TRANSFORMATIONAL SUPPLY CHAIN GOVERNANCE AND PERFORMANCE OF AGRO PROCESSING FIRMS IN KENYA

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ABSTRACT

Purpose of the study: The study aimed at determining the effect of transformational supply chain governance on performance of agro processing firms in Kenya.

Research methodology: The study adopted a survey research design. The targeted population was 344 agro-processing firms in Kenya registered with the Kenya Association of Manufacturers. This study used a census survey and questionnaires were used to collect primary data. Data analysis was conducted using descriptive statistics and inferential statistics.

Findings: The study revealed that transformational supply chain governance had a significant influence on performance of agro processing firms in Kenya.

Conclusion: The study concluded that transformational supply chain governance effected the performance of agro processing firms in Kenya.

Recommendations: The study recommends that agro processing firms should implement the transformational supply chain governance to enhance their productivity and profitability. The

study findings are important to regulators to enhance the level of implementation of transformational supply chain governance in agro processing firms. The study also recommends that it is necessary for future researchers to undertake similar or replicate empirical studies in agro processing firms that are not members of Kenya Association of Manufacturers to validate the findings and conclusions of this study.

Keywords: *Transformational Supply Chain Governance, Business Culture Change, Innovations, Employee Outcomes, Performance, Agro Processing Firms, Kenya*

INTRODUCTION

The performance of a firm is a multi-dimensional construct divided into financial and non-financial models (Selvam, *et al.,* (2016). The financial models are productivity, return on assets, profitability, sales growth, cash flow and other financial performance measures. The non-financial models are market shares, market position, product quality and customer satisfaction. Thus, there is no universal unit of analysis for describing or measuring performance, competitiveness and success in firms (Berginc, 2014). Productivity is a crucial factor in production performance of firms and its growth can help businesses to be profitable (Sickles & Zelenyuk, 2019). Profitability, efficiency, solvency and market prospects building blocks for analyzing financial statements and company performance as a whole (Zelenyuk, 2018). Customer satisfaction is a measure of how products and services supplied by a company meet or surpass customer expectation (Pokryshevskaya & Antipov, 2017). According to Dekker, *et al.,* (2018), performance indicators in agro-food supply chains are efficiency, flexibility, responsiveness and food quality. The performance of Agro Processing Firms in Kenya can be enhanced by embracing the concept of transformational supply chain governance.

The developing countries within the region of Africa are increasingly implementing and adopting the concept of transformational SCG to have sustainable market competition and economic growth in the agro processing industry. Agro processing is a widely diverse subsector and is vital to the production of food, beverages and non-food products like tobacco, sisal as well as the treatment of wood for furniture and paper products (Ncube, *et al.,* 2017). Agro processing is the process of converting primary or raw agricultural materials or products into consumable commodities suitable for consumption (Gichuru, Iravo & Arani, 2015). According to Gyau and Spiller (2012), both

exporters and importers in Ghana can improve their economic performance and enhance efficiency in the supply chain if they adopt a more coordinated structure of SCG with appropriate mechanisms for equitable distribution of benefits. According to Aziz and Azim el Hammady (2015), agro processing enterprise development in Egypt has the potential to provide employment for the rural poor in off-farm activities such as handling, packaging, processing, transporting, and marketing of food and agricultural produce. According to Mhazo, *et al.* (2013), agro processing industry in Zimbabwe plays a vital role in the national economic development and has potential to meet the local needs and export requirements. According to Kingoo and Chirchir (2013), implementation of supply chain governance is very limited in Kenyan parastatals but has a good impact on the organizational performance. Ponte and Sturgeon, (2014) explained the importance of transformational SCG in global value chains with a modular theory-building effort for the Southern African poultry value chain.

The transformational SCG is one of the conceptions or concepts or ideas of the supply chain governance (SCG). The SCG is a governing system of rules, structures and institutions that guide, control, and lead supply chains, through policies and regulations, with the goal of creating greater efficiency (Wible, Mervis & Wigginton, 2014). Therefore, transformational SCG can assist firms economic and business sustainability in disruptive times since it is a system that be used online to propel business. Different actors, such as international organizations and individual firms, within the global supply chain, put the governing systems into place. The global supply chain is the process of transforming raw materials into a product, which often occurs in several different countries, moving products and services from producers to consumers (Hugos, 2018).

