

THE INTERNATIONAL JOURNAL OF BUSINESS & MANAGEMENT

Influence of Process Adaptation on Sustainable Competitiveness of Tea Firms in Kenya

Henry Kiplangat Cheruiyot

Ph.D. Student, School of Business and Economics, Moi University, Kenya

Abstract:

There is concern to produce and process tea in an environmentally friendly manner through collaboration with the stakeholders, in a way that guarantees sustainable competitiveness. Tea is one of the leading foreign exchange earners for the Kenyan economy; however, the process adaptation and sustainable competitiveness in tea firms is inadequate. The objective of the study was to evaluate the effect of process adaptation and sustainable competitiveness in tea firms. This research utilized the resource based view theory. The study targeted 878 respondents from 107 registered tea firms in Kenya and multistage sampling method was used to get sample size of 484. Primary data was collected using questionnaires. Data was analyzed using descriptive and inferential statistics. The process adaptation ($r=0.739$) influence sustainable competitiveness in tea firms. The process corporate environmental practices positively influence the sustainable competitiveness in tea firms in Kenya. The findings indicated that policy makers of tea firms should pay close attention to the process strategies of product adaptation which enhance sustainable competitiveness and their moderating roles as they were negative and significant in this study.

Keywords: process, adaptation, sustainable, competitiveness, firms

1. Introduction

Sustainable competitiveness is important for a firm because it increases benefits. Competitiveness is picked up when associations perform superior to their rivals in a similar industry. With the goal for associations to outsmart rivalry and prevail in the market, they should have some sort of points of interest contrasted with their opponents. Willems (2012) points out that a firm attains a higher level of competitiveness when it acquires or develops a resource or a combination of resources that allows it to outclass its competitors. Barney (2001) indicates that sustainable competitiveness is procured through assets and abilities a firm controls, that are important, uncommon, defectively imitable, and not substitutable. These assets and capacities can be seen as groups of unmistakable and elusive resources, including a company's administration abilities, its authoritative procedures and schedules, and the data and information it controls. Also, sustainable competitiveness is what lay not on static effectiveness nor on advancing inside settled requirements yet on limit change that moves the imperatives' through joint effort with the partners. Likewise, Fougher (2006) indicates that competitiveness gets to be distinctly significant just in connection to performers working inside the setting of some rendition of a market economy. Any firm should be competitive to survive and should have the capacity to meet focused gauges of profitability, that is, the effectiveness with which it changes over assets into better value.

Smith *et al.* (2008) point out that worries about sustainability concentrate on the need to embrace advancements and practices that don't significantly affect the environment, are effortlessly open to and successful for farmers, can prompt to enhancements in sustenance efficiency and have positive reactions on ecological products and enterprises. In any case, corporate ecological mishaps can make public relations problems, crush markets and professions, and thump billions off the value of an organization. To this end, Esty and Winston (2006) asserts that organizations that don't add ecological speculation to their practices, risk missing upside openings in business sectors that are progressively molded by environmental factors.

The consequences of corporate environmental exercises have stretched out to end up determinants of the long term performance. To be fruitful in the long term, organizations need to set up activities that have a quantifiable positive and durable effect on the environment (Ringbeck and Gross, 2008). Similarly, Epstein (2008) sketched out the significance of creating ecological methodologies, which would minimize environmental effects through reusing, life-cycle evaluations and waste reduction systems. Furthermore, for partnerships with contamination counteractive action situated corporate ecological techniques, the relationship amongst environmental and corporate performance was more positive (Wagner, 2005). Research has demonstrated that through corporate environmental practice systems, firms can accomplish positive financial execution results (Aragon-Correa and Sharma, 2003; Dowell, et al., 2000; Sharma, 2000) and gain an upper hand over their opponents. Ambec and Lanoie (2008) point out that all the more particularly, acting in an ecologically sustainable manner gives a chance to firms to make an incentive by upgrading incomes or potentially diminish costs. Through focused environmental activities and initiatives, firms can make interest for new, environmentally friendly products, which can open up new markets prompting to improved incomes. Furthermore, Dowell *et al.*

(2000) note that firms can likewise accomplish significant reputational profits by ecological activity which thus can prompt to expanded deals and in this way improve incomes.

