



## Environmentally Sustainable Supply Chain Practices, Organisation Culture on Firm Performance. A Mediation Approach

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### Abstract

*Sustainability is increasingly turning into a strategic business project that firms are recognizing that sustainable carry outs can be economical and ought to make fresh income streams as well as enhance client and worker gratification. Despite this, sustainability and performance of firms have received little research attention. Using Natural Resource-Based View and stakeholder theory, research main purpose was to determine the mediating effect of organization culture on the association amid environmentally sustainable supply chain practices and firm performance. This study used descriptive statistics, Pearson product-moment correlation, and Structural Equation Modeling (SEM) to test the hypothesis. Data collected from 281 Kenyan manufacturing firms were used to test study hypotheses. From bias-corrected bootstrapping Structural Equation Modeling, results showed that organization culture variable fully mediates the association amid environmentally maintainable supply chain methods on the performance of manufacturing firms. Thus, the study infers that a strong organizational culture in the organization leads to the enhanced implementation of environmentally sustainable supply chain practices in the organization which in turn increases the performance of manufacturing firms. Without organization culture, these practices may go unheeded and not contribute to improved performance of manufacturing firms in Kenya. Consequently, this study recommends that the managers of these firms should build an organizational culture with environmental concerns in all their processes. This study hence contributes to theory and practice by the inclusion of organizational culture and also extends natural resource-based view and stakeholder theories of a firm.*

#### Keywords:

*Environmentally  
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Firm performance.*

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## 1. Introduction

In today's internationally competitive surroundings, assessing performance is commonly considered to be an important component of effective preparation, control, and decision-making (Ahi & Searcy, 2015). Naslund and Williamson (2010) proposed that in the competitive worldwide surrounding, the performance of a firm can no lengthier only be established by the choices and activities that take place inside a company; rather it will rely on the implementation of choices and activities engaged in its whole supply chain. Pullman, Maloni, and

Carter (2009) posits that major businesses have selected to take part in the assured supply chain sustainability technique that aligns with their anticipated performance results. In spite of this arrangement, performance result on maintainable supply chain methods is still a puzzle. Additionally, assessing performance in sustainable supply chains remains in a comparatively early developing phase. Though numerous studies have been printed in this section, most of the work is theoretical in nature (Ashby, Leat, & Hudson-Smith, 2012). Sustainability is gradually becoming a tactical firm initiative as both big and minor firms are recognizing that maintainable methods can be economical and might generate fresh income channels as likewise rise client and worker fulfillment Mincer (2008). Regardless of this, sustainability performance in an organization has attracted small study attention. Furthermore, as proposed by Ortas, Moneva, and Álvarez (2014) performance collected works lacks worldwide researches that measure the probable association amid sustainable supply chain technique and firm performance. However, several scholars have advocated that future studies should consider sustainability practices and organizational performance, through sustainability-oriented organizational culture and quality management-oriented organizational culture and reinforced by (Dessein et al., 2015).

According to Kataria, Kreiner, Hollensbe, Sheep, and Smith (2015) culture is viewed as a very complex phenomenon (Dubkevics & Barbars, 2010) and it can take very broad, wide and multi-aspect dimensions. Organization culture can be viewed as a set of beliefs, values and shared assumptions in an organization. Hofstede (1998) states that culture should be posited in the minds of all members of an organization. Linnenluecke and Griffiths (2010) posit that numerous researchers propose that the pathway for the taking on of business sustainability values leads through the taking on of a sustainability-oriented organizational culture. Dessein et al. (2015) categorised culture and its association to sustainable development (SD) into three thematic clusters. (1) That culture has a helpful and self-promoting role. (2) Culture act as a frame, contextualize, mediate, and equilibrium the other 3 backbones of sustainability (i.e. 'culture for maintainable growth'), which provides culture as a more influential power that can function over itself. Culture is a go-between to link the numerous scopes of sustainability (Dessein et al., 2015) and (3) Incorporate, manage and direct all facets of maintainable action (i.e. 'culture as sustainable growth'), which perceives culture as the vital basis and component for attaining the sustainable growth objectives.