The agro-processing sector in Kenya is having three subsectors of nourishment, refreshments and non-sustenance (Kenya Association of Manufacturers (KAM), 2019). The choice of the industry for this study depended on its importance of adding value to the agricultural products before exportation or consumption, provision of employment and contribution to gross domestic product. In 2015, agriculture was the leading sector of the economy, accounting for 23% of wage employment and providing livelihood for almost 70% of Kenyans (Mitullah, Kamau & Kivuva, 2017). In 2016, agriculture contributed 33% to Kenya's gross domestic product, 60% of exports and 7% of imports (Kenya National Bureau of Statistics (KNBS), 2018). The agro processing firms have been inefficient in terms of value addition to the agricultural produce and Kenya is a net

exporter of raw agricultural produce instead of high-quality value-added products (Ndicu, *et al.,* 2015; Maina, Gichira, & Wanjau, 2017). According Vernon (2017), performance of the manufacturing sector in Kenya is affected by the use of obsolete SCM practices. This calls for adoption and implementation of modern governance systems like transformational SCG to improve performance and efficiency of the agro processing firms. Hence, based on this background, the study examined the effect of transformational supply chain governance on the performance of agro-processing firms in Kenya.

STATEMENT OF THE PROBLEM

The agro processing industry establishes the biggest bit of 38% of Kenya manufacturing sector (KAM, 2019). The manufacturing sector has high and yet untapped potential to contribute to employment and gross domestic product. The sector has experienced performance issues that include trade imbalances, drop in gross domestic product, unemployment, inflation and closure of international firms in Kenya (Magutu, Aduda & Nyaoga, 2015). The manufacturing sector is the largest among all the industrial production activities and accounts for 99 percent of all industrial activities in Kenya, but has been growing at a slower rate than the economy which expanded by 5.6% in 2015 (KNBS, 2016). The agriculture sector recorded mixed performance in 2017 that led to a decelerated growth of 1.6% compared to 5.1% growth in 2016 that also affected the agro processing industry (KNBS, 2018).

The gross domestic product from manufacturing dropped from Kshs. 118,134 million in the first quarter of 2016 to Kshs. 113,460 million in the second quarter of 2016 (Memia, *et al.,* 2018). The manufacturing of food products declined by 10.8% while the dairy sub-sector production volumes contracted by 12.1% in 2017. Sugar production declined significantly by 41.2% from 639.7 thousand tonnes in 2016 to 376.1 thousand tonnes in 2017. The Production of tea dropped by 7% from 473.0 thousand tonnes in 2016 to 439.8 thousand tonnes in 2017. Semi-processed coffee dropped by 15.1% to 33.7 thousand tonnes and production of beverages declined by 5.2% in 2017. The production of tobacco products dropped by 4.4 % because of 4.1% decline in production of cigarettes in 2017. Leather and related products recorded a decline of 12.0%; and the manufacture of wood and products of wood dropped by 13.2% in 2017 (KNBS, 2018).

The statistics clearly indicate that there was a performance gap of agro processing sector, which this study aimed to resolve. This implies that the share of manufacturing in GDP has been reducing over time (Were, 2016). The major problem of the sector in Kenya is inefficient value addition to agricultural produce (Ndicu, *et al.,* 2015; Maina, *et al.*, 2017). According to Gyau and Spiller (2012), the exporters and importers in agribusiness in Ghana can improve their economic performance and enhance efficiency in the supply chain if they adopt a more coordinated structure of supply chain governance. According to Kingoo and Chirchir (2013), supply chain governance has a lot of impact on organizational performance of Kenyan parastatals though implementation is limited. Zhang and Aramyan, (2014) found out that supply chain governance may improve performance in agri-food sector in the developing countries like China if implemented. According to Anupam and Fedorowicz (2015), trust, bargaining power and contract support the supply chain governance information sharing and material flow coordination in supply chains in Indian firms. In view of the forgoing, this study creates new knowledge to bridge the existing gap on influence of supply chain governance on performance of agro processing firms in Kenya.

RESEARCH OBJECTIVE

To establish the effect of transformational supply chain governance on performance of agro processing firms in Kenya.

RESEARCH HYPOTHESIS

H_0: Transformational supply chain governance does not significantly effect the performance of agro processing firms in Kenya.

LITERATURE REVIEW

THEORETICAL REVIEW

Agency Theory

Agency theory was relevant in understanding the effect of transformational supply chain governance on performance of agro processing firms in Kenya and hence provided the theoretical background for this study. The theory of agency was first proposed and created by two scholars, Ross and Mitnick in 1973 (Mitnick, 2006). The economic theory of agency was developed by Ross in 1973, while the institutional theory of agency was developed by Mitnick in 1973 though the

basic concepts underlying these two approaches are similar (Mitnick, 2013). The game theory deals with the incentives as well as the institutional structures and helps in selecting a compensation system that will produce behavior by the agent consistent with the principal's preferences (Ross, 1973; Mitnick, 1973; Ross, 1974; Mitnick, 1974; Mitnick, 1974). Thus, the focus is on the nature of the incentive system and the contracting system that guides the distribution of those incentives, the conditions of risk and information that lead to the choices of the actors. The agency theory is policing in the context of agency relations and managerial discretion with three stages of diversion of resources to policing; implementation of policing mechanism; and agent's reaction to policing (Jensen & Meckling, 1976; Mitnick, 2013).