On the cost side of the condition, environmental activities can help firms to decrease costs through decreasing waste and contamination, enhanced energy proficiency, and enhanced business processes all through their operations and supply chains (Christmann, 2000; Rao and Holt, 2005; Rothenberg, Pil, and Maxwell, 2001; Sroufe, 2003). In addition, from a long term point of view, such activities can stay away from potential future costs identified with consistence, ecological emergency, and liabilities (Reinhardt, 1999; Karpoff, Lott, and Wehrly, 2005). Ansanelli (2011) notes that interests in clean innovations mirror a responsive stance to ecological issues, whereby restricted assets are focused on tackling environmental issues: item and production process enhancements are made to adjust to legitimate prerequisites. Source decrease means that organizations constantly adjust their products and production processes with a specific end goal to diminish contamination levels based on legitimate necessities. Kristel and Verbeke (2003) point out that to the degree that counteractive action at the source permits firms to accomplish administrative consistence at a lower cost and to diminish liabilities, this ecological technique might be seen as a cost authority approach.

The concentration of environmental administration management and eco-control on creation forms has a custom. Jasch (2009) and Schaltegger *et al.* (2008) noted that in the forefront are money related markers underway and additionally the relationship between non-financial pointers underway and financial outcomes. A procedure oriented sustainability administration control however goes past a fixation on natural issues with (specialized) production processes. Alongside production procedures different business procedures, for example, innovation, and administration, coordination or client service are a part of the procedure point of view of the SBSC.

Numerous "administration prevailing fashions", for example, lean administration, frameworks re-engineering or add up to quality administration basically include a procedure orientation. Some of these methodologies can at any rate to a degree be found in environmental and quality administration (e.g. add up to quality environmental administration). The most essential strides of process-arranged sustainability administration control incorporate the investigation and enhancement of procedures. Distinctions can be made here between core procedures and process chains, the meaning of client, social and environmental necessities, the usage in causal connections and quantifiable pointers and additionally inner reporting. Schaltegger (2010) pointed out that process advancement requests propelled and able workers. Since powerful and proficient sustainability administration may require significant and non-stop change, sustainability administration control must consider environmental learning procedures and inspiration.

2. Literature

2.1. Influence of Process Adaptation and Sustainable Competitiveness

Melnik *et al.* (2003), Sroufe (2003) and Sroufe *et al.* (2000) describe process adaptation as the change of process proficiency with better-input use, cleaner prepare innovation, better housekeeping and upkeep systems, and streamlined operations. Klassen and Whybark (1999) contend that production operations, through product design and process innovations, have been perceived as the basic driver of ecological performance. They further; note that it is the set of all exercises that alter the current item's design to lessen any negative effect on the environment amid production, packaging, utilization, disposal and recycling. By basically changing to renewable assets in production and packaging, and changing product designs to encourage reconstructing, reusing and disposal, product adaptation processes intend to diminish both the utilization of assets inputs and the production of undesired products.

Within the previous decade, there has been huge pressure for firms to minimize or remove emissions completely, effluents, and waste from their operations. Caincross (1991) notes that contamination decrease can be accomplished through two essential means, first through control, that is, emissions and effluents are trapped, stored, treated, and discarded utilizing contamination control equipment and counteractive actions whereby, emissions and effluents are diminished, changed, or anticipated through better housekeeping, material substitution, re-using, or process advancement. The last approach lessens contamination amid the manufacturing procedure while delivering saleable products. The previous approach involves costly, ineffective contamination control equipment.

Process adaptation additionally incorporates end-of-pipe and process reusing exercises, more extensive counteractive action projects, for example, approach and methodology. Gonza' lez *et al.* (2008) point out that these components start from a more conventional ecological administration framework (EMS, for example, those connected with ISO 14000. In this case, an EMS may include formal frameworks and databases which incorporate strategies and procedures for the preparation on ecological practices of staff and the checking, condensing, and detailing of specific environmental performance data to inward and outer partners of the firm. Melnik *et al.* (2003) note that the documentation of this environmental data is principally inside centered around plan, contamination control and waste minimization, training on ecological processes, answering to top administration, and the setting of objectives.