Thus, institutional culture can be a mediator or moderator. For mediation, Ogbonna and Harris (2000) argue that culture is a complete arbitrator (mediator) amid the leadership style and business performance. When considering the research by Harris and Ogbonna (2003) the institution culture might be a complete arbitrator also in the association amid the single/group leadership and consequences. In the meantime, culture is likewise an arbitrator amid the business plan and institution performance (Arogyaswamy & Byles, 1987). Furthermore, green institutional culture is an arbitrator amid sustainability strengths and green innovation Küçükoğlu and Pınar (2015) and likewise, institution culture is an arbitrator in the association amid e-commerce espousal and hotel performance (Sobihah & Lukman, 2015). Therefore, this study mediated organization culture on environmentally sustainable supply chain practices and performance of firms in Kenya.

### *1.1. Hypothesis Development*

According to Marshall, McCarthy, McGrath, and Claudy (2015) environmental supply chain methods concentrate on resource utilization and effects on the physical surroundings. Whereas Green Supply Chain Management (GSCM) is well-defined by Dheeraj and Vishal (1992) as the technique of observing and enhancing environmental performance in the supply chain by incorporating environmental thinking into a supply chain management all over a products life cycle. For this study, environmental supply chain methods and green supply chain methods are used interchangeably. In the period of the late 1980s and 1990s, the ideas of supply chain management and ecological as a strategic institutional practice to achieve competitive benefit has been getting amplified attention. Sarkis, Zhu, and Lai (2011) asserts that the importance of these strategic practices can be traced back to environmental management movement of the late 1960s. Since then there has been a geometric growth in academic publications of this field (Fahimnia, Sarkis, & Davarzani, 2015).

Green Environmental Supply Chain Management practices (GSCM) is the incorporation of ecological thinking into the supply chain which comprises of the industrial process, material finding and assortment, product design and supply of the ultimate produce to the customers as well as end-of-life managing of the merchandise after its useful life (Srivastava, 2007). Ecological facets of supply chain management have remained as the foremost concentration of study for the last 20 years as identified by Carter and Liane (2011). According to Das (2018) the logic behind regarding environmental management practices (EMP) as one of the significant issues affecting the performance of an institution can be drawn back to the outcomes of Hart (1995), Porter and Van der Linde (1995), Klassen and Whybark (1999), McLaughlin and Klassen (1996). Srivastava (2007) studied green supply chain management (GSCM) which he described as "study incorporating environmental rational in supply chain management, comprising product design, material obtaining, and assortment, manufacturing methods, supply of the ultimate product to the customers as well as finale of life management of the product after its beneficial life" (p. 54–55). He categorized researches into those regarding with the significance of GSCM, those concentrated on green design and those concerning green operations.

Kleindorfer, Singhal, and Van Wassenhove (2005) studied researches of ecological sustainability in functions management issued in the initial fifty factors of Production and Operations Management (POM). The context that well-versed their appraisal demonstrates a lengthy supply chain embraced from Kleindorfer and Corbett (2001) and comprised in an article presenting the first exceptional factor of POM in regards to Environmental and Operations Management. Therefore, environmental supply chain methods can comprise any environmental exertion focused toward the formation, improvement, manufacture and/or distribution of a product to the final consumer.

Rands and Starik (1995) established that ecologically maintainable institutions will have institutional philosophies that emphasize the significance of environmental sustainability. Crane (2000) settled that an inflexible institutional philosophy can restrict the taking on of green practices. Likewise, Molnar and Mulvihill (2003) study exposed that “sustainability need to be incorporated into a company’s culture, mission and dream”. In addition, Rands and Starik (1995) stressed that ecologically maintainable institutions need to nurture cultures originated on mutual ecological principles, sustainability behaviour customs, and artefacts which emphasize the significance of ecological sustainability.

Cranes and Harris (2002) who inspected the existence of green institutional philosophies in companies recognized that subcultures might hinder the growth of a company-wide green culture. From her case research of Grenville (2006) settled that a company’s culture, and the existence of subcultures, establish which ecological matters it selects to tackle. Linnenlueckes, Russell, and Griffiths (2009) establish that subcultures in firms can influence on workers’ level of comprehending sustainability inside their firm.

