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Ethnicity and culture in Kenyan Co-operatives

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Abstract

The research seeks to understand the varying cultural dimensions of nine of Kenya's ethnic communities and the potential correlations with positive organizational perceptions, attitudes, and outcomes. Published literature on either intra-Kenyan culture dimension differences or organizational behavior within co-operatives is scarce. This empirical study aims to expand knowledge of intra-country cultural differences and cultural impacts on co-operatives. The research received facilitation assistance by Global Communities and funded by USAID as part of a wider study on co-operatives in Kenya. The research found that seven of the eight GLOBE framework dimensions studied correlated positively and significantly with each other with the exception of power distance. Climate average annual temperatures correlated significantly and negatively with uncertainty avoidance, power distance, assertiveness, future orientation, and humane orientation but not institutional collectivism, in-group collectivism, or performance orientation. Participative leadership, perceived co-operative member voice, co-operative member commitment, and co-operative innovation history all positively and significantly correlated with seven of the eight culture dimensions with the exception again of power distance. This study is relevant to co-operative leaders, co-operative members, community leaders, government policy makers, and donor agencies seeking to capacity build co-operatives.
Key words: Ethnicity, Culture, Co-operatives, Africa, Leadership

Introduction

While Kenya's impressive multi-year gross domestic product growth of 5.8%, reduction in child mortality, nearly universal primary school enrolment, and exceptional literacy rates lifted millions out of poverty (World Bank, 2018), the nation still struggles as one of the most unequal in the region with 42% living below the poverty line (UNICEF, 2018). Equitable sustainable economic development remains an elusive goal in the Republic of Kenya. Standing at 146 out of the 188 countries ranked in the human development indicators, Kenya subsides in the medium human development category (UNDP, 2017). Co-operative member societies provide a potential solution as they work to sustainably improve equitable economic growth at the bottom of the pyramid (UNDESA, 2018). Co-operatives exist as autonomous democratic associations of individuals who come together voluntarily in order to meet some common economic and social aspirations (ILO, 2002). This research seeks to investigate linkages between intra-Kenya culture dimension differences and positive co-operative organizational outcomes. In general, organizational practices must be tailored in order to work effectively within different cultural contexts looking at varying social, legal, economic, political (Child and Kieser, 1979), religious, urban versus rural, education levels, subcultures, and physical geography attributes of the land (Dietz, Gillespie, Chao, Lewicki, Skinner, & Saunders (2010). Specifically, this research intends to advise co-operative leaders and other stakeholders on different leadership and management actions and techniques better

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tailored to Kenya's diverse cultural landscape by answering the following research questions:

1) What extent does intra-Kenyan culture link to organizational behavior in member co-operatives?
2) What linkage does climate have on Kenya's ethnic cultural communities?
3) What linkage do the GLOBE study's culture dimensions correlate with each other in Kenya ethnic communities?

Literature Review

Social identity theory and functional theory underpin this research. Being a member of a group, society, or culture gives humans an identity. Tajfel & Turner (1979) state that individuals within identifiable communities portray a positive image about themselves collectively and negative portrayals about other outside groups thus increasing their own self-esteem. Dheer, Lenartowicz, Peterson, & Petrescu (2015), Hofstede (1980), and Nisbett (2004) posit that environmental factors shape cultural norms thus creating distinct societies within geographies.

Culture

Kroeber and Kluckhoh (1952) came up with over 160 definitions of culture. Over the next sixty years, the literature generally summarize culture as an identifiable group of distinct individuals and the configuration of fundamental assumptions about people and their interconnectedness to one another and around the globe (Gibson *et al.* 2009). Research generally narrows culture into three main levels. First, articles represent observable symbols of culture (Schein, 1997). In communities, the styles of houses, methods of exchanging greetings, or clothing comprise artefacts or within organizations one can observe artefact through office layouts, dress codes, buildings, organization charts, and internal communications (Schneider and Barsoux, 2003). Someone new to a culture can observe the artefacts but may find it challenging to decipher all the deep cultural meanings that they observe (Dietz *et al.*, 2010). Second, people in a culture retain beliefs about the wider world around them that get represented in their values (Schein, 1997). Then those same values are utilized to judge behaviors of those in society (Schneider and

Barsoux, 2003). Third, the deepest basis for culture involves its elementary conventions about what is moral, customary, and right (Schneider and Barsoux, 2003). The assumed conventions form the foundation of behavior within a society (Schein, 1997). Organizational behaviourists care about national culture because it links to organizational performance through differing views on acceptable individual performance behaviors and leadership styles (Garg and Ma, 2005).

Several different models were developed from the prolific Hofstede cultural dimensions model (Hofstede, 1980; Hofstede, 2001) to Schwartz and Bilsky (1987), Trompenaars (1993), and House, Hanges, Javidan, Dorfman, & Gupta's (2004) famous GLOBE Model. Hofstede's model the most widely used in organizational research (Mooij, 2010), the GLOBE Model is now the most utilized in recent research (Shi & Wang, 2011).

In the GLOBE Model, this research utilizes eight of the nine dimensions in what a society practices. de Luque & Javidan (2004) defined *uncertainty avoidance* as the extent to which a society, organization, or group relies on social norms, rules, and procedures to alleviate the unpredictability of future events. So, the degree to which a culture comes together to plan ahead for natural disasters, such as droughts, or security risks is almost the same no matter which community one originates from. Cultures with higher uncertainty avoidance hold emotional needs for rules. On the other hand, cultures with low uncertainty avoidance show dislike for formal rules and only set such rules when absolutely necessary (Flynn, 2006; Wacker, 1998). As an example between countries, Switzerland shows the highest uncertainty avoidance in what their society practices, as opposed to what it values, at a 5.37 mean out of a 7 point Likert scale while Russia demonstrates the lowest uncertainty avoidance with 2.88.

Ingroup collectivism is the degree to which individuals express pride, loyalty, and cohesiveness in their organizations or families. *Institutional collectivism* stands as the extent to which organizational and societal institutional practices encourage and reward collective distribution of resources and collective action (Gelfand, Bhawuk, Nishii, & Bechtold, 2004).

Snell and Hui (2000) found that employees in less collectivist nations tend to be more autonomous and confident in relying on their own ideas while employees in collectivist countries rely more on the information heard by others to generate their own opinions. Collectivists integrate into stronger social cohesive groups with strong loyalty versus lower collectivist cultures forming looser social bonds with individuals fending for themselves (Hofstede, 2001). *Performance orientation* reflects the extent to which a community encourages and rewards innovation, high standards, excellence, and performance improvement (Javidan, 2004). Sub-Saharan Africa on average tends to encourage lower innovation and performance than other cultures in America or Germany, as examples, and tolerate mediocrity more as a cultural trend (Hofstede, 2001).