There are conventional method for fighting contamination; through treatment of waste and polluting streams and rivers, treating water, air, noise and solid waste (Olajire, 2012). An entire scope of innovations are included from the large number of environmental and substance frameworks utilized for treating water, to filtration frameworks, violent winds and other obstruction frameworks utilized for air, acoustic enclosures in areas and buffers and different composting or disposal strategies. For any stream, there will presumably be a progression of similarly satisfactory treatment alternatives, with various quality, financial matters and environmental performance. On the off chance that focus is given to the conventional ways to deal with overseeing wastes, the development has been from, dumping and scattering, to controlling, on to reusing and administration and now it is focused on counteractive action at source, attempting to oversee and minimize utilization of assets.

Later on, a more accentuation on sparing assets and utilizing what rare sources of inputs available all the more sensibly are available, in this way the push will definitely slant towards an all the more upstream set of arrangements. Tea processing regularly produces a lot of waste water and now and again, solid waste that must be discarded or treated at all expensive and most secure route in order to meet

the strict discharge controls that are set by government substances to ensure life (both human and animal) and the environment (Simate, 2011). The acidity or alkalinity of waste water influences both waste water treatment and the environment. Low pH demonstrates expanding acidity while a high pH shows expanding alkalinity (a pH of 7 is normal). Olajire (2012) points out that the pH of waste water needs to stay in the vicinity of 6 and 9 to ensure living organisms are protected. Antacids and acids can change pH in this way inactivating waste water treatment forms.

Process and product adaptation require an alternate mentality and spotlights on new, imaginative practices that specialists and planners may not effortlessly get a grip because of a customary concentration on form, fit and financial outline. Johansson, (2002) notes that inspiration and competency have been observed to be perspectives which are basic to process and product adaptations achievement. Both these components are created through suitable training on environmental practices programs. In an expansive investigation of the usage of process and product adaptation practices in Europe, Tukker *et al.* (2001) notes that instruction was observed to be a basic prejudicial element for 'leader' organizations.

2.2. Theoretical Framework

According to Verbeke & Rugman (2002), the typical application of resource-based view of firm was sought to strategically manage companies. These resource-based view observes those capabilities and resources of the firm that will enable it to create a sustainable competitive advantage as well as above normal rates of returns. Resources can include capital, human, equipment, knowledge resources as well as information technology. The can be separated into intangible (intellectual and knowledge property) as well as tangible (assets and equipment) dimensions. In order to confer with the advantage, resource-based view must be rare, non-substitutable, valuable and inimitable. A study by Schroeder & Sohel (2003) and Ray *et al.* (2005) predicted that the success of programs and performance are affected by costly-to-imitate, valuable and rare resources.

These resource-based view has been perceived as core distinctive competencies by strategic management. According to Verbeke & Rugman (2003) on resource based theory of a firm states that if companies are offered support by organizational-level competencies, they can gain sustainable competitive advantage. Therefore unique combination of resources that are difficult to imitate, rare, non-substitutable, and are valuable to customers are reflected in these competencies. A wide variety of basic components may be built by these resource combination, including employee skills, organizational processes as well as physical assets (Delmas, 2001).

Employees' skills are normally established through training and education on environmental practices efforts although they may be purchased. Resource-based view has aided in specifying the nature of resources necessary to provide a bridge to investigate resources and to overcome the liability of foreignness that provide international diversification and the foundation for product (Peng, 2001). Further, resource based view literature has revealed that more flow of knowledge within multinational corporations are facilitated by capability building.

According to Doh & Hahn (2006), approaching a well-established resource-based view from a new methodological vantage could be reinvigorated and perhaps even be profitably re-examined. In terms of understanding management phenomena, implications of reputable strategy theories still contained several areas for further growth, therefore, new perceptions were possible in the existing resource based view context (Hansen *et al.*, 2004). A study by Narayanan (2001) stated that increased recognition of strategy and innovation culture to be closely aligned all through the innovation process is likely to improve manufacturing performance. Further addition from Jordi *et al* (2010) that; for efficient management of a firm's intangible resources, managers need to turn their particularly to its human capital, culture, innovation and reputation with resource-based view, which are almost impossible resources for competitors to match.

The possibility to leverage the firm's extra resources into new market segments, as stated by Bowen and Wiersema (2008), is the foundation and purpose for corporate tactical choice regarding growth via international or product modification; that industry globalization and foreign-based competition are statistically significant factors detailing the scope and degree of international variation. Corresponding to Peng (2001) there may be, however, a must ensure that subsidiary professionals are sufficiently incentivized to attempt potential development. Significant international experience by top professionals presents firm-specific tacit knowledge that is difficult to imitate. The resource-based view plays a part in foreign entry setting research by recommending that such strategies are drawn by the source features of businesses in another country as well to be forced by the firm-specific advantages possessed by the multinational organizations. Newer research from a source of information based view point of view casts uncertainty on the level theory of internationalization by recommending that new and small organizations may have source advantages that permit successful preceding internationalization.