Narrowing the research to the influence of organization culture on performance indirectly through sustainability practices is not known as per the researcher knowledge on a review of the literature. Most studies on organization culture focus on adoption or implementation of sustainable practices and not on performance. Thus, the study hypothesized that:

*H. Environmentally sustainable supply chain practices positively improve performance via institution culture of manufacturing companies in Kenya.*

## **2. Theoretical Review**

The starting point of the resource-based view can be trailed back to previous study of Penrose (1959), Selznick (1957) amongst added scholars. The stress on this school of thinking was on the significance of assets and its effect for the company performance. This model basically stresses the notion that an institute need to be perceived as a package of resources and abilities to make worth and thus achieve a competitive benefit (Barney, 1991). The resource-based view in additional suggests that companies can attain general competitiveness and performance if they have touchable and untouchable assets that are valued, infrequent, unique and nonsubstitutable. These 4 features of assets refer to what Barleye (2007) think through as strategic resource that, if well-organized construct and sustain a company’s competitive benefit and enhance its performance. Resource-Based View (RBV) offers a worthy hypothetical basis to deliberate the input of assets and aptitudes to a company’s performance. The model provides an understanding into the associations amongst in-house resources, capabilities, and performance. The main impression of the RBV is that for a company to attain competitive benefit then it all relies on diverse resources, which are unique, valued and nonsubstitutable. It is maybe one of the most important frame-works in ecological management (Barney, 1991).

In accordance to Barney (1991) companies in the similar sector can be diverse in accordance to their personal assets and as resources are not flawlessly moveable amongst companies, the heterogeneity and the resultant competitive benefit attained might be long-lasting over time. Nevertheless, assets and abilities are not valued on their personal and are fundamentally fruitless in segregation (Newbert, 2008). As such, Newbert (2008) vies that the key to achieving a competitive gain is by the utilization of a valued resource ability combination. This view is in additional backed up by Ghobadian et al. (2007) who speak out that assets and abilities are bases of competitive gain, but they do not essentially input to competitive gain.

For companies to achieve competitive gain in this competitive surroundings, they need to offer worth to consumers. This worth can be derived from either cost benefit, service or distinguished merchandises. The resource-based model, thus, concentrates on the association amid a company’s interior resource strength and the capability to remain competitive over its strategy preparation. Resource-based view model (RBV) has likewise remained lengthy by Grant (1991) to include competitive plan.

In respect to Grant (1991) Resource-based View Model connects competitive tactics and abilities to worth making. He suggests that not only do abilities require to be well thought-out as the foundation to advance a competitive plan but they likewise requires to be improved and upheld by the strategist. Hence RBV is significant to comprehend worth may stem from the strategic arrangement of resources and competitive tactics. In emerging their competitive tactics, the industrial companies in Kenya may give emphasis to the resources prevailing inside the company so as to be capable to make worth for its customers.

The resource-based theory of competitive benefit suggests that competitive gain may be maintained by yoking resources that are valued, infrequent, imperfectly imitable, and nonsubstitutable (Barney, 1991). Company’s resources have remained well-defined as all assets, abilities, institutional procedures, company

qualities, information, and knowledge organized by a company that empowers the company to look on and execute strategies with the aim to enhance its competence and effectiveness (competitiveness) (Barney, 1991; Daft, 1983). The extension of the resource-based view has comprised the incorporation of dynamic abilities (Helfat & Peteraf, 2003) and natural resources (Hart, 1995). The growth of assets and abilities ought to be demonstrated via enhancements in numerous institutional performance measurements. For instance, a green initiative partnership with consumers was optimistically connected to value, elasticity, and ecological performance, whereas the partnership with contractors was linked with improved distribution performance (Klassen & Vachon, 2006). Constructing these functional abilities through the greening of supply chains, in additional backs up the worth, infrequency, inimitability and nonsubstitutability characteristics of the RBV (Carteri et al., 1998; Foerstl, Reuter, Hartmann, & Blome, 2010).

