

Strategies and related strategic processes are executed in anticipation of some type of expected outcome. Strategic control practices are hailed as tools for improving the implementation of strategic plans and organizational performance. This study examines how belief control practices affect organizational performance. The conceptual framework consisted of hypothesized relationship.

H<sub>01</sub>: There is no significant direct relationship between strategic control practices and organizational performance.

Organizational performance was measured by both financial and non financial indicators. Appropriate organizational performance dimensions spawn effectiveness, efficiency and adaptability (Papadakis (1998)). Papadakis (*ibid*) further states that three distinct dimensions of performance can conceptually be measured: *Profitability* (operating profits and ROA); *Organizational growth* (revenue growth and profit growth); *Relative market position* (market share and market share increase). At the organizational level, the broad area of management control systems literature has adopted, along with the financial performance, dimensions such as: effective direction of attention (Simons, 1990; Widener, 2007), organisational learning (Simons, 1990, 1995, 2000; Kloot, 1999, Chenhall, 2005; Henri, 2006 and Widener, 2007) as well as strategic management effectiveness (see e.g. Simons, 1990, 1995, 2000; Chenhall, 2005). The literature recommends both objective and subjective measures of organizational performance, with the latter preferred where there may be reluctance to provide financial data (Fiorto & LaForge, 1986) or difficulties with interpretation (Covin & Slevin, 1989). In addition, Pearce et al. (1987) reported that actual and perceived measures of performance are strongly correlated based on empirical data. Finally, the use of a perceived success measurement scales are seen to provide a major

advantage over standardized measures of performance across firms, industries and other cultures by capturing the perceptions that underlie respondents' decision making processes. Such an approach enables the comparison of organizations that differ in size, industry, time horizon, and objectives (Dess & Robinson (1984). These perception-based dimensions have been successfully used in previous studies (Allen and Kilmann, 2001; Chenhall, 2003; Tangen(2002). Consistent with, this study will adopt perceptual measures of organizational performance. Contingency theory indicates that performance can be improved when key variables are correctly aligned (Chenhall, 2003).

The specific objectives of the study were;

1. To establish the extent to which belief controls are practiced in the sugar sub-sector in Kenya
2. To determine the relationship between belief control practices and organizational performance in the sugar sub-sector in Kenya.

### **Methodology**

This study was based on a census survey of 45 firms in sugar industry value-chain in western Kenya.

The study units consisted of 52 firms, that is, 9 sugar manufacturing firms, 2 molasses processing firms, 12 out grower companies and 29, jageries each of which has a fixed crushing capacity of at least 20 tonnes of cane per day (TCD). The firms were derived from the register of the Kenya Sugar Board, the industry regulatory body. According to Nachmias & Nachmias (1996), survey design is suitable where the objective of the study is to determine existence and extent of a problem.

The broad industry-based understanding was necessary to studying the hitherto enigmatic problems of the Kenyan sugar industry. Data was collected by means of self-administered questionnaires sent to the chief executive officers, finance officers and marketing managers. A total of 109 out 135 questionnaires were completed, representing an 82 percent response rate.

Belief control items were based on an in-depth specialist literature review (Sheehan 2006; Bisbe, Batista-Foguet & Chenhall , 2005; Bisbe & Otley, 2004). The pool of items generated from this exercise that were deemed to represent the underlying dimensions of the belief control variable were given

to an expert panel of five academics drawn from the fields of strategic management, organizational theory and marketing. These experts expressed their degree of agreement/disagreement with the use of the different items on a Likert scale of five points. This process yielded fewer items to represent the strategic control scale. The items were rated on a five-point Likert scale anchored by “1” not at all to “5” very great extent. Construct validity was established by principal components analysis (PCA) using orthogonal rotation. The Cronbach alpha for strategic control scale items indicated belief control (0.83), well above the recommended threshold of 0.70, Pallant (2007). This compares favorably with prior studies, for example, Widener (2005) strategic control scale exhibited a Cronbach alpha for belief control (0.91).