Manufacturing performance is likely to improve as they increasingly recognize that innovation culture and strategy are closely aligned throughout the innovation process (Narayanan, 2001). (Jordi *et al*, 2010) add that; with the resource based view, managers need to turn their attention to the efficient management of a firm's intangible resources, particularly its innovation, human capital, reputation, and culture, which are difficult resources for competitors to match. Newbert (2008) concludes that value and rareness are related to competitive advantage, that competitive advantage is related to performance, and that competitive advantage mediates the rareness-performance relationship.

Manufacturing performance is likely to improve as they increasingly recognize that innovation culture and strategy are closely aligned throughout the innovation process (Narayanan, 2001). Jordiet al, 2010 add that; with the resource based view, managers need to turn their attention to the efficient management of a firm's intangible resources, particularly its innovation, human capital, reputation, and culture, which are difficult resources for competitors to match. Newbert (2008) concludes that value and rareness are related to competitive advantage, that competitive advantage is related to performance, and that competitive advantage mediates the rareness-performance relationship.

3. Research Methodology

The identification of the nature and extent of effect-and-cause relationships was through the explanatory research design. It assesses impacts of specific changes on existing norms, various processes. According to Creswell et al., (2007), the focus on a specific problem or an analysis of a situation by causal studies is to enlighten on the designs of relations between variables.

Several districts in Kenya mainly grow tea, for instance; Nandi, Kericho, Kiambu, Bomet, Thika, Sotik, Maragua, Kisii, Muranga, Nyamira, Kakamega, Nyambene, Nakuru, Meru, Trans-Nzoia, Nyeri, Embu and Kirinyaga. Eighty percent of favorable weather patterns are experienced in these areas. Small-scale growers and multinational companies share production as mentioned earlier and; several scientific advances in tea cultivation have come their way, currently small-scale sector average yields stands at 1800kg per hectare which is still below estates sector (Teas Research Foundation, 2002; Willson, 1999). Higher quality standards has been achieved in small-scale sector despite the disparities in yields leading to steadily higher selling prices. According to KTDA (2003), people earning their livelihood from the sector is approximately 3 million, with over 80,000 people employed in the estate, rendering it the largest employer in the private sector industry.

Despite its importance to developing countries, the tea sector is faced with a number of constraints. In a review of six major tea producing countries (India, Indonesia, Sri Lanka, Kenya, Vietnam and Malawi), Sanne van der Wal (2008) reported that tea production is hindered by rising production costs (labour, fuel and electricity), mismanagement, age of tea bushes, high overhead costs, bad agricultural practices, low labour productivity, climate change and dilapidated infrastructure. In addition, the sector's environmental footprint is considerable, with reduced biodiversity due to habitat conversion and high-energy consumption (mainly using logged timber) among other factors.

In addition, the environmental footprint of the sectors is considerable, with factors such as high-energy consumption (majorly use of logged timber), reduced biodiversity as a result of habitat conversion etc. Furthermore, poor extension services, low farm gate prices, poor access to credit, limited market as well as low level of farmer organization are among the smallholder problematic issues. When making improvements in the current farming systems, adoption of alternative philosophy and agricultural practices that takes into accounts social, economic and environmental impacts of agricultural activities are required to address the emerging issues. The contribution of sustainable agriculture aids in addressing this challenge. Tea firms registered under Tea Board of Kenya took part in this research.

The target population was 878 managers responsible for production, finance and human resource in tea firms because they understood the various environmental practices (Tea firms HR database, 2015) that are in place in their own firms and also have strong knowledge on how basic requirements in both local and international market for tea. Nassiuna (2006), argues that in most descriptive and experimental research, coefficient of variation of at most 20% is accepted and standard error of 0.02 can be used. Sample size for production managers in community owned tea firms is 134 and the rest of the managers as per the type of tea firms were calculated. Random sampling method was used so that the senior most managers in the three key departments was asked to fill the questionnaire at one in employee relations office and finance and two in production department. The exercise started on a Monday because most managers tend to report on duty on Monday before getting other office commitment outside the tea factories.