Researches and conceptualizations have established and claimed for the enhancement of name and appearance, which is well thought-out as an important resource in general (Barney, 1991). Foerstl et al. (2010) posits that the values connected with greening the supply chain, the competitive gains are not essentially in the upstream (contractor management) phases of the supply chain as they might even be longer in the downstream (consumer) phases with green advertising abilities and resources (Shang, Lu, & Li, 2010). RBV model helps to identify challenges in SSCM as identified by Touboulic and Walker (2015) as key challenges in SSCM is the proof of identity and growth of main resources giving to make sure attainment of ecological, community and economic performance in the supply chain.

Nevertheless, regardless of the amplified collected works dedicated to using of RBV, the model has its individual criticizers. According to Kalling and Hedman (2003) this model is condemned for disregarding the difficulties to changing aspects and management. Chan, He, and Wang (2004) likewise censure the model for its implied supposition of fixed balance yet competitive gains stem from growing present abilities that are extremely successful in answering to the institutional surroundings.

### **3. Methodology**

This study embraced positivism paradigm while employing explanatory survey design. The target population of this study was supply chain managers from nine hundred and forty manufacturing firms in Kenya categorized into different regions. Using a sample of 281 respondents, a multistage sampling design was used to select sample respondents. At the final stage, a supply chain manager in each manufacturing firm was invited using purposive sampling to take part in the study. Data was collected using primary sources through structured questionnaires. The questionnaires were administered to the supply chain executives of the industrial firms in Kenya who are responsible for sustainable supply chain practices.

#### *3.1. Measurement of Variables*

Environmental sustainability practices measures was adapted from (Holt & Rao, 2005; Vachon & Mao, 2008; Vermeulen & Ras, 2006; Zhu, Sarkis, & Lai, 2007b; Zhuo & Sarkis, 2004) Recycling of materials from Bouchery, Ghaffari, and Jemai (2010) and Toxic waste & emission reduction from (Klassen & Vachon, 2006; Matos & Hall, 2007; Pappis & Tsoufas, 2006; Rao, 2002; Rogers & Carter, 2008; Vachon, 2007; Vachon & Klassen, 2003; Vachons & Klassen, 2008; Zhu, Sarkis, & Lai, 2007a).

On performance measures, the researcher adopted the questionnaire from Zailani, Jeyaraman, Vengadasan, and Premkumar (2012). who adopted it from Harmon and Cowan (2009) questionnaire model for measuring the performance of manufacturing firms in relation to sustainable supply chain practices. The researcher did not alter the questionnaire. The measures of institutional culture were adapted from an organizational culture assessment instrument (OCAI) and it's fixed in rival values framework (CVF) by Cameron and Quinn (2011).

#### *3.2. Structural Equation Modeling (SEM)*

The research used Partial Least Squares (PLS) of Structural Equation Modeling (SEM) to analyze the data. In accordance to Sorbom and Joreskog (2004) SEM has turn out to be a broadly used methodology for identifying, approximating and trying theorized associations amongst practically significant variables in the behavioural and communal sciences for the last two decades. The best method of (SEM) framework for trying indirect impacts is prejudice corrected bootstrapping, Bolger and Shrout (2002). As in all bootstrapping methods, BC bootstrapping of the confidence intervals (CIs) for indirect effects consist of taking numerous samples with replacement from the data set in question. SEM process follows two steps: authenticating the dimension model through carrying out confirmatory factor examination and appropriate the structural model through path analysis with latent variables using AMOS version 22. Kline (1998) proposed a two-step modeling process and needs SEM scholars to trial the untainted dimension model underlying a whole structural equation model, and if the fitting of the measurement model is found suitable, then the structural model is tested.

#### 4. Finding and Discussions

This chapter gives the analysis, presentation, interpretation, and discussion of results on the mediating effect of organization culture on environmentally sustainable supply chain practices and performance of industrial companies in Kenya.