Carl, Gupta, & Javidan (2004) define *power distance* as the extent to which a community accepts and endorses authority, power differences, and status privileges. Societies with high power distance are the least likely to challenge the authority of their leaders. Higher power distance cultures have organizations that tend to hold more centralized power and decision making (Flynn & Saladin, 2006). *Future orientation* represents the degree to which a society encourages and rewards future-oriented behaviors such as planning and delaying gratification (Ashkanasy, Gupta,

Mayfield, & Trevor-Roberts, 2004). *Assertiveness* endures as the degree to which a society feels that individuals are assertive, confrontational, and aggressive in their relationships with other people (Den Hartog, 2004). *Humane orientation* entails the degree to which a society encourages and rewards individuals for being fair, altruistic, friendly, generous, caring, and kind to others (Kabasakal & Bodur, 2004).

Climate and Culture

Researchers have detailed various clusters of culture with similar climatic areas around the world (House, *et al.*, 2004). Hofstede (1980) felt that climate represented the main cause of diversity in global cultures. The House *et al.* (2004) team on the GLOBE study considered climate as average temperatures, annual rainfall, humidity-levels, altitude above sea level, and atmospheric pressure with the main emphasis on average temperatures. Kenyan climate factors per ethnic culture areas may be viewed below in Table 1.

Accordingly, the following hypothesis is proposed:

> H_1: *Cultural dimensions assertiveness and future orientation will negatively and significantly correlate with average annual temperatures.*

Table 1: Climate per Ethnic Area. Source: Tutiempo (2018).

Ethnicity	Average Temp (^{O}C)	Percipitation (mm)	# Rain Days	Closest Locations for Historical Data
Embu	19.03	1136.35	151.36	Embu Town
Kamba	21.18	675.64	87.81	Makindu Town and Nairobi JKIA Average
Kalenjin	17.65	1146.51	124.40	Eldoret Town
Kikuyu	18.44	866.33	128.73	Nyeri Town and Nairobi JKIA Average
Kisii	19.10	2255.22	180.50	Kisii Town
Mijikenda	27.22	674.94	93.33	Malindi Town
Luhya	21.45	1859.36	109.00	Kakamega Town and Tororo Uganda Average, Rain Kakamega Town Only
Luo	23.10	1438.05	138.08	Kisumu Town
Taita	25.46	551.34	84.11	Voi Town

Organizational Perceptions, Attitudes, and Outcomes

Organizational Innovation involves the internal development and usage of new products, services, programs, policies, processes, and

other techniques from existing inputs or new inputs (Helm & Andersson, 2010). Jones & Davis (2000) posit that culture plays a statistically significant role to enhance or hinder innovation. Accordingly, the following hypothesis is proposed:

H₂: Cultural dimension performance orientation will positively and significantly correlate with organization innovation history.

H₃: Cultural dimension uncertainty avoidance will negatively and significantly correlate with organization innovation history.

Commitment to the co-operative in the psychological tradition, affective organization commitment involves the degree to which an employee, or in this study a member, feels devotion to a particular entity (Lew, 2011). Meyer, Stanley, Jackson, McInnis, Maltin, & Sheppard (2012) delineate strong correlations between culture and affective commitment with particular attention to collectivism and power distance. Accordingly, the following hypotheses are proposed:

H₄: Cultural dimension in-group collectivism will positively and significantly correlate with members' commitment to their co-operative.

H₅: Cultural dimension power distance will negatively and significantly correlate with members' commitment to their co-operative.

Member perceived voice entails the perception that members can intentionally express co-operative related ideas, information, and opinions (Ruck, Welch, and Menara, 2017; Van Dyne, Ang, & Botero, 2003). Brockner, Ackerman, Greenberg, Gelfand, Francesco, Chen, Leung, Bierbrauer, Gomez, Kirkman, & Shapiro (2001) found strong links between perceived voice and culture but most specifically within the power distance dimension. Accordingly, the following hypothesis is proposed:

H₆: Cultural dimension power distance will negatively and significantly correlate with members' perceived voice.

Participative leadership refers to a form of leadership in which co-operative members have a substantial amount of input into the specific goals to be pursued by the co-operative (Hoch, 2013). House *et al*. (2004) found strong linkages between all cultural dimensions and participative leadership. Accordingly, the following hypothesis is proposed:

H₇: Cultural dimension humane orientation will positively and significantly correlate with participative leadership.

Research Methods
Sample
The Kenyan Ministry of Industry, Trade and Cooperatives has registration information for 2,996 co-operatives within the country. The research team was interested in agricultural co-operatives only and not SACCOs, similar to the Western concept of credit unions, housing, and other types of co-operatives where the interaction between management and members were distant. Agricultural co-operatives have on average fewer members than SACCOs and usually interact directly with the management committee and senior management, unlike SACCOs and housing co-operatives. In total, there were 308 specifically designated agricultural co-operatives across Kenya. Sectors included sugar cane, livestock, tea, coffee, horticulture, fishing, dairy, cotton, bananas, bee keeping, poultry, pyrethrum, ranching, and tobacco.

The research team narrowed down a purposive sample of counties to 12 out of Kenya's 47 counties based on USAID co-operative programming priorities as shown below in Table 1 and Figure 1.

Table 1: Sample Counties

Embu	Usain-Gichu
Kitui	Kisumu
Machakos	Kakamega
Makueni	Busia
Taita-Tavetta	Murang'a
Kilifi	Kisii

In selecting the specific co-operatives per county, the research team utilized random sampling. A cross-sectional survey was conducted in 19 agricultural co-operatives in 12 counties comprising 9 different ethnicities in the sample (n = 506) utilizing deductive quantitative methodology with correlations and difference of means analysis standard in cultural dimensions research. The researchers disqualified 74 respondents' questionnaires for filling in less than 50% of the answers or filling in an overwhelming number of answers with the same number on the Likert scales indicating

a likely lack of understanding or an indifference to the questionnaire as a whole.

Figure 1: Sample Sites within Counties

Measures

The research utilized the House *et al.* (2004) GLOBE study's culture dimensions 2 question scales for each of the 8 culture variables. The innovation scale utilized the 4 organizational innovation history questions from Helm & Andersson (2010). The participative leadership construct was included utilizing the Hoch (2013) 4 question scale. Perceived upward voice used the Kanten & Ulker (2012) 3 question scale. Affective co-operative member commitment adapted 8 questions from the Meyer, Allen, & Smith (1993) affective employee commitment scale. Average historical annual temperatures were taken from Tutiempo (2018).

The research team had the questionnaire translated by two separate individuals with knowledge of both Kiswahili and English. However, the team discovered early on in the pilot discussions in Kiambu County with the local Ministry of Industry, Trade and Cooperatives official and attending farmers as well as in the first county surveyed, Embu, that literacy rates among co-operative members would require verbal translation and explanation. The research team provided the direct translation and the same translator

verbally translated in 17 out of the 19 co-operatives with two research assistants translating in the other 2 co-operatives.