Multi stage sampling technique was used because according to Singh (2006); this type of sampling is more comprehensive and representative of the population. In this type of sampling primary sample units are inclusive groups and secondary units are sub-groups within these ultimate units to be selected which belong to one and only one group. Stages of a population were created, through stratification that is according to the nature of ownership of the tea firms that's; community owned and private owned tea firms. Then, the researchers used purposive sampling to administered questionnaire of managers responsible and have adequate knowledge of for the environmental practices being carried out by tea firms and random sampling to pick on the interviewee where there is more than the required number of managers.

This research collected qualitative data using self-administered questionnaires taken to tea firms then a follow-up visit after 7 to 10 days to increase of response rate. Four research assistants underwent two weeks training on environmental practices on data collection and thereafter, the researcher made formal request for approval for this research study from the Office of the President. Upon completion of the data collection, the data was checked, cleaned, coded and analyzed before making final report. This study used both primary data sources.

Primary data was collected using self-administered questionnaires to firm managers, employee relations managers and leaf based managers of the tea firms with telephone calls prior to delivery of the questionnaires to the contact persons and thereafter to made follow ups. Before this is done the interviewees were inducted through phone on areas where they did not understand. The same questionnaire was used by all the respondents to enhance consistency on the interpretation by all the respondents.

The study was concerned with various variables and with expressing and analyzing the variation that variables exhibit. Univariate analysis was carried out to know how data were distributed in relation to a single variable using frequency tables, histograms, and associated statistics. Having examined the distribution of values for particular variables through the use of frequency tables and associated statistics. The correlation analysis was used to give correlation coefficients between the four independent variables measured using seven-item likert scales. The correlation coefficients indicate the strength of the association between the variables. A coefficient was considered significant if the p-value was less than 0.05. There was significant correlation between all the independent variables and there are no high correlations of 0.90 or above. (Bryman and Cramer, 1997) in (Boonand Arumugam, 2006) suggest 0.80 instead of 0.90 as the threshold. The investigation of relationships was an important step in explanation and consequently contributes to the building of theories about the nature of the phenomena in which the researcher was interested.

4. Results

4.1. Descriptive Statistics

During the study respondents from the firms were asked to provide information regarding to their levels of agreement with the items concerning corporate environmental practice on sustainable competitiveness. Descriptive statistics were computed and the outcome was important for investigating whether or not the variables were normally distributed.

4.2. Descriptive Statistics of Process Adaptation

The process adaptation statements were computed to determine the mean score for each item as shown in table 1. All the statements used to explain the process adaptation had a mean score of above 5.9, indicating that the respondents rated highly the process adaptation to sustain the competitiveness of tea factories.

	Mean	Std. Deviation	Skewness	Kurtosis
Use of cleaner transportation methods	6.04	.557	-3.207	2.608
Reduction in raw material (i.e. the use of recycled material) for product manufacturing	6.02	.666	-1.907	1.898
Avoidance of materials that are considered harmful, but not illegal	5.93	.696	-1.567	2.050
We source most of our material from the community	5.91	.674	-1.710	2.104
Our suppliers of material are environmental friendly	5.96	.574	-3.033	2.172
Mean	5.9718	.45261	-6.139	2.972

Table 1: Descriptive Statistics on Process Adaptation

4.3. Descriptive Statistics for Sustainable Competitiveness

During the study the dependent variable was the sustainable competitiveness among the tea firms. The respondents were requested to establish the extent they agree or disagree with statements relating to the sustainable competitiveness in tea firms as summarized in Table 2. The findings showed that all the statements representing sustained competitiveness had a mean of above 5.8, indicating that the respondents highly rated the tea firm sustained competitiveness. The overall skewness was -5.61 and kurtosis was 59.96, indicating that the distribution of values deviates from the mean. From the 8 statements used to explain sustained competitiveness characteristics at tea firms had an overall mean score of 6.00 indicating that respondents agreed on its sustained competitiveness. This implies that the sustained competitiveness was highly rated among the respondents.