### **Findings and Discussion**

The descriptive measures of belief control system dimensions are found in Table 1. Respondents were asked to consider to what extent the contents of firm mission and vision statements clearly communicate the firm’s core values to the workforce, top managers’ involvement in the communication of core values, the workforce awareness of the core values, whether the mission and vision statements inspire employees, and whether top management and operating managers periodically meet to debate and reaffirm importance of core values. The responses were on a 5-point scale and revealed that most of the variables measuring belief control system have mean values close to the mean point of three. Almost 70% of the managers (44.4% moderately agree, 17.8% agree to a great extent, 6.7% agree to a very great extent) indicated that mission and vision statements clearly communicate the firm’s core values. The situation is similar with 73.4 % feeling that top managers are at least involved in the communication of core values (57.8% to a moderate extent, 15.6% to a great extent , 0% to a very great extent). The foregoing could explain the 68.9% who perceive that the workforce is aware of the firm’s core values (51.1% to a moderate extent, 11.1% to a great extent and 6.7% to a very great extent). A large proportion of respondents, 77.8 % are of the view that the mission and vision statements inspire the employees (48.9% to a moderate extent, 22.3%, to a great extent, and 2.2% to a very great extent). 77.8 % also deem that top management and operating managers periodically meet to debate and reaffirm importance of core values (46.7% to a moderate extent, 26.7% to a great extent, 4.4% to a very great extent). The overall mean 2.96 suggest that belief control systems are moderately prevalent in firms in the sugar industry.

### **Belief Control System and Organizational Performance**

In order to test H1, The main effect of belief control system was then entered in model 2 shown in Table 4.16. After entry of belief control system scale at step 2, the total variance explained by the model as a whole was 31.1 %, Adjusted  $R^2 = 0.278$ ,  $F(2,42) = 9.487$ ,  $p < 0.001$ . Belief control explained an additional 6.4 % of organizational performance, after controlling for firm size,  $R$  squared change = 0.064,  $F$  change (1,42) = 3.892,  $p < 0.05$ . In support of H1A, belief control system was positively and significantly related to organizational performance ( $\beta = 0.288$ ,  $p < 0.05$ ). Examination of the control variable revealed that firm size was significant ( $\beta = 0.359$ ,  $p < 0.05$ ) to organizational performance. To test whether the control variable, firm size, would affect the significance of the predictor variable, belief control system, a regression analysis was conducted in which firm size was removed. In this analysis, belief control system was still significant ( $\beta = 0.460$ ,  $p < 0.001$ ). That means that belief control system would have significant influence on organizational performance with or without the presence of firm size. The results indicate that 31.1% of the variance in organizational performance was explained by the model. According to Cohen (1988), this is a large effect.

### **Extent of Practice of Belief Control Systems**

The survey reported an overall mean 2.96 on the prevalence of belief controls in the sugar industry in Kenya. This suggests that belief control systems are moderately prevalent in firms in the sugar industry in western Kenya. Belief controls systems have attracted wide attention among scholars, mostly due to prevalent use in an organization to communicate core values in order search for new opportunities to address customers' needs (Simons, 2000). Such core values are engendered in mission and vision statements and are used by senior managers to communicate formally and systematically reinforce basic values, purpose and direction for the business (Bart and Baetz, 1998). The findings are consistent with previous studies. Anderson et al (2006) found moderate score of 3 on a 5-point Likert-type scale, indicating moderate extent of usage of each control system. Mohamed et al (2008) found strong dominance of belief control systems at a great extent (mean of 4.0 on a five-point scale). Anderson et al (2006) also found moderate score of 3 on a 5-point Likert-type scale, indicating moderate extent of usage of each control system. Some studies have, however, found greater extent of use. Peljhan and Tekavcic (2008) on a scale of 1 to 7 found a mean of 4.618 whilst Widener (2007) with a similar scale reported a mean value of 4.74. Case-based research summarily provide support for use of belief control systems in