The agency theory describes the relationship between two or more parties (principal and agent), in which one party, designated as the principal, engages another party, designated as the agent, to perform some task on behalf of the principal (Kivistö & Zalyevska, 2015). The theory assumes that once principals delegate authority to agents, they often have problems controlling them because agents' goals often differ from their own and agents often have better information about their capacity and activities as compared to the principals (Van Genugten & Van Thiel, 2019). Agency theory suggests that in imperfect labor and capital markets, managers will seek to maximize their own utility at the expense of corporate shareholders (Bicudo de Castro, 2017). Agents have the ability to operate in their own self-interest rather than in the best interests of the firm because of asymmetric information e.g., managers know well than shareholders whether they are capable of meeting the shareholders' objectives. Managers can be encouraged to act in the stockholders' best interests through incentives, constraints and punishments (Schmitz, 2013).

Agency theory suggests that the firm is a loosely defined contract between resource holders (Giinter & Spremann, 1987). The primary agency relationships in business are those between stockholders and managers and those between debtors and stockholders. These relationships are not necessarily harmonious indeed; agency theory is concerned with so-called agency conflicts, or conflicts of interest between agents and principals (Kivistö & Zalyevska, 2015). When agency occur it also tends to give rise to agency costs, which are expenses incurred in order to sustain an effective agency relationship such as offering management performance bonuses to encourage managers to act in the shareholders' interests (Giinter & Spremann, 1987). Agency costs are those

costs borne by shareholders to encourage managers to maximize shareholder wealth rather than behave in their own self-interests (Hayne, 1998).

Theory of Performance

Theory of Performance (ToP) was relevant in understanding the effect of transactional supply chain governance on performance of agro processing firms in Kenya and provided the theoretical background for this study. Performance theory originated from a variety of fields, but it is mostly associated with the work of Schechner (1985) and Turner (1988) who examined and highlighted how performances are central to human behavior and understanding. Performance theory suggests that every firm puts on a performance in business to be competitive in the global market. Performance can entail observance to a rigid structure of operating but it can also be a means of achieving set goals by the firms. The concept of performance enables an assessment of the ways in which individual firms operate and compete in the world market. It is a means of understanding how firms situate themselves at the national, regional and global levels for themselves and for others. Performance offers modern perspectives in multiple environments (Shepherd 2016).

According to Agami, Saleh and Rasmy (2012), ToP develops and relates six foundational concepts of perform, performer, level of performance, performer's mindset, immersion and reflective practice. These concepts form a framework that can be used to explain performance as well as performance improvements of companies. To perform is to produce valued results as per the set goals. A performer can be a firm or a group of firms engaging in a collaborative effort. Developing performance is a journey and level of performance describes location in the journey to achieve the set objectives. The current level of performance depends holistically on six components of context, level of knowledge, levels of skills, level of identity, personal factors and fixed factors of the companies (Nielsen, 2013). According to Schrettle, *et al.,* (2013), the performance theory calls for greater awareness of attention to formal elements of textual representation (structural concerns) and greater focus on context. Performance at each processing level is key to the company and relies on worker's assumption of responsibility for the emergent event (Osoro, Muturi & Ngugi, 2015). There is need to establish how ToP can help in discussing, appreciating and understanding the role played by agro processing sector in the economy. The ToP links well with the performance of agro processing firms in Kenya and it will guide this study to the right direction.