Results

Descriptive Statistics

The following Tables 3 and 4 represent initial descriptive statistics from the study.

Table 3: Number of Respondents per Co-operative

Factor Level Information

Cooperative #	N	Cooperative #	N
1	39	10	27
2	17	11	14
3	31	12	26
4	19	13	9
5	56	14	101
6	33	15	26
7	21	16	25
8	15	17	14
9	13	18	20

Table 4: Gender Breakdown

Factor Level Information

		Value Label	N
Gender	1	Male	358
	2	Female	125
		Unanswered	23

The sizes of co-operatives varied widely and therefore the number of potential questionnaire respondents. The number of respondents per co-operative ranged from 9 to 101. The gender breakdown of respondents was 74.1% male and 25.9% female.

Variance Components and Difference of Means

Significant variance due to ethnicity exists above the 5% level in all organizational variables (Table 4 and Table 5). Discussion about the variance components due to ethnicity for the culture dimensions is explained below.

Correlations Matrices and Cronbach's Alpha

The researchers also analyzed correlations matrices to assess the strength of similarity in movement and direction between two variables (Table 6 and Table 7).

Table 4: Variance Components by Ethnicity.

Organizational Perceptions & Outomces	SPSS	Error	Variance
Innovation	0.241	2.127	10.18%
Commitment	0.038	0.697	5.17%
Voice	0.106	0.854	11.04%
Participatory Leadership - Coop	0.204	2.309	8.12%
Participatory Leadership - TM	0.22	2.279	8.80%
Participatory Leadership - SM	0.251	2.344	9.67%

Table 5: Culture Dimensions Variance Components by Ethnicity.

Globe Framework by Ethnicity	SPSS	Error	Variance
Uncertainty Avoidance	0.033	2.566	1.27%
Institutional Collectivism	0.066	2.4	2.68%
Ingroup Collectivism	0.023	2.236	1.02%
Performance Orientation	0.078	2.657	2.85%
Power Distance	0.17	3.527	4.60%
Assertive	0.158	2.784	5.37%
Future Orientation	0.116	2.308	4.79%
Humane Orientation	0.333	2.635	11.22%

Table 6. Difference of Means per Ethnicity on Globe Framework Dimensions.

	Uncertainty Avoid.	InstColl	InGroup Collect.	Performance Orient.	Power Distance	Assertive	Future Orientation	Humane Orient.
Embu	5.098214286	4.957954545	5.482142857	5.294642857	3.452861953	4.427272727	5.672727273	5.663636364
Kalenjin	5.158536585	5.292682927	6.426829268	6.548780488	4.5375	5.056402439	6.085365854	6.182926829
Kamba	4.603586696	4.976656315	5.627854238	5.301089563	3.67826087	4.316546763	5.354393628	5.035288557
Kikuyu	4.751136364	4.835851648	5.512457912	5.339285714	3.717171717	3.808048433	5.674957118	5.663636364
Kisii	4.953809524	4.503032258	5.824666667	5.6	3.94892291	4.288617886	5.452	5.196258065
Luhya	4.486263736	4.25	5.403846154	5.285714286	5.076923077	5.321428571	4.821428571	3.510989011
Luo	4.25	4.229166667	5.047101449	5.070652174	3.625	3.770833333	4.780797101	4.520833333
Mijikend	4.5	4.555555556	5.611111111	5.333333333	2.6875	3.444444444	4.777777778	5.722222222
Taita	4.131578947	4.157894737	5.684210526	5.847953216	3.736842105	3.973684211	4.657894737	4.673976608

Notes: (1) the **BLACK** *indicates the highest average per ethnicity shown while the* **GRAY** *represent the lowest average per ethnicity shown.*

Table 7. Correlations Matrix and Cronbach's Alpha

		Mean	Standard Deviation	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Average Temperatures	20.14	2.04													
2	Innovation History	5.23	1.55	-.16**	(.84)											
3	Commitment	5.04	0.85	-.11*	.33**	(.60)										
4	Voice: Upward Communication	3.83	0.95	-.10*	.41**	.42**	(.70)									
5	Participative Leadership All Referents	5.32	1.52	-.10*	.48**	.32**	.48**	(.90)								
6	Uncertainty Avoidance	4.75	1.61	-.14**	.23**	.26**	.28**	.27**	(.52)							
7	Institutional Collectivism	4.74	1.57	-.09	.25**	.27**	.34**	.32**	.43**	(.20)						
8	In-Group Collectivism	5.67	1.50	-.07	.27**	.31**	.24**	.34**	.34**	.28**	(.75)					
9	Performance Orientation	5.47	1.65	-.07	.26**	.31**	.24**	.39**	.31**	.26**	.59**	(.62)				
10	Power Distance	3.79	1.91	-.09*	.06	.02	-.04	-.02	.08	.09*	.07	.04	(.69)			
11	Assertive	4.29	1.70	-.09*	.15**	.19**	.19**	.15**	.30**	.23**	.23**	.23**	.44**	(.37)		
12	Future Orientation	5.43	1.54	-.20**	.29**	.34**	.34**	.41**	.34**	.30**	.39**	.42**	.02	.31**	(.58)	
13	Humane Orientation	5.24	1.68	-.17**	.32**	.31**	.35**	.45**	.31**	.30**	.37**	.34**	-.01	.23**	.51**	(.72)

*p<0.05; **p<0.01   n = 506   Note. Scale reliabilities on the diagonal.

Results Narrative

The positive correlations ranged in value from a .09 (Institutional Collectivism with Power Distance) to .51 (Future Orientation with Humane Orientation). Variables did not show any indications of multicollinearity. The latent organizational outcome variable, Innovation, and organizational perception variables, Perceived Voice and Participative Leadership, and organizational attitude variable, Commitment, all correlated positively and significantly with each other and to the 8 culture variables from a .15 (Participative Leadership with Assertiveness) to .48 (Innovation with Participative Leadership) with the exception of Power Distance which was not significant thus supporting hypotheses 2, 3, and 6, but not hypotheses 4 and 5. All culture constructs related positively and significantly at the < .001 level between 0.228 and 0.508 except for power distance that only exhibited correlation with institutional collectivism at 0.089 at the < .05 level and assertiveness at 0.443 at the < .001 level. All culture variables unexpectedly correlated positively and significantly with each other with the exception of Power Distance that was insignificant with all culture variables except Institutional Collectivism and Assertiveness. The only variable that related negatively and significantly is Average Annual Temperatures from a -.09 (Power Distance, Assertiveness) to -.20 (Future Orientation). Average Annual Temperatures correlated negatively and significantly with uncertainty avoidance, power distance, assertiveness, performance orientation, and humane orientation thus supporting hypothesis 1.