	Mean	Std. Deviation	Skewness	Kurtosis
Our market share grows faster than the market share of the rival tea firms	5.94	.799	-.046	1.332
Our profitability share grows faster than the profitability of the rival tea firms	6.07	.677	-.344	1.027
Our productivity grows faster than the productivity of the rival tea firms	5.99	.668	-.296	1.912
Our clients are more satisfied than the clients of the rival tea firms	5.98	.717	-.414	1.561
The skill of adjustment to the changeable needs of the markets in our tea firms is better than in the rival tea firms	5.99	.700	-.118	1.212
We have a better image than the rival tea firms	5.88	.738	-.784	1.131
The employees' motivation of our tea firms is higher than the employees' motivation of the rival tea firms	6.02	.745	-.982	1.594
We have less labour absenteeism than the rival tea firms	6.07	.690	-.287	1.328
Mean	6.0007	.41491	-.609	1.964

Table 2: Descriptive Statistics on Sustainable Competitiveness

4.4. Correlations Analysis

The description of the relationship between two variables was through the use of Pearson moment correlation which depended on the level of measurement. Table 3 shows the relationship between sustainable competitiveness (dependent variable) and the process (independent variable) using Pearson product-moment coefficient correlation investigation. There was a positive relationship between process adaptation and sustainable competitiveness. A positive relationship exist between process adaptation and sustained competitiveness [$r = .739$, $n = 433$, $p < .05$]. This indicated a positive correlation existed between the variables and the more the tea firms do process adaptation the higher the sustainable competitiveness.

		Zscore(SCO)	Zscore(PRA)
Zscore(SCO)	Pearson Correlation	1	
	Sig. (2-tailed)		
Zscore(PRA)	Pearson Correlation	.739**	1
	Sig. (2-tailed)	.000	

Table 3: Pearson Moment Correlation Results
 **. Correlation is significant at the 0.01 level (2-tailed).
 N=433

This indicated a positive correlation existed between the variable process adaptation and sustainable competitiveness. These results supports earlier studies by (Klassen and Whybark, 1999b) which established that process adaptation decrease several negative environmental effect during materials production, delivery and acquisition' advance process effectiveness with better cleaner process technology, maintenance procedures, better housekeeping as well as input utilization, and streamlined operations (Sroufe, 2003; Melnyk *et al.*, 2003; Sroufe *et al.*, 2000). According to Whybark & Klassen (1999), manufacturing operations have been recognized through process technologies & product (design) as a critical driver of environmental performance.

5. Conclusion

Process adaptation had positive significant effect on sustainable competitiveness. Process adaptation incorporates end-of-pipe and reusing exercises, more extensive counteractive action projects. Process involves sourcing of raw materials from community, reduction in raw material, renewable energy sources and energy saving new technology, environmental friendly suppliers of raw materials. This drove producer firm's objectives towards stakeholders' collaboration based on the understanding of best quality and cheap raw materials from the community, use of renewable energy like wood fuel that are environmentally friendly from the community and latest technology in the processing and manufacture of tea.

6. Recommendation

The county governments and national government should create conducive environment for tea firms to undertake CEP to win caring and ethical consumers. Managers are key on corporate environmental practices when it comes to making business decisions and should conceptualize resource dependency theory and to analyze differently the influence of process environmental practices on sustainable competitiveness.

7. References

- i. Ambec, S., Lanoie, P., 2008. "Does it pay to be green? a systematic overview". *Academy of Management Perspectives* 22 (4), 45e62.
- ii. Barney, J. B. (2001). Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. *Journal of Management*, 643-650.
- iii. Boon, O.K., and V. Arumugam. (2006). The Influence of Corporate Culture on Organizational Commitment: Case Study of Semiconductor Organization in Malaysia. *Sunway Academic Journal*.
- iv. Bryman, A. and Cramer, D. (1997). *Quantitative Data Analysis with SPSS for Window*. London: Routledge.
- v. Caincross, F. (1991). *Costing the earth*. Harvard Business School Press.
- vi. Castanias, R., & Helfat, C. (2001). The managerial rents model: Theory and empirical analysis. *Journal of Management*, 661-678.
- vii. Creswell, J. W., Tashakkori, A., Jensen, K. D., & Shapley, K. L. (2007). Teaching mixed methods research: Practices, dilemmas, and challenges. *Handbook of mixed methods in social & behavioral research*, 691-637.
- viii. Delmas, M. (2001). 'Stakeholders and competitive advantage: the case of ISO 14001'. *Productions and Operations Management*, 343-358.
- ix. Epstein, M. J., & Roy, M. J. (2001). Sustainability in action: Identifying and measuring key performance drivers. *Long Range Planning*, 34, 585-604.
- x. Esty, D. C. and Winston, A. S. (2006). *Green to Gold: How Smart Companies Use Environmental Strategy to Innovate, Create Value, and Build Competitive Advantage*. New Haven, CT: Yale University Press.
- xi. Fougher T. (2006). The state, international competitiveness and neoliberal globalisation: is there a future beyond 'the competition state'? *Review of International Studies*, 165-185.
- xii. Gonza'lez, P., Sarkis, J., Adenso-Diaz, B., (2008). Environmental management system certification and its influence on corporate practices: evidence from the automotive industry. (n.d.). *International Journal of Operations and Production Management*, 28 (11), 102.
- xiii. Hansen M. H, Perry L.T, Reese C.S. (2004). A Bayesian Operationalization of The Resource-Based View. *Strategic Management Journal*, 1279-1295.
- xiv. Jasch, C. (2009): *Environmental and Material Flow Cost Accounting*, Dordrecht: Springer.
- xv. Johansson, G. (2002). Success factors for integration of process adaptation in product development: a review of state of the art. *Environmental Management and Health*, 13 (1), 98-107.