CONCEPTUAL FRAMEWORK

The conceptual framework refers to the conceptualization of the relationship between variables in the research study (Heale & Twycross, 2015). It is a diagrammatic presentation of the relationship between independent and dependent variables of the study. Robson & McCartan (2016) defined a conceptual framework as a system of concepts, assumptions, expectations that supports and directs research. Conceptual framework helps the researcher to understand the proposed relationship between variables; to establish the significance of the proposed relationship; and to test the conceptual model (Kothari & Garg, 2014).
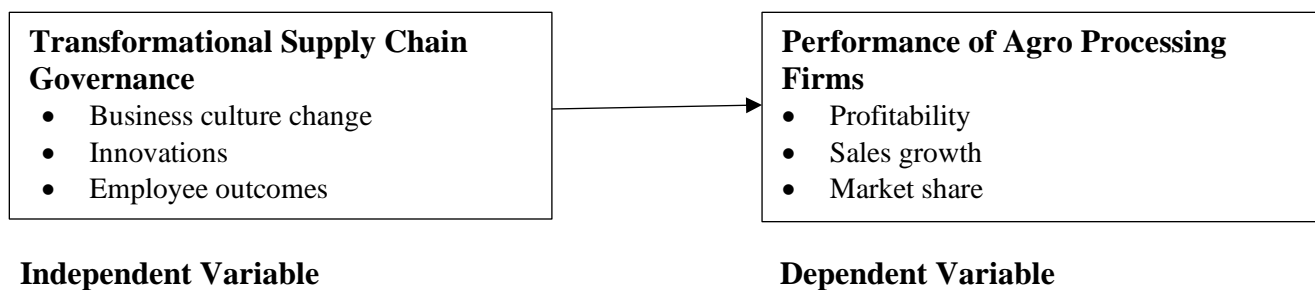
Transformational Supply Chain Governance	Performance of Agro Processing Firms
• Business culture change • Innovations • Employee outcomes	• Profitability • Sales growth • Market share

Independent Variable   **Dependent Variable**

Figure 1: Conceptual Framework

RESEARCH METHODOLOGY

The study used a survey research design, which is appropriate where large population geographically spread is involved which was the case in this study. The design enabled the study to apply both qualitative and quantitative research approaches as observed by Leavy (2017) that the two approaches reinforces each other. This study was anchored on positivism research philosophy for it accommodates both old and new knowledge. Halfpenny (2015) and (Matta, 2015) assert that positivism research philosophy can be used to investigate what truly happens in organizations through scientific measurement of people and system behaviors. The target population was 344 agro processing firms in Kenya that were members of Kenya Association of Manufacturers as derived from the Kenya Manufacturers and Exporters Directory (KAM, 2019). The study adopted census survey. The structured and semi-structured questionnaires were used to obtain primary data for the study. The study used both descriptive statistics and inferential statistics to analyze the data.

RESEARCH FINDINGS AND DISCUSSIONS

Response Rate

The researcher distributed 344 questionnaires from which 300 were filled and returned, an 87.21% response rate as indicated on table 1. This response rate conforms to Halfpenny (2015) affirmation that a 50% response rate is sufficient for analysis; a rate of 60% is good and that of above 70% is exceptional.

Table 1: Response Rate

Rate of Response	Respondents	Percentage
Returned	300	87.21
Not Returned	44	12.79
Total Distributed	**344**	**100**

Reliability Analysis

Reliability is the degree to which an assessment tool produces consistent results (Creswell & Creswell, 2017). Cronbach's Alpha (α) was used to test reliability of the proposed constructs. The Cronbach's alpha coefficient should range between 0 and 1. Coefficient of 0.6 - 0.7 is commonly acceptable rule of thumb that indicates acceptable reliability and gives unbiased estimate of data generalizability (Cronbach, 1951; Heale & Twycross, 2015).

Table 2: Reliability Tests of the Factors

Factors/Variables	Cronbach's Alpha Value	Items	Comments
Transformational SCG	0.733	10	Accepted
Performance of agro processing firms	0.833	10	Accepted

The variables in table 2 above showed that the Cronbach's Alpha was above the required coefficient of 0.70 thus the results of the study are highly reliable. The higher alpha coefficient value means there is consistency among the items measuring the concept of interest (Taber, 2018). The factors showed that the Cronbach's Alpha were above the required coefficient of 0.70 thus the results of the study are highly reliable. This is in tandem with the findings of Park (2018), who

observed that reliability is the extent to which a measurement of an instrument or procedure yields the same results on repeated trials.

Descriptive Analysis for Transformational Supply Chain Governance

The respondents were requested to indicate their levels of agreement on specific statements regarding transformational supply chain governance based on a five-point Likert scale as shown in table 3 below.

Table 3: Descriptive Statistics for Transformational Supply Chain Governance

Statements	Strongly disagree	Disagree	Not sure	Agree	Strongly agree	mean	Std. Dev
	%	%	%	%	%		
Business culture change is important for the success of the firm	0	0	2.7	42.3	55	4.51	0.721
The firm promote innovations then guide, encourage, empower and facilitate employees	0	0	0	42	58	4.47	0.551
Employee outcomes depend on motivation of workers by setting more challenging expectations to achieve higher performance	0	0	2.7	22.3	75	4.49	0.601
The roles of principals and agents or the interaction situation in the firm is restructured	0	2.7	5.3	22.3	69.7	4.61	0.632
The firm rewards best performing employees	0	5.3	7.7	32.3	54.7	4.53	0.633
The firm considers views of their workers, customers and suppliers	0	0	10	23	67	4.41	0.847
The firm ensures that its workers have the right capacity	0	0	0	42	58	4.30	0.983
Transformation of a firm needs visionary and strategist managers	0	0	2.7	22.3	75	4.49	0.601
The firm must create an environment in which employees can accept and execute their responsibilities with confidence	0	2.7	5.3	22.3	69.7	4.61	0.632
Transformational SCG has helped in improving performance of the firm	0	0	0	42	58	4.30	0.983