The latent organizational outcome and organizational perceptions and attitudes variables showed scale reliability within acceptable ranges using Cronbach's alphas from .70 (Perceived Voice) to .90 (Participative Leadership) with the exception of Commitment that fell under the .65 threshold at .60. Culture variables show a mix of acceptable reliabilities with Cronbach's alphas between the .65 and .95 acceptable range of In-Group Collectivism, Power Distance, and Humane Orientation, then slightly below the acceptable threshold with Performance Orientation, Future Orientation, and Uncertainty Avoidance. Both Assertiveness and Institutional Collectivism variables showed unacceptable scale reliability with .37 and .20 respectively.

The variance components were run on the GLOBE culture variables according to ethnicity. The research found a mix between similarity and differences in Kenyan cultures. Among the eight GLOBE tested cultural dimensions, the study found that half were similar across Kenya and the other half varied significantly. The four cultural aspects that Kenyans were similar across ethnicity were ingroup collectivism, uncertainty avoidance, institutional collectivism, and performance orientation with the culture variables with the most variance due to ethnicity included power distance, assertiveness, future orientation, and humane orientation. A difference-of-means tests was calculated between respondents across the nine different ethnic communities surveyed and results shown above in table 6 as well as below in each of the culture variable charts 1 through 8.

Table 6 above shows the difference-of-means across the nine communities of Uncertainty Avoidance practices as 4.75 on the 7-point Likert scale. Uncertainty Avoidance displays a low variance due to ethnicity at 1.27%. The community with the greatest uncertainty avoidance is the Kalenjin and the lowest is the Taita as shown in chart 1. Climate average temperatures correlates significantly and negatively with Uncertainty Avoidance. Uncertainty Avoidance's scale reliability is slightly lower than the acceptable level at .52.

Uncertainty Avoidance

Figure 1: Uncertainty avoidance means

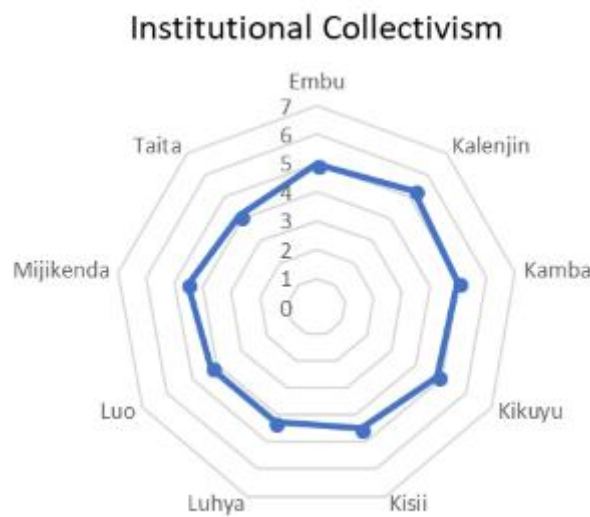## Institutional Collectivism

Figure 2: Institutional collectivism means

Institutional Collectivism's (Figure 2) mean is 4.74, a standard deviation of 1.57, and a low variance due to ethnicity of 2.68%. The low variance due to ethnicity means that no matter which ethnicity one originates from in the study, one tends to demand or push for collective distribution of resources at the local level at roughly the same rate. However, the scale's Cronbach's alpha gave an unacceptable reliability score of .20.

In-Group Collectivism (Figure 3) has the highest culture variable scale reliability with a Cronbach's alpha of .75. The construct has a mean of 5.67, standard deviation of 1.50, and the lowest variance due to ethnicity of all the culture variables at 1.02% therefore meaning very little difference among Kenya's ethnic communities.
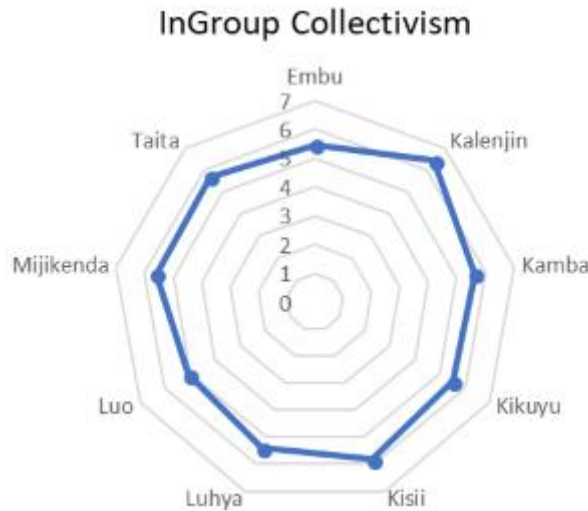
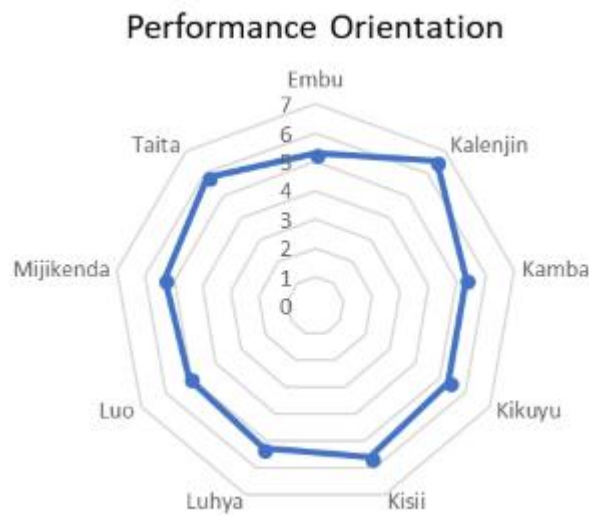*Figure 3: In group collectivism means*

Figure 4: Performance orientation means

Performance Orientation (Figure 4) has a low variance due to ethnicity at 2.85%, a mean of 5.47 which is much higher than the 59 nation GLOBE study mean of 4.1, and a standard deviation of 1.65. The scale's Cronbach's alpha shows a reliability of .62. The community with the greatest Performance Orientation is the Kalenjin and the lowest is the Luo.