##### 4.1. Descriptive Statistics, Reliability Validity and Correlation Analysis

###### 4.1.1. Environmentally Sustainable Supply Chain Practices

Research respondents were asked to indicate on a five-point Likert scale their level of agreement on several statements describing environmentally sustainable supply chain practices as summarized in Table 1. Table 1 depicts the mean, standard deviation, skewness and factor loadings of environmentally sustainable supply chain practices. Findings showed that all the statements representing environmental supply chain practices had a mean score of above 4.00, indicating that the respondents highly rated the variable. The overall skewness was -1.72 and kurtosis was 5.05, indicating that the distribution of values deviates from the mean and are within the stipulated values of <3 for skewness and <10 for kurtosis as backed by Klinee (2005), Kline (2010) respectively. Similarly, the standard deviation of the majority of the items ranged between 0.75 and 1.4. It could then be deduced that the responses to the environmental supply chain practices items were not deviating much from the expected responses. From the 6 statements used to explain environmental supply chain sustainable practices had an overall mean score of 4.36 indicating that respondents agreed on environmental supply chain practices measures. This shows that majority of the respondents agreed with the statements that were used to measure environmental supply chain practices.

Table-1. Environmentally sustainable supply chain practices.

Survey item	Mean	Std. deviation	Skewness	Loadings
Our organization procures recycled materials which are then used in our day to day operations	4.03	1.398	-1.247	0.884
We often ask suppliers to commit to waste reduction goals set by our organization	4.35	0.85	-1.784	0.85
Our organization is involved in cleaner production which is a core value in our internal policies	4.48	0.754	-1.871	0.842
The organization I work for participates in the design of products that are energy efficient.	4.42	0.795	-1.594	0.537
We often tailor our products to meet both pollution and emission minimization	4.48	0.765	-2.023	0.517
Our organization has an effective environmental management system in place which guides all our environment-related issues	4.39	0.751	-1.777	0.873
Environmental supply chain practices	4.3582	0.58607	-1.716	

KMO =0.800, (df=15), total variance explained (45.13).

Bartlett's Test of Sphericity.000 AVE=0.588, CR=0.891, Cronbach's alpha= 0.949

Correlation results=.000

###### 4.2. Organization Culture

Respondents were tasked with the responsibility of responding on the statements related to organisation culture as indicated in Table 2. Table 2 shows the mean, standard deviation, skewness and loadings of each item representing organisation culture. From the results, all the statements representing organization culture had a mean score of above 4.00, indicating that the respondents highly rated the variable. The overall skewness was -1.02 and kurtosis was 1.38, indicating that the distribution of values deviates from the mean and it is within the recommended values of <3 for skewness and <10 for kurtosis respectively (Klinee, 2005) From the 8 statements used to explaining organization culture had an overall mean score of 4.37 indicating that respondents agreed on organization culture measures. These shows that most of the respondents settled with the declarations that were in use to quantify institutional culture. Institutional culture teaches the population about the achievement of the purposes inside the institute. These findings concur with Ahmad, Veerapandian, and Ghee (2011) that a key to better performance is a robust culture, an important and robust culture can create an institute to attain outstanding performance, whereas adverse and feeble culture might result to low performances and at the finale no attainment.

###### 4.3. Performance of Manufacturing Firms

Research respondents were inquired to indicate on a five-point Likert scale their level of agreement on several statements relating to performance of manufacturing firms as summarized in Table 3. The standard deviation of performance of manufacturing firms ranged between 0.66 and 0.84. It could then be deduced that the responses to the performance of a manufacturing firm's items were not deviating much from the expected responses. All the statements representing the performance of manufacturing firms had a mean score of above 4.38, indicating that the respondents highly rated the variable. The overall skewness was -1.57 and kurtosis

was 2.85, indicating that the distribution of values deviates from the mean and this is within the recommended threshold of <3 for skewness and <10 for kurtosis respectively (Kline, 2010; Klinee, 2005). From the 10 statements used to explain the performance of manufacturing firms had an overall mean score of 4.38 indicating that respondents agreed on the performance of a manufacturing firm's measures. This shows that majority of the respondents agreed with the statements that were used to measure the performance of manufacturing firms.