The findings shown in table 3 above indicated that on the statement of "Business culture change is important for the success of the firm", the majority of the respondents, 165 (55%) gave strongly

agreed and 127 (42.3%) gave agreed to the statement, while a few of the respondents, 8 (2.7%) were not sure as supported by a mean of 4.51 and a standard deviation of 0.721. On the statement of "The firm promote innovations then guide, encourage, empower and facilitate employees", the majority of the respondents, 174 (58%) gave strongly agreed and 126 (42%) gave agreed to the statement evidenced by a mean of 4.47 and a standard deviation of 0.551. About the statement of "Employee outcomes depend on motivation of workers by setting more challenging expectations to achieve higher performance", the majority of the respondents, 225 (75%) gave strongly agreed and 67 (22.3%) agreed to the statement, while a few of the respondents, 8 (2.7%) were not sure as shown by a mean of 4.49 and a standard deviation of 0.601. Regarding the statement of "The roles of principals and agents or the interaction situation in the firm is restructured", the majority of the respondents, 209 (69.7%) gave strongly agreed and 67 (22.3%) agreed to the stamen, while a few of the respondents, 16 (5.3%) were not sure and 8 (2.7%) gave disagreed to the statement as supported by a mean of 4.61 and a standard deviation of 0.632. Concerning the statement of "The firm rewards best performing employees", the majority of the respondents, 164 (54.7%) gave strongly agreed and 97 (32.3%) gave agreed to the statement, while a few of the respondents, 23 (7.7%) were not sure and 16 (5.3%) disagreed to the statement as shown by a mean of 4.53 and a standard deviation of 0.633.

On the statement of "The firm considers views of their workers, customers and suppliers", the majority of the respondents, 201 (67%) gave strongly agreed and 69 (23%) gave agreed to the statement, while a few of the respondents, 30 (10%) were not sure as evidenced by a mean of 4.41 and a standard deviation of 0.847. Regarding the statement of "The firm ensures that its workers have the right capacity", the majority of the respondents, 174 (58%) gave strongly agreed and 126 (42%) gave agreed to the statement as supported by a mean of 4.30 and a standard deviation of 0.983. Concerning the statement of "Transformation of a firm needs visionary and strategist managers", the majority of the respondents, 225 (75%) gave strongly agreed and 67 (22.3%) gave agreed to the statement, while a few of the respondents, 8 (2.7%) were not sure as indicated by a mean of 4.49 and a standard deviation of 0.601. On the statement of "The firm must create an environment in which employees can accept and execute their responsibilities with confidence", the majority of the respondents, 209 (69.7%) gave strongly agreed and 67 (22.3%) agreed to the statement, while a few of the respondents, 16 (5.3%) were not sure and 8 (2.7%) disagreed to the

statement as as shown by a mean of 4.61 and a standard deviation of 0.632. Finally, on the statement of "Transformational supply chain governance has helped in improving performance of the firm", the majority of the respondents, 174 (58%) gave strongly agreed and 126 (42%) gave agreed to the statement as supported by a mean of 4.30 and a standard deviation of 0.983.

The results clearly indicated that transformational supply chain governance enhances the performance of agro processing firms in Kenya as summarized in table 3 above. The findings are in agreement with that of Hansen and Pihl-Thingvad (2019) who established that transformational governance is positively associated with innovative behavior and firm performance. Asfar *et al.,* (2017) stated that transformational supply chain governance is positively related to entrepreneurial behavior only when psychological empowerment is high then improve performance of organizations. Mkheimer, (2018) found that most organizations have same styles of transformational initiative that has positive effect on business achievement of small and medium enterprises in Malaysia. According to Berkovich and Eyal (2019), transformational supply chain governance leads to better moral reasoning and improves performance of firms. The findings are in tandem with Wilkesmann (2013), who concluded that transformational supply chain governance leads to effective scholastic educating and has sufficient impact in organizations. Nubuor, *et al.* (2013) observed that transformational initiative practices lead to admired impact, scholarly incitement and individual thought that leads to project success and performance of banking projects in Ghana. According to Frost, *et al.* (2010), transformational governance is the process of creating, sustaining and enhancing governance-follower and governance-governance partnerships in pursuit of a common vision in accordance with shared values and on behalf of the industry in which managers and general staff jointly serve.