Power Distance (Figure 5) has a mean of 3.79 which is similar to the GLOBE study's 59 nation mean of 3.89, and a standard deviation of 1.91. Power distance stood as the fourth greatest difference between Kenyans with 4.60% of the variance due to ethnicity. The Luhya community had the highest average power distance and the Mijikenda the lowest.
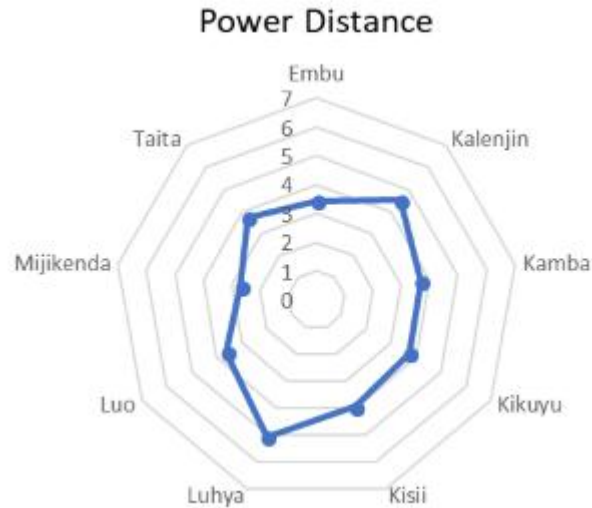
Power Distance

Figure 5: Power distance means
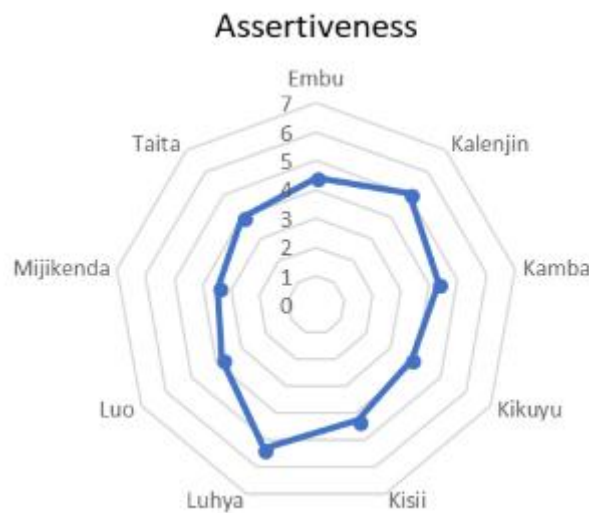
Assertiveness

Figure 6: Assertiveness means

Assertiveness (Figure 6) comprised the second highest difference among Kenyan ethnic groups with 5.37% of the variance due to ethnicity. The Luhya community feels that their population are the most assertive among the nine cultures surveyed followed by the Kalenjin then the Embu then Kamba then Kisii. The lowest assertiveness perceptions about their society came from the Mijikenda. Assertiveness is negatively and significantly correlated with the average temperatures in the areas where the ethnic communities live.
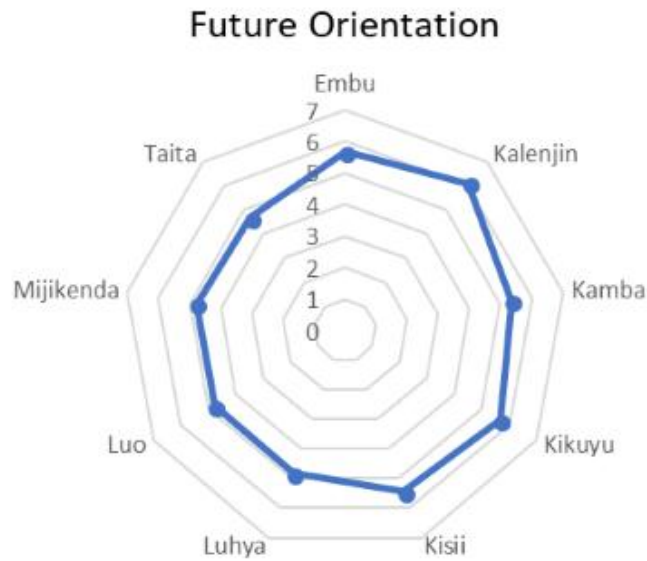
Future Orientation

Figure 7: Future orientation means

Future orientation (Figure 7) shows 4.79% of the variance due to ethnicity. The community that feels like it makes the most plans for the future are the Kalenjin followed by the Embu and then Kikuyu communities. The populations that plan the least for the future and focus on solving current problems first are the Taita followed by the Mijikenda then the Luo. The standard deviation is 1.54 and a slightly below acceptable Cronach's alpha reliability for the scale at .58.
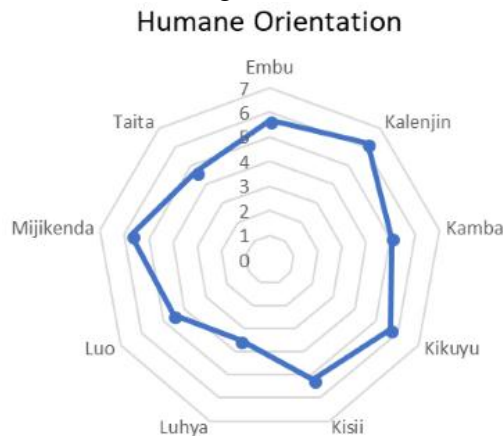
Humane Orientation

Figure 8: Human orientation means

Humane orientation (Figure 8) represents the greatest difference between Kenyan ethnic groups with a large 11.22% of the variance due to ethnicity. The group that feels that society exists as the most humane are the Kalenjin with a very high average of 6.18 on a 7-point Likert scale. The second highest humane perceptions are found in the Mijikenda followed by the Kikuyu and Embu tied for third highest. The community that feels that society subsides as the least humane are the Luhya with a 3.51 average on the same scale, over 1.0 lower than any other group. The construct's scale reliability has a Cronbach's alpha of .72 and a standard deviation of 1.68.

A delineation of all hypotheses discussed above may be viewed in Table 7 below.

Table 7: Delineation of all hypotheses

Hypothesis 1	Average annual temperatures correlate negatively with assertiveness and future orientation.	Supported
Hypothesis 2	Performance orientation correlate positively with innovation.	Supported
Hypothesis 3	Uncertainty avoidance correlate negatively with innovation.	Not Supported
Hypothesis 4	In-group collectivism correlate positively with commitment.	Supported
Hypothesis 5	Power distance correlate negatively with commitment.	Not Supported
Hypothesis 6	Power distance correlate negatively with perceived voice.	Not Supported
Hypothesis 7	Humane orientation correlate positively with participative leadership.	Supported

Discussion

Institutional collectivism's and assertiveness' low scale reliability came as a surprise given that the GLOBE study found acceptable scale reliability in the 59 countries. However, the GLOBE study surveyed employed mid-level managers across three industries in 59 countries: the food industry, finance industry, and telecommunications industry. However, given the large proportion of the world's population involved in primary agriculture as their main economic activity 26% and within Kenya at 38% (ILO, 2018), the institutional collectivism scale might be less applicable to the self-employed rural farmer. Both the institutional collectivism and the in-group collectivism mean are much higher than the 59 nation GLOBE study mean.