- xvi. Jordi Surroca, Josep A. Tribo´, and Sandra Waddock. (2010). Corporate Responsibility and Financial Performance: The Role of Intangible Resources. *Strategic Management Journal*, 463-490.
- xvii. Klassen RD, Whybark DC. 1999. The impact of environmental technologies on manufacturing performance. *Academy of Management Journal* 42(6): 599–615. DOI: 10.2307/256982
- xviii. Kristel Buysse and Alain Verbeke. (2003). Proactive Environmental Strategies: A Stakeholder Management Perspective. *Strategic Management Journal Strat.*
- xix. Melnyk, S.A., Sroufe, R.P., Calantone, R.L., (2003). Assessing the Impact of Environmental Management Systems on Corporate and Environmental Performance. *Journal of Operations Management*, 21, 329–351.
- xx. Newbert Scott L. (2008). Value, Rareness, Competitive Advantage, and Performance: A Conceptual-Level Empirical Investigation of the Resource-Based View of the Firm. *Strategic Management Journal*, 745-768.
- xxi. Olajire, A. A. (2012). The Brewing Industry and Environmental Challenges. *Journal of Cleaner Production* xxx, 1-21.
- xxii. Peng M. (2001). The resource-based view and international business. *Journal of Management*, 803-829.
- xxiii. Rao and Holt, 2005;
- xxiv. Ray, G., Muhanna, W.A., Barney, J.B. (2005). Information technology and the performance of the customer service process: a resources-based analysis. . *MIS Quarterly*, 29 (4), 625–652.
- xxv. Sanne van der Wal. (2008). Sustainability Issues in the tea sector: A comparative analysis of six leading producing countries. . Amsterdam, The Netherlands: SOMO- Centre for Research on Multinational Corporations.
- xxvi. Schaltegger S. (2010). Sustainability as a driver for Corporate Economic Success Consequences for the Development of Sustainability Management Control
- xxvii. Schaltegger, S.; Bennett, M.; Burritt, R. & Jasch, C. (Eds.) (2008): *Environmental Accounting for Cleaner Production*, Dordrecht: Springer.
- xxviii. Sharma, S. a. (2005). Stakeholder influences on sustainability practices in the Canadian forest products industry. *Strategic Management Journal*, 159-180.
- xxix. Simate G. C. (2011). The treatment of brewery wastewater for reuse: state of the art. *Desalination*, 273, 235-247.
- xxx. Singh Y. K. (2006). *Fundamental of Research Methodology and Statistics*. Ansari Road, Daryaganj, New Delhi: New Age International (P) Limited.
- xxxi. Tea Board of Kenya. (2008). *Kenya Tea*. Nairobi.:
- xxxii. Tea Research Foundation. (2002). *The Tea Growers Hand Book*. 5th Edn. Tea Research Foundation of Kenya Printing Services.
- xxxiii. Tukker, A., Eder, P., Charter, M., Haag, E., Vercalsteren, A., Wiedmann, T. (2001). Process adaptation: the state of implementation in Europe—conclusions of a state of the art study for IPTS. *The Journal of Sustainable Product Design*, 1 (3), 147– 161.
- xxxiv. Willson, K.C. (1999). *Coffee, Cocoa and Tea*. CAB International, Wallingford, UK.