Descriptive Statistics for Performance of Agro Processing Firms

The respondents gave their views on how they ranked the performance metrics in principle siting no definitive measurements like ratios or percentage points but based on their reviews of previous data present in their respective firms.

Table 4: Descriptive Statistics for Performance of Agro Processing Firms

Statements	Strongly disagree	Disagree	Not sure	Agree	Strongly agree	mean	Std. Dev
	%	%	%	%	%		
The profitability level in terms of revenue generation was favourable for the last five (5) years	0	0	0	39.7	60.3	4.37	0.646
The sales growth in terms of revenue increase continued for the last five (5) years	2.7	2.7	0	38	56.6	4.40	0.856
Growth of market share in terms of firm's sales was registered for the last five (5) years	0	0	2.3	36.3	61.4	4.51	0.590
Productivity level in terms of output or volume increased for the last five (5) years	0	0	0	42	58	4.47	0.551
The return of assets level in terms of profits improved for the last five (5) years	0	0	0	39.7	60.3	4.37	0.646
The processing or manufacturing costs reduced for last five (5) years	0	0	2.3	36.3	61..4	4.51	0.590
The cash flow level in terms of cash and cash-equivalents being transferred into and out of a business was adequate for last five (5) years	2.7	2.7	0	39.7	56.6	4.40	0.856
The customer satisfaction level in terms of meeting customer expectation and loyalty improved for last five (5) years	0	0	0	39.7	60.3	4.37	0.646
The market position level in terms of consumer's perception of firm's products was stable for last five (5) years	0	0	2.3	36.3	61.4	4.51	0.590
Product quality standards in terms of consumers' preference was maintained for last five (5) years	0	2.7	5.3	22.3	69.7	4.61	0.632

The findings based on these measures are presented on table 4 above. On the productivity and return of assets levels, the findings revealed that the respondents significantly ranked their firm performance as evidenced by mean of 4.47 and 4.37 respectively and standard deviation of 0.551 and 0.646 respectively. This is in tandem with the findings of Njuguna and Wanjohi (2021), who observed that performance of agro processing firms is measured using cost reduction, profitability

market shares and productivity. This in line with the results of Mwaura and Okeyo (2020), who concluded that return on assets, return on equity, market share, sales volume, customer satisfaction and employee satisfaction, measure the performance of large manufacturing in Kenya. This in agreement with Wamiori, Namusonge and Sakwa (2019), who observed that financial performance of manufacturing firms in Kenya, is measured through return on assets and profitability.

The findings are in tandem with Kiriinya, Ngugi and Mwangangi (2021), who observed that profitability, customer satisfaction and market share play a big role in measuring the performance of pharmaceutical firms in Kenya. The results are in agreement with that of Sickles and Zelenyuk (2019), who established that productivity describes various measures of the efficiency of production that is a crucial factor in production performance of firms and its growth can help businesses to be profitable. This is also in tandem with Shimenga and Miroga (2019) who observed that financial performance points out to the performance of manufacturing firms in Kenya. The return on assets measures how effectively a firm uses its assets to create profits and how much it generates by the firm from investing any amount in one individual employee.

The respondents were asked to rate performance of their respective firms based on growth of market share and sales growth levels. The findings revealed that the respondents agreed that their firms improved in market shares and sales growth because of adopting supply chain governance as shown by a mean of 4.51 and 4.40 respectively and standard deviation of 0.590 and 0.856 respectively. This is in line with the findings of Onyando and Naikuru (2021), who observed that profits and sales growth are used in measuring the performance of Kenya vehicle manufacturers limited. The market share is a key metric in understanding performance of a firm relative to the growth of the market as measurement of internal sales growth or decline. According to Sickles and Zelenyuk (2019), sales growth is a strategic indicator used in decision-making, and influences the formulation and execution of business strategy to improve firm's performance. Odalo, Njuguna & Achoki (2016) established that organizational performance is measured in terms of market share using sales per year, level of profitability and return on assets.

The findings revealed that the respondents were in agreement that transactional supply chain governance significantly increased profits and lowered processing costs of their firms as indicated by a mean of 4.37 and 4.51 respectively and standard deviation of 0.646 and 0.590 respectively.