The Kenyan community that scored the lowest on power distance meaning that they believe that power should be shared equally amongst all in society and that leaders should be questioned when disagreements arise are the Mijikenda. The next least tolerant of power distance are the Embu followed by the Luo communities. The population with the highest perception that their society holds the greatest power distance are the Luhya followed by the Kalenjin. These two communities are the least likely of the nine community groups surveyed to challenge their leaders and hold them to account.

Kenyans on average show a slightly higher perception that Kenyan society practices more uncertainty avoidance than the global average. Inasmuch, Kenyans have a slightly greater tendency to formalize interactions with others, document agreements by using legal contracts, keep meeting minutes, follow rules, and take calculated risks. Kenya stands higher than the mean average from the GLOBE study's 59 nation at 4.16. Kenya was not part of the GLOBE study's sample. Only five Sub-Saharan African nations were included in the GLOBE's sample. Interestingly, Kenya's intra-nation standard deviation is higher at 1.61 than the GLOBE study's multi-country standard deviation at .60. The low variance due to ethnicity means that these perceptions about the practices within Kenyan ethnic communities are held fairly constant across the country in the nine ethnic groups surveyed. Uncertainty avoidance correlated positively, significantly, and similarly to the GLOBE study with institutional collectivism, performance orientation, and future orientation. However, it did not correlate similarly to GLOBE with in-group collectivism, power distance, assertiveness, and humane orientation.

Logically though, utilizing the geography of thought for agricultural communities, one would expect the higher the level of formality due to uncertainty avoidance than the higher the perceive humane interactions by hiding emotional outbursts and opinions in favor of long-term interpersonal community relationships as highlighted in Nisbett (2004). This type of thinking would make it logical for agriculturalists who have a pro-planning future orientation to achieve future success through kind polite interactions and thus humane orientation with their community. These respondents are arguably more intertwined and more dependent on each other especially by the nature of their agricultural member-based co-operatives than the mid-level employed managers of the GLOBE study. The GLOBE study found no statistically significant correlation between future orientation and humane orientation whereas this study found the relationship between the two as the highest statistically significant correlation. Logically this is understandable in that mid-level managers' own polite and kind behavior in their community might stand as irrelevant towards their future success in their isolated corporate already successful employment whereas primary agriculture farmers in member-based co-operatives with their neighbors in the community need the kindness and polite interactions to survive economically into the future. The combination of humane and future orientations and uncertainty avoidance correlating positively might explain the unique phenomenon of also correlating positively with innovation as communities politely work together with a focus on the future and desire to avoid unforeseen outcomes that befall agriculturalists due to fluctuating weather conditions and market demand in commoditized economic environments.

Both future orientation and humane orientation show dramatically higher means on the 7-point Likert scale than the mean for the GLOBE study. Even more remarkably, the Kenyan average for future orientation at 5.43 also considerably exceeds the mean average for all regions of the world including the Sub-Saharan Africa geographic region at 3.92. The difference, again, is likely due to the type of sample. Agriculturalists logically must plan for the future more than employed already economically successful mid-level managers. However, while much higher than the GLOBE worldwide mean, Kenya's humane orientation is in-line with other Sub-Saharan African nations in the GLOBE study. So Sub-Saharan African preferences for kind and polite interactions transcends employed or self-employed and industry.

Stereotypes thrive in Kenyan society about its various ethnic communities (Tuna, 2015; Tanui, 2009). The intra-Kenya variability in culture dimensions largely did not support the ethnic stereotypes that swirl around certain communities. Specifically, a commonly prevalent though unresearched stereotype in Kenya exists that some communities are more or less assertive than others. Some colloquial commentators accuse the Luo community of being the most assertive in Kenya (Nairobian, 2018) and the Taita as the least assertive. However, the Luo are similar to the Kikuyu population in that they both actually perceive their societies as equally low in assertiveness. Contrary to stereotypes, the Luhya are the highest in assertiveness. The Luhya community is conversely the lowest in mean for humane orientation. This is similar to GLOBE findings that humane orientation and assertiveness are negatively and significantly correlated. While the inverse correlation exists in the Luhya community, in all nine ethnic communities as a whole, the correlation is unexpectedly positive and significant. The Assertiveness mean is 4.29, which is similar to the GLOBE study's 59 nation mean of 4.14, and a standard deviation of 1.70.

Based on the significant difference in humane orientation, the Luhya community

with its lower than any region in the world mean is most likely to practice social control based on bureaucracy, supervisory support, organizations controlled by legislation and unionization, and more of a stakeholder approach as opposed to the Kalenjin community with its Sub-Saharan African-aligned mean is more likely to implement social control through shared values and norms, mentoring and patronage support, organizations are trusted more and are autonomous in human resource practices, and more of a shareholder approach. Humane Orientation has a mean of 5.24 which is dramatically higher than the GLOBE mean of 3.18.

Simply put, there are significant differences between Kenyan cultures in how humanely they feel that the society around them is concerned for and sensitive to other people. The community with the lowest average humane orientation is also the one with the highest assertiveness. Again, the negative correlation was found in the GLOBE study between the variables but not on average in this study with the exception of the Luhya community.

The Kenyan community with the highest mean of future orientation, the Kalenjin, stands in stark contrast to Ketter & Arfsten (2015) who found the Kalenjin community to be in the middle of Kenya's ethnic communities with regards to long-term orientation, a similar variable to GLOBE's future orientation. Ketter & Arfsten (2015) also found the Luhya to be the most long-term oriented of all surveyed ethnic communities, while this research puts the Luhyua in the middle of the means. The future orientation dimension has a mean much higher than the mean for the GLOBE study's 59 nation mean at 5.43 and 3.85 respectively.

As expected, average area temperature shows statistically significant negative correlations with uncertainty avoidance, power distance, assertiveness, future orientation, and humane orientation. These findings are supported by Hofstede (1980) that posits that climate plays a crucial causal role in culture formation. As temperatures increase, Kenyan ethnicities tend to be less assertive, tolerate less power distance, avoid uncertainty less, and become less inclined towards future and humane orientations. The area of the country with the lowest average temperatures among the nine ethnic communities surveyed (Tutiempo, 2018) also had the highest means for 6 of the 8 culture variables studied and the highest temperatures and communities with the highest three temperature areas are the lowest in 7 of the 8 culture variables. Also, as temperatures rise, perceptions about a co-operative's participative leadership, members' perceived voice, members' attitude in commitment, and the innovation track record all decline. In warmer climates, co-operatives should be more intentional about soliciting member feedback and involving members in decision making.

The lack of significant correlation between institutional and in-group collectivism and average area temperature shows that communities in Kenya are likely collectivist regardless of their home climatic conditions. Performance orientation and average area temperature were also not correlated significantly.