**Table-2. Organisation culture.**

Survey item	Mean	Std. deviation	Skewness	Loadings
Our organization procures recycled materials which are then used in our day to day operations	4.03	1.398	-1.247	0.884
We often ask suppliers to commit to waste reduction goals set by our organization	4.35	0.85	-1.784	0.85
Our organization is involved in cleaner production which is a core value in our internal policies	4.48	0.754	-1.871	0.842
The organization I work for participates in the design of products that are energy efficient.	4.42	0.795	-1.594	0.537
We often tailor our products to meet both pollution and emission minimization	4.48	0.765	-2.023	0.517
Our organization has an effective environmental management system in place which guides all our environment-related issues	4.39	0.751	-1.777	0.873
Environmental supply chain practices	4.3582	0.58607	-1.716	

KMO =0.722, (df=28), total variance explained (65.196).  
 Bartlett's Test of Sphericity.000 AVE=0.588, CR=0.891, Cronbach's alpha= 0.949  
 Correlation results=. .604

**Table-3. Performance of manufacturing firms.**

Survey items	Mean	Std. deviation	Skewness	Loadings
In our firm, we have recorded significant improvement in terms of sales and market share	4.56	0.69	-1.52	1.772
In our firm, there has been an improvement in the image of our organization and products	4.44	0.658	-1.052	1.16
We have also seen some significant improvement in relations with community stakeholders such as Non-governmental organizations and community activists	4.22	0.828	-1.19	1.963
Our organization has achieved significant improvement in compliance with environmental standards.	4.32	0.796	-1.654	4.184
We have also recorded a significant reduction in consumption of hazardous materials and energy	4.44	0.715	-1.239	1.808
In our firm, we have been able to reduce manufacturing and operational costs.	4.29	0.775	-1.058	1.284
The has also been a reduction in the number of days for a supply chain to respond to plan, source, make and deliver unexpected demand variations	4.3	0.786	-0.921	0.519
Overall mean	4.3789	0.47944	-1.565	

KMO =0.870, (df=15), total variance explained (51.826)  
 Bartlett's Test of Sphericity .000 AVE=0.519, CR=0.881, Cronbach's alpha = .840

**4.4. Hypotheses Testing for Mediation of Organisation Culture on Environmentally Supply Chain Practices and Firm Performance**

In this research, SEM was in use to carry out arbitration examinations by means of AMOS version 22. The study hypothesis is stated as below:

H<sub>1</sub>: Environmentally sustainable supply chain practices improve the performance of manufacturing firm via organization culture.

The study tests the mediating effect of organization culture on the relationship between environmentally sustainable supply chain practices and performance of manufacturing companies in Kenya. The findings are depicted in Figure 1, Table 4 and Table 5 respectively. Figure 1, shows the structural model for environmentally sustainable supply chain practices, organisation culture and performance of manufacturing firms in Kenya. Table 4 displays estimates of relationships between environmentally sustainable supply chain practices, organisation culture and performance with their p-values and Table 5 depicts bias corrected bootstrapping results of direct, indirect and total effects of study variables.

The effect of environmentally sustainable supply chain practices on the performance of manufacturing firms, the direct effect is .259 (the path coefficient from ecological supply chain practices to performance of manufacturing firms) as shown in Figure 1 and Table 4. The indirect effect, through organization culture, is computed as the product of the path coefficient from environmentally maintainable supply chain carry outs to the organisation culture and the path coefficient from organization culture to performance (1.144\*.605=.692) as depicted in Table 5.