This is tandem with the findings of Kyengo, Muathe & Kinyua (2019), who observed that profitability, market share and customer retention indicate performance of food processing firms in Kenya. The results compare with those by Zelenyuk (2018), who established that profitability is ability of a company to use its resources to generate revenues in excess of its expenses. The findings are in agreement with those of Memia, Ngugi & Odhiambo, (2018) who found that the financial metrics including profitability, return on assets and market share measure the performance of large manufacturing firms in Kenya.

The respondents indicated that the adoption of supply chain governance improved cash flow and led to improved customer satisfaction of their respective firms as shown by a mean of 4.40 and 4.37 respectively and a standard deviation of 0.856 and 0.646 respectively. The findings compare with those by Selvam, *et al.,* (2016), who found that the performance of a firm is a multi-dimensional construct that is measured with the cash flow, customer satisfaction and market position. According to Pokryshevskaya and Antipov (2017), customer satisfaction is a key performance indicator within business and is often part of a Balanced Scorecard, and provides a leading indicator of consumer purchase intentions and loyalty. The result was in tandem with Shimenga and Miroga (2019), who observed that financial leveraging positively influences financial performance of manufacturing firms in Kenya and manufacturing firms with effective financial leveraging mechanisms could realize an increase in their profitability.

The respondents were asked to rate performance of their respective firms based on market position and product quality levels. The findings revealed that the respondents agreed that their firms improved in the market position and product quality because of adopting supply chain governance as shown by a mean of 4.51 and 4.61 respectively and standard deviation of 0.590 and 0.632 respectively. This finding is in line with Bor, Ngugi & Odhiambo (2021), who observed that product quality and cost management, measures the performance of food and beverage processing sector in Kenya. This is in line with Nimpano, Shalle and Mulyungi (2021), who concluded that customer satisfaction and quality measure performance of agri-manufacturing firms in Rwanda. The financial and cost indicators should be complemented by non-financial measures related to market position, quality of products, delivery and flexibility and be integrated with management's strategic objectives.

Test of Hypothesis and Multiple Regression Analysis Results

The research used multiple regression analysis to establish the linear statistical relationship between transactional supply chain governance and performance of agro processing firms in Kenya. The hypothesis in this study was tested using regression models.

Regression Analysis of the Influence of Transformational SCG on Performance of Agro Processing Firms in Kenya

The objective of the study was designed to establish the effect of transactional supply chain governance on performance of agro processing firms in Kenya. Following the theoretical arguments, the following hypothesis was formulated and tested:

H_0: Transformational supply chain governance does not significantly effect the performance of agro processing firms in Kenya.

Table 5: Model Summary for Transformational SCG and Performance of Agro Processing Firms in Kenya

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.673[a]	0.452	0.451	0.22679

a. Predictor: (Constant), Transformational supply chain governance
b. Dependable Variable: Performance of agro processing firms

The hypothesis was tested by running an ordinary least square regression model. The model summary in table 5 above demonstrates that the coefficient of determination as indicated by Adjusted R square to be 0.451 implying that 45.1% of performance of agro processing firms in Kenya.is explained by transformational supply chain governance. Therefore, the researcher rejected the null hypothesis stating that transformational supply chain governance does not influence performance of agro processing firms in Kenya. Instead, the researcher considered the alternative hypothesis as transactional supply chain governance has significant effect on performance of agro processing firms in Kenya.

The finding is in agreement with that of Hansen and Pihl-Thingvad (2019) who established that transformational governance is positively associated with innovative behavior and firm

performance. This is in tandem with Asfar *et al.* (2017), who stated that transformational supply chain governance is positively related to entrepreneurial behavior only when psychological empowerment is high and improves performance of organizations. The findings are in tandem with Wilkesmann (2013), who concluded that transformational supply chain governance leads to effective scholastic educating and has sufficient impact in organizations. This finding is in line with Nubuor, *et al.* (2013), who observed that transformational initiative practices lead to admired impact, scholarly incitement and individual thought that leads to project success and performance of banking projects in Ghana.

ANOVA for Transformational SCG and Performance of Agro Processing Firms

In table 6 below, the ANOVA was used to show the overall model significance. The hypothesis was tested by running an ordinary least square regression model. The acceptance and rejection criteria was that, if the p-value is greater than 0.05, the H_0 is not rejected but if it is less than 0.05, the H_0 fails to be accepted. Since the p-value is less than 0.05, then transformational supply chain governance had a significant explanatory power on performance of agro processing firms (F=246.159 and p-value <0.05). The finding is also supported by the p-value of 0.000. Therefore, the researcher rejected the null hypothesis stating that transformational supply chain governance does not influence performance of agro processing firms in Kenya and considered the alternative hypothesis as transactional supply chain governance has significant influence on performance of agro processing firms.