The GLOBE study found a linkage between participative leadership and several culture dimensions including performance orientation, future orientation, assertiveness, both institutional and in-group collectivism, power distance, humane orientation, and uncertainty avoidance. This research found positive correlations between all the same culture dimensions with the exception of power distance. Inasmuch, among Kenyan co-operatives, the degree to which their host societies are stratified into different classes, upward social mobility, extent of civil liberties, and degree of fixed power bases all do not correlate with level of participation

that leaders allow their members to get involved in organizational decision making.

This research found strong correlations between the culture dimensions and innovation history with the co-operatives. Jones & Davis (2000) hypothesized that power distance, uncertainty avoidance, and collectivism, would lower innovation. However, this research found no significant correlation between innovation and power distance, and also significant positive correlations between uncertainty avoidance, institutional collectivism, and in-group collectivism with innovation. Innovation also correlates significantly with performance orientation, assertiveness, future orientation, and humane orientation. Assertiveness is loosely similar to innovation antecedent proactiveness (Helm & Andersson, 2010) and logically someone who values competition, dominant and tough behavior, and values success and progress would be more aggressive to innovate to seek solutions and rewards. Co-operatives should install senior management with a track record of innovation accomplishments in agricultural member-based organizations to offset impacts of low assertiveness communities. Additionally, the humane orientation may correlate with innovation because of the collectivist nature of Kenyan communities and co-operatives specifically. Therefore, members might see their intertwined lives in the co-operatives and think collectively for innovative solutions while being polite as needed for communities in long-term interpersonal relationships with future orientation all leading to innovation.

Members' affective commitment to their co-operative were higher in communities with greater institutional and in-group collectivism. This result is similar to the majority of research on collectivism and affective commitment (Meyer, 2012). The greatest correlation with commitment came in future orientation which logically ties similarity between a society's long-term orientation and their emotional bonded long-term expectations with the co-operative. However, Meyer *et al.* (2012) found no significant link between affective commitment and long-term orientation, similar to future orientation, and mastery orientation, similar to performance orientation, but this study found positive and significant correlations. Co-operatives should use "we" statements (Avenanti, Sirigu, & Aglioti, 2010) in official and informal interpersonal interaction to increase the collective perceptions of co-operative members and increase affective commitment.

Finally, the research shows strong positive and significant correlations between members' perceived voice and all culture variables except power distance. However, Brockner *et al.* (2001) found a negative and significant correlation between power distance and employee perceived voice. Surprisingly, a society's assertiveness is the lowest positive and significant correlation with members' perceived voice. So, a culture that practices assertiveness does only negligibly correlate to actually being heard. The strongest correlation is with humane orientation. Co-operative members feel they can speak up and be heard more by management and the board when they also feel that their society is humane and kind. Co-operatives must intentionally foster environments of kind polite interactions with members during meetings and regular interactions surrounding the agricultural production in order to foster better suggestions and ideas.

Conclusion and Limitations

This research notes the importance of revising the culture dimension scales for institutional collectivism and assertiveness for more appropriate Sub-Saharan African usage and for individuals not employed in successful positions. A more random population sample across multiple socio-economic levels might be applied more effectively in the future. The research found

different behaviors and perceptions correlated between climate and culture. Recommendations given above reflect differing managerial approaches depending on geographically specific climate areas and differing cultural dimensions in order to enhance perceptions, attitudes, and outcomes.

In the next step, researchers will utilize a structural equation modelling software (Mplus v.8, Muthén & Muthén, 1998-2017) with a robust estimator (i.e., MLR, used to accommodate any non-normality in the indicators for the latent variables) to test latent variable models of relationships implied and test measurement models.

There were limitations to the culture dimensions whereby researchers cannot make sweeping generalizations as the data only represented the summated responses of the 506 individuals that were surveyed. The surveys were not done in every county. Therefore, the intra-culture variability within communities was not captured. Future expanded research should include multiple counties per ethnic community where applicable, various sub-tribes, and incorporate samples from every community in Kenya instead of only the nine featured in this study.

References

Ashkanasy, N., Gupta, V., Mayfield, M. and Trevor-Roberts E. (2004). Future Orientation. In R. House, P. Hanges, M. Javidan, P. Dorfman, & V. Gupta. (2004). Culture, Leadership, and Organizations: the GLOBE Study of 62 Societies (282-342). Thousand Oaks, CA: Sage.

Avenanti, A., Sirigu, A. and Aglioti S. (2010). Racial Bias Reduces Empathic Sensorimotor Resonance with Other-Race Pain. *Current Biology. 20: 1018–1022.*

Brockner, J., Ackerman, G. Greenberg, J. Gelfand, M. Francesco, A. Chen, Z. Leung, K. Bierbrauer, G. Gomez, C. Kirkman, B. and Shapiro D. (2001). Culture and Procedural Justice: The Influence of Power Distance on Reactions to Voice. *Journal of Experimental Social Psychology. 37(4): 300-315.*

Carl, D., Gupta, V. and Javidan M. (2004). Power distance. In R. House, P. Hanges, M. Javidan, P. Dorfman, & V. Gupta. (2004). Culture, Leadership, and Organizations: the GLOBE Study of 62 Societies (513-563). Thousand Oaks, CA: Sage.

Child, J. and Kieser, A. (1979). Organisational and Management Roles in British and German Companies: an examination of the culture-free thesis. Book Chapter. Organisations Alike and Unlike. Lammus, C.J. & Hickson, D.J. [eds.]. Routledge, London.

de Luque, M. and Javidan M. (2004). Uncertainty avoidance. In R. House, P. Hanges, M. Javidan, P. Dorfman, & V. Gupta. (2004). Culture, Leadership, and Organizations: the GLOBE Study of 62 Societies (602-653). Thousand Oaks, CA: Sage.

Den Hartog (2004). Assertiveness. In R. House, P. Hanges, M. Javidan, P. Dorfman, & V. Gupta. (2004). Culture, Leadership, and Organizations: the GLOBE Study of 62 Societies (395-436). Thousand Oaks, CA: Sage.

Dheer, R., Lenartowicz, T. Peterson, M. and Petrescu M. (2015). Cultural regions of Canada and the United States: Implications for international management research. *International Journal of Cross Cultural Management. 14(3): 343-384.*

Dietz, G., Gillespie, N. Chao, G. Lewicki, R., Skinner, D. and Saunders M. (2010).

Unravelling the complexities of trust and culture. Saunders, MNK, Skinner, D., Gillespie, N., Dietz, G & Lewicki, R.M (ed). Trust: A cultural perspective. Cambridge: Cambridge University Press.

Flynn, B. and Saladin B. (2006). Relevance of Baldridge Constructs in an International Context: a study of national culture. *Journal of Operations Management. 24(5): 583-603*.

Garg, R. and Ma, J. (2005). Benchmarking Culture & Performance in Chinese Organisations. Benchmarking: *An International Journal. 12(3): 260-74*.