The aggregate effect is the summation of direct and indirect effects (.259 + .692 = .951) as portrayed in Table 5. From the results the indirect effect (1.144\*.605=.692), is higher than the direct effect of .259. Thus, the study concludes that the construct organization culture is a mediator in the relationship between environmentally sustainable supply chain practices and performance of manufacturing firms. The type of mediation is full mediation since the direct effect is not significant when the mediator was introduced in the model. The researcher, therefore, concludes that there is a complete mediation effect between organization culture on environmentally sustainable supply chain practices and performance of manufacturing firms hence this model attains steps and guidelines suggested by Hair, Black, Babin, Anderson, and Tatham (2006); Preacher and Hayes (2008) and Metters, Zhao, Bendoly, Jiang, and Young (2010). The study, therefore, fails to reject hypothesis H<sub>1</sub>, and infers that organization culture variable fully mediates the relationship between environmentally sustainable supply chain practices on the performance of manufacturing firms. This shows that the higher the organization culture in manufacturing firms, environmentally sustainable supply chain practices will highly increase the performance of the firms. This is supported by Fernández, Junquera, and Ordiz (2003) argument that excellent environmental performance depends upon incorporating environmental issues into the organizational culture. In support of this finding, Miska, Hilbe, and Mayer (2014) postulated that companies in cultures with greater future orientation practices are more likely to engage in economic sustainability practices. Cognate to this finding, in regard to future orientation culture, Bansal and Ortiz (2016) display that companies that take part in maintainable longer-term carry outs have lesser financial instability, greater sales increase, and greater probabilities of continued existence. This agrees to Ashkanasy, Gupta, Mayfield, and Trevor-Roberts (2004) classification of cultures with greater future orientation as bearing in mind materialistic attainment and spiritual satisfaction to be incorporated and assigning a greater importance on long-term achievement, and it bring into line with the idea of sustainability inside the economic sphere. It is thus probable that firms in cultures with better future orientation carry outs are more probable to take part in ecologically sustainable carry outs that lead to improved performance.

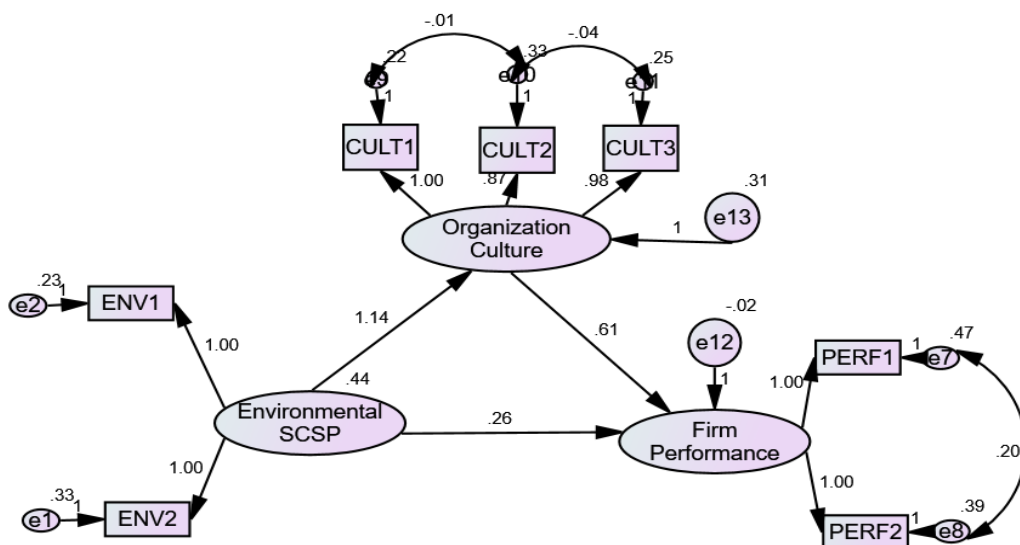


Figure-1. SEM model for mediating effect of organisation culture on environmental SSCP and firm performance.

**Table-4.** SEM results for mediating effect of organization culture on environmental SSCP and firm performance.

Variables	Estimate	S.E.	C.R.	P
Organization culture<---Environmental SCSP	1.144	.103	11.153	.000
Firm performance<---Environmental SCSP	.259	.148	1.755	.079
Firm performance <--- Organization culture	.605	.102	5.935	.000
Model fit results				
$\chi^2(df)$	1465.29 (211)			
CMIN/df	1.977			
IFI.	.937			
TLI.	.915			
CFI.	.926			
GFI.	.942			
RMSEA	.068			

\*\*p<0.05.

**Table-5.** Total effect, direct effect and indirect effect of organization culture on environmental SSCP and firm performance.