Table 6: ANOVA Table for Transformational Supply Chain Governance and Performance of Agro Processing Firms in Kenya

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.661	1	12.661	246.159	.000[b]
	Residual	15.327	298	0.051		
	Total	27.988	299			

a. Dependent Variable: Performance of agro processing firms

b. Predictor: (Constant), Transformational supply chain governance

The findings in table 6 above is in agreement with that of Hansen and Pihl-Thingvad (2019) who established that transformational governance is positively associated with innovative behavior and firm performance. This is in tandem with Asfar *et al.* (2017), who stated that transformational supply chain governance is positively related to entrepreneurial behavior only when psychological empowerment is high and improves performance of organizations. The finding is in line with Mkheimer (2018), who found out that most organizations have same styles of transformational governance initiative that has positive effect on business achievement of small and medium enterprises in Malaysia. This finding is in line with Nubuor, *et al.* (2013), who observed that transformational initiative practices lead to admired impact, scholarly incitement and individual thought that leads to project success and performance of banking projects in Ghana.

Regression Coefficients for Transformational SCG and Performance of Agro processing Firms in Kenya.

From table 7 below, regression equation can be written as:

Y= 2.177+ 0.508X

Where: **X** is transformational supply chain governance; **Y** is performance of agro processing firms in Kenya.

Table 7: Regression Coefficients Table for Transformational Supply Chain Governance and Performance of Agro processing Firms in Kenya

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.177	0.146		14.870	0.000
	X_4	0.508	0.032	0.673	15.689	0.000

a. Dependent Variable: Performance of Agro Processing Firms

b. Predictor: Transformational supply chain governance

The regression equation above shows that when transformational supply chain governance is held constant at zero, performance of agro processing firms would be 2.177 units. There is an influence of transformational supply chain governance on performance of agro processing firms in Kenya.

A unit increase in transformational supply chain governance increases performance of agro processing firms by 0.508 Units. The hypothesis was tested by running an ordinary least square regression model. The acceptance and rejection criteria was that, if the p-value is greater than 0.05, the H_0 is not rejected but if it is less than 0.05, the H_0 fails to be accepted. Since the p-value is less than 0.05, we conclude that there is a significant effect of transformational supply chain governance on performance of agro processing firms in Kenya. The finding is also supported by the p-value of 0.005. The researcher rejected the null hypothesis stating that transformational supply chain governance does not influence performance of agro processing firms in Kenya and considered the alternative hypothesis since the transactional supply chain governance has positive significant effect on performance of agro processing firms in Kenya. The findings are in tandem with Wilkesmann (2013), who concluded that transformational supply chain governance leads to effective scholastic educating and has sufficient impact in organizations. This finding is in line with Nubuor, *et al.* (2013), who observed that transformational initiative practices lead to admired impact, scholarly incitement and individual thought that leads to project success and performance of banking projects in Ghana. According to Frost, *et al.* (2010), transformational governance is the process of creating, sustaining and enhancing governance-follower and governance-governance partnerships in pursuit of a common vision in accordance with shared values and on behalf of the industry in which managers and general staff jointly serve.

CONCLUSION

The study established that transformational supply chain governance had a significant influence on the performance of agro processing firms in Kenya. This study concluded that transformational supply chain governance improves the performance of agro processing firms. This study also concludes that transformational supply chain governance to be implemented in the firms with good structures and rules that guide a firm in enhancing competitive edge within the global supply chains. The results showed that transformational supply chain governance had influence on the performance of agro processing firms in Kenya. The influence was significant in the model. This study results showed a strong positive relationship between transformational supply chain governance and the performance of agro processing firms. This indicates that the proper implementation and adoption of transformational supply chain governance improves the performance of agro processing firms in Kenya. Being a concept of supply chain governance,

transformational SCG is a governing system of rules, structures and institutions that guide, control, and lead supply chains, through policies and regulations, with the goal of creating greater efficiency. The system is cable to assist firms in the economic and business sustainability during the disruptive times, since it embraces online systems of conducting business. This study concludes that the business culture change is important for the success of the firms and that the firms to reward best performing employees to improve performance.

RECOMMENDATIONS

The study recommends that the firms to adopt business culture change that is important for the success of their firms. The employees to be motivated through setting more challenging expectations to achieve higher performance and ensure that the workers have the right capacity. The firms need to engage the visionary and strategist managers to propel the implementation of transformational supply chain governance. The study outcome on 344 agro processing firms has revealed that further research should be carried out to determine the effect of transformational supply chain governance on performance of other agro processing firms. It is necessary for future researchers to undertake similar or replicate empirical studies in agro processing firms that are not members of Kenya Association of Manufacturers to validate the findings and conclusions of this study.

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