enhancing a positive effect on a managers' values to lead to increasing focus on a firms strategic direction, (McCartney& Rouse, 2004; Marginson, 2002). In contrast, Khan (1999) in a retrospective longitudinal study reported that belief control systems only appeared after the first seven years of a firm's existence, suggesting absence of the same at formative stages of the company. Prior studies which have found belief control systems to be critical in organizations seeking to maintain coherence in complex and uncertain environments (Peljhan & Tekavcic, 2008; Bartlett & Ghoshal 1993; Simons 1995b). In such situations, belief control systems have been used to overcome inertia Bruining et al., 2004). surprisingly, some studies have surprisingly failed to detect existence of belief control systems (Altinay & Altinay, 2004). The conflicting findings could be attributed to the fact that the sugar firms in Kenya, alongside other African companies, have embraced strategic management practices relatively more recently (Elbana, 2008).

This findings of this study (table 2) revealed that belief control system was positively and significantly related to organizational performance ( $\beta = 0.288$ ,  $p < 0.05$ ). This finding may be attributed to the generally held view that belief systems can inspire employee commitment and effort towards achieving organizational goals, leading to organizational performance (Locke et al, 1988). The findings compare favorably with previous studies. For instance, Mohamed et al. (2008) found that beliefs control system had a significant relationship with overall organisational capabilities ( $\beta= 0.446$ ;  $p<0.006$ ), a critical antecedent to organizational performance. Widener (2007) reported that reliance on a belief control system is positively associated with efficient use of management attention ( $p<0.01$ ) which is in turn associated with higher levels of firm financial performance ( $p < 0.05$ ). Farther partial support is recieved from (Peljhan and Tekavcic (2008) who, though not distinguish between belief and boundary systems, however suggested that the combination of performance-driven behaviour and regular use of MCS, including belief control system, resulted in improved organizational outcomes. Furthermore, Marginson (2002) suggested that beliefs system had a positive effect on manager's values and lead to increasing strategic focus, while Merchant (1982) reported that implementation of good control systems led to good performance. In addition, Gould and Quinn (1993), using case-based research found that organization with strategic control systems have benefited from a number of advantages: greater clarity and realism in planning. The importance of belief systems is also underscored by Masuku & Kirsten (2003), who in a study of

124 smallholder cane growers in Swaziland reported that lack of trust between the sugar firms and the sugar cane farmers, an element of effective belief control systems and boundary control systems, led to average performance results. These findings are similar to results of Milford (2002) who studied the state of the value chain in the Australian Sugar Industry. In sum, empirical evidence supports that increased use of belief control systems will lead to improved organizational performance.

This finding further implies the presence of effective mission statements, vision statements, credos and statements of purpose that are used to by top management to enhance unanimity of purpose and effective utilization of resources.

### **Significance and Implication of the Study**

The first theoretical contribution of this study is the wide ranging review of extant studies. This has enabled the screening and structuring of the different studies so that the both perspectives of strategic control systems in a facilitation role and as an enabler of business strategy are clearly delineated. This exercise has allowed the study to clearly point out the gaps in literature and offer avenues for future research. Given the hitherto fragmented reviews, this study makes a significant contribution in synthesis of strategic control frameworks.

This study provides an advancement of strategic control theory and strategic orientation theory. With regard to strategic control theory, these study findings suggest a departure from Simons (1995) postulate that the four levers are to be used in a balanced manner (Simons, 1995, p.153). Belief control systems and interactive control systems are depicted as higher order controls that are not affected by the moderating role of strategic orientation. Further, the prevalence of reactor strategy is a surprise finding, and a contradiction of Miles and Snow (1978), in this study and suggests that the predisposition to ignore reactor orientation is a significant omission on the part of strategic management researchers. This could well constitute a major factor in the lamented theory impoverishment in strategic control theory.