Effects	Variables	Environmental SCSP	Organization culture	Firm performance
Total effect	Organization culture	1.144	.000	.000
	Firm performance	.951	.605	.000
Direct effect	Organization culture	1.144	.000	.000
	Firm performance	.259	.605	.000
Indirect effect	Organization culture	.000	.000	.000
	Firm performance	.692	.000	.000

## 5. Conclusions and Recommendations

This study provides empirical support that organization culture mediates the relationship between environmentally sustainable supply chain practices on the performance of manufacturing firms in Kenya. The organization culture variable fully mediates the relationship between environmentally sustainable supply chain practices and performance of manufacturing firms. The more the organization culture developed in manufacturing firms the higher the environmental supply chain practices influences the performance of the firms. The role of organizational culture in improving the performance of manufacturing firms through environmental supply chain practices should not be neglected. The manufacturing firm should pay attention to fostering a strong organization culture geared towards sustainability if they seek to gain from sustainable supply chain practices implemented. In conclusion, the key issues in organization culture the manufacturing firms should focus on are; the manufacturing firm should be results-oriented with the main concern is getting the job done, eventually making employees competitive and achievement-oriented. The leadership of the manufacturing firm also plays a fundamental role in the culture of the firm. The leader should exemplify coordinating, organizing and efficiency among employees. To sum up, when manufacturing firms adopt all these organization cultural practices, they are able to implement environmentally sustainable supply chain practices effortlessly and in that way increase their performance.

### 5.1. Contribution of Study to Knowledge

There is flimsy evidence of studies examining the mediation effect of organization culture on environmentally sustainable supply chain practices and performance of manufacturing firms. This study, therefore, filled the knowledge gap that was established by [Dahlggaard-Park et al. \(2015\)](#) and [Dessein et al. \(2015\)](#) by providing evidence of complete mediation effect of organization culture on environmentally sustainable supply chain practices. Under the RBV theory, growth of resources and abilities might be demonstrated through enhancements in numerous institutional performance dimensions. For instance, a green initiative partnership with consumers was optimistically connected to quality, elasticity, and ecological performance, whereas the partnership with contractors was related with improved distribution performance ([Klassen & Vachon, 2006](#)). Construction these functioning abilities through the greening of supply chains in additional backs up the worth, infrequency, inimitability, and non-substitutability aspects of the RBV ([Carteri et al., 1998](#); [Foerstl et al., 2010](#)). Maintainable supply chain carry outs influence performances of manufacturing companies and also economically maintainable supply chain practices predict the performance of manufacturing firms ([Marshall et al., 2015](#)).

### 5.2. Contribution of the Study to Profession and Managerial Implication

Practical implications are quite apparent in this study. Supply chain managers, production managers or operations managers in the manufacturing sector need to establish how best they can foster an organizational culture that supports supply chain sustainability practices in their organization. A strong organizational



culture geared towards sustainability in the organization leads to the enhanced implementation of sustainable supply chain practices in the organization which in turn increases the performance of firms.

### *5.3. Managerial and Policy Implication*

The supply chain managers of manufacturing firms should ensure that environmentally sustainable supply chain practices such as recycling of materials, adoption of cleaner production methods, enhanced pollution and emission prevention measures, production of products that are energy-efficient, adoption of environmental management systems and commitment to waste reduction are put in place to enhance the environmental performance of manufacturing firms. The supply chain managers of manufacturing firms should build an organizational culture with environmental supply chain practices in mind. From the past studies on sustainability initiatives and organization culture, it shows that culture does matter incorporate sustainability success. The managers of manufacturing firms should build an organizational culture with environmental concerns in all their processes. The manufacturing firms' managers should provide clear organization leadership, provide the organization glue that holds the organization together and provide dominant characteristics such as competitiveness that provide criteria for the success of sustainability issues.

Future studies should establish the mediating effect of organization culture on sustainable supply chain practices and performance of firms in the service sectors and draw comparisons between manufacturing sectors and service sectors. In addition, the link between sustainable supply chain practices and organizational culture in terms of research is still scanty and grey. Researchers should further research on the role of organizational culture in promoting the success of sustainability initiatives of firms and also analyze if organizations can demonstrate a unified organizational culture that bases its values and beliefs on sustainable supply chain practices and improvement of firm's performance.

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