Gelfand, M., Bhawuk, D. Hisae, L. and Bechtold D. (2004). Individualism and collectivism. In R. House, P. Hanges, M. Javidan, P. Dorfman, & V. Gupta. (2004). Culture, Leadership, and Organizations: the GLOBE Study of 62 Societies (437-512). Thousand Oaks, CA: Sage.

Gibson, CB., Maznevski M. and Kirkman BL (2009). When Does Culture Matter?. Book Chapter. Handbook of Culture, Organizations, and Work. R. S. Bhagat & R. M. Steers [eds.]. Cambridge: Cambridge University Press.

Helm, S. and Andersson F. (2010). Beyond Taxonomy An Empirical Validation of Social Entrepreneurship in the Nonprofit Sector. *Nonprofit Management & Leadership. 20(3)*.

Hoch, J. (2013). Shared Leadership and Innovation: The Role of Vertical Leadership and Employee Integrity. *Journal of Business of Psychology. 28:159–174*.

Hofstede, G. (1980). Culture's consequences: International differences in work-related values. Beverly Hills, CA: Sage.

Hofstede G. (2001). Cultured Consequences. (2nd ed.). Thousand Oaks, C.A: Sage.

House R., Hanges, P. Javidan, M. Dorfman, P. and Gupta V. (2004). Culture, Leadership, and Organizations: the GLOBE Study of 62 Societies. Thousand Oaks, CA: Sage.

ILO (2002). R193 - Promotion of Cooperatives Recommendation, 2002 (No. 193). Geneva, 90th ILC session (20 Jun 2002). http://www.ilo.org/dyn/normlex /en/f?p=NORMLEXPUB:12100:0::NO::P1 2100_ILO_CODE:R193.

International Labour Organization (ILO) (2018). World Bank Economic Development Indicators: https://data.worldbank.org/indicator/SL.A GR.EMPL.ZS.

Javidan, M. (2004). Performance orientation. In R. House, P. Hanges, M. Javidan, P. Dorfman, & V. Gupta. (2004). Culture, Leadership, and Organizations: the GLOBE Study of 62 Societies (239-281). Thousand Oaks, CA: Sage.

Jones, G. and Davis H. (2000). National Culture and Innovation: Implications for Locating Global R& D Operations. *Management International Review. 40(1): 11-39*.

Kabasakal, H. and Bodur M. (2004). Humane orientation in societies, organizations, and leader attributes. In R. House, P. Hanges, M. Javidan, P. Dorfman, & V. Gupta. (2004). Culture, Leadership, and Organizations: the GLOBE Study of 62 Societies (564-601). Thousand Oaks, CA: Sage.

Kanten, P. and Ulker F. (2012). A relational approach among perceived organizational support, proactive personality and voice behaviour. *Procedia - Social and Behavioral Sciences 62: 1016 – 1022*.

Ketter, C. and Arfsten M. (2015). Cultural value dimensions and ethnicity in Kenya. *International Business Research. 8(12): 69-79*.

Kroeber, A. and Kluckhohn C. (1952). Culture: A Critical Review of Concepts and Definitions. Papers of the Peabody Museum of Archaeology and Ethnology. 47(1). Cambridge, MA: Harvard University.

Lew, TY (2011). Affective Organizational Commitment and Turnover Intention of academics in Malaysia. 2010 International

Conference on Business and Economics Research. Kuala Lumpur, Malaysia: IACSIT Press.

Meyer, J., Allen, N. and Smith C. (1993). Commitment to Organizations and Occupations: Extension and Test of a Three-Component Conceptualization. *Journal of Applied Psychology. 78(4): 538-551.*

Meyer, J., Stanley, D. Jackson, T. McInnis, K. Maltin, E. and Sheppard L. (2012). Affective, normative, and continuance commitment levels across cultures: A meta-analysis. *Journal of Vocational Behavior. 80: 225–245.*

Mooij M., and Hofstede G. (2010). The Hofstede Model Applications to Global Branding and Advertising Strategy and Research. *International Journal of Advertising. 29:85-110.*

Nairobian Reporter (2018). What Kenyan women think of men and their tribes. SDE News. https://www.sde.co.ke/thenairobian /article/2001263487/what-kenyan-women-think-of-men-and-their-tribes.

Nisbett, R. (2004). The Geography of Thought: How Asians and Westerners Think Differently and Why. Free Press: New York.

Ruck, K., Welch, M. and Menara B. (2017). Employee voice: An antecedent to organizational engagement? *Public Relations Review, Vol. 43(5): 904 - 914.*

Schein, EH (1997). Organizational Culture and Leadership. (2nd ed.). San Francisco, CA: Jossey-Bass.

Schneider, SC and Barsoux JL (2003). Managing Across Cultures. London: FT/Prentice-Hall.

Schwartz, SH and Bilsky W. (1987). Toward a Universal Psychological Structure of Human Values. *Joumal of Personality and Social Psychology. (53): 550-562.*

Shi, X. and Wang J. (2011). Interpreting Hofstede Model and GLOBE Model: Which Way to Go for Cross-Cultural Research? *International Journal of Business and Management. 6(5).*

Tajfel, H. and Turner J. (1979). An integrative theory of intergroup conflict. *The social psychology of intergroup relations. 33(47).*

Tanui, K. (2009). How we give life to tribal stereotypes. Standard Newspaper. https://www.standardmedia.co.ke/article/1 144022583/how-we-give-life-to-tribal-stereotypes.

Trompenaars, K. (1993). Riding the Waves of Culture: understanding cultural diversity in bittiness. London: Nicholas Brealey.

Tuna, C. (2015). Top 9 Funniest Tribal Stereotypes Of Kenyan Tribes. Are They True - POLL. Mpasho News. https://mpasho.co.ke/top-10-funniest-tribal-stereotypes-kenyan-tribes-true-poll/.

Tutiempo Network, S.L. (2018). Climate data: Kenya, Historical weather data in Kenya (E-W). https://en.tutiempo.net/clim-ate/kenya.html.

UNDESA (2018). 2018 International Day of Cooperatives "Sustainable consumption and production". United Nations. New York: https://www.un.org/development/ desa/cooperatives/2018/03/02/coopsday/.

UNDP (2017). Human Development Report 2016. United Nations. New York: http://hdr.undp.org/.

UNICEF (2018). Kenya at a Glance. New York: https://www.unicef.org/kenya/ overview_4616.html

Van Dyne, L., Ang, S., and Botero, IC (2003). Conceptualizing employee silence and employee voice as multidimensional constructs. *Journal of Management Studies. 40(6): 1359–1392.*

World Bank (2018). Economic Development Indicators. Washington, D.C.: https://data.worldbank.org/country/kenya.