The implication of the findings to managers is that it pays to have employees buy-in to company core values. The rapid change in the operating environment of sugar firms in Kenya includes privatization of previously state- controlled companies. To cope in the competitive environment, newly privatized firms are expected to upgrade their core values and mission

statements promptly for greater goal orientation. Management should, therefore, enhance participative decision making.

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**Table 1: Measures of belief control system**

|  | Response scale |       |       |       |      | Min  | Max  | Mean | Std Dev | N  |
|--|----------------|-------|-------|-------|------|------|------|------|---------|----|
|  | 1              | 2     | 3     | 4     | 5    |      |      |      |         |    |
| Mission and vision statements clearly communicate the firm's core values | 6.7%           | 24.4% | 44.4% | 17.8% | 6.7% | 1    | 5    | 2.93 | 0.99    | 45 |
| Top managers are involved in the communication of core values            | 2.2%           | 24.4% | 57.8% | 15.6% | 0%   | 1    | 4    | 2.87 | 0.69    | 45 |
| Workforce is aware of core values  | 0%             | 31.1% | 51.1% | 11.1% | 6.7% | 2    | 5    | 2.93 | 0.84    | 45 |
| Mission and vision statements inspire                                    | 2.2%           | 24.4% | 48.9% | 22.3% | 2.2% | 1.0  | 5.0  | 3.0  | 0.81    | 45 |
| Top management and operating managers debate core values                 | 2.2%           | 20.0% | 46.7% | 26.7% | 4.4% | 1.0  | 5.0  | 3.1  | 0.86    | 45 |
| Overall Mean   |                |       |       |       |      | 1.60 | 4.60 | 2.96 | 0.65    | 45 |

Scale: 1-Not at all, 2- To a little extent, 3- To a moderate extent, 4- To a great extent, 5- To a very great extent

Source: Analysis of survey data



**Table 2: The Effect of Belief Control System on Organizational Performance (Standardized Regression Coefficients)**

| Variables                | Model 1  |                       |                     | Model 2  |                       |                    |
|--------------------------|----------|-----------------------|---------------------|----------|-----------------------|--------------------|
|                          | <i>B</i> | <i>SE<sub>b</sub></i> | $\beta$             | <i>B</i> | <i>SE<sub>b</sub></i> | $\beta$            |
| Constant                 | -0.575   | 0.953                 | -                   | -0.656   | 0.924                 | -                  |
| Step 1                   |          |                       |                     |          |                       |                    |
| Firm size                | 0.615    | 0.164                 | 0.497 <sup>d</sup>  | 0.445    | 0.181                 | 0.359 <sup>b</sup> |
| Step 2                   |          |                       |                     |          |                       |                    |
| Main Effect              |          |                       |                     |          |                       |                    |
| Belief control system    | -        | -                     | -                   | 0.361    | 0.183                 | 0.288 <sup>b</sup> |
| R <sup>2</sup>           |          |                       | 0.247 <sup>d</sup>  |          |                       | 0.311 <sup>b</sup> |
| Adjusted R <sup>2</sup>  |          |                       | 0.230 <sup>d</sup>  |          |                       | 0.278 <sup>b</sup> |
| Change in R <sup>2</sup> |          |                       | 0.247 <sup>d</sup>  |          |                       | 0.064 <sup>b</sup> |
| F change (ANOVA)         |          |                       | 14.133 <sup>d</sup> |          |                       | 9.487 <sup>d</sup> |
| Df (ANOVA)               |          |                       | (1,43)              |          |                       | (2,42)             |
| F value for model        |          |                       | 14.133 <sup>d</sup> |          |                       | 3.892 <sup>b</sup> |
| Df (Model summary)       |          |                       | (1,43)              |          |                       | (1,42)             |
| Durbin-Watson            |          |                       | 1.520               |          |                       | 1.542              |

The significance levels shown are one-tailed for hypothesis testing and two tailed for control variable testing: <sup>a</sup>p< 0.1; <sup>b</sup>p<0.05; <sup>c</sup>p< 0.01; <sup>d</sup>p< 0.001

Source: Analysis of survey data