Leveraging on Workplace policies for Women Engineers Performance in Commercial/Manufacturing State Corporations in Kenya

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Abstract
In the modern world, women in leadership has ignited a lot of debate globally and Kenya is no exception. The general objective of the study was leveraging on workplace policies for women engineers performance in Commercial/Manufacturing State Corporations in Kenya. Tree objectives guided the study: To determine the effect of affirmative-action on women engineers' leadership performance, to establish the effect of family-friendly policies on women engineers leadership performance and the moderating effect of organization culture to women engineers' leadership performance. Three theories were the foundation of the study. Descriptive research design formed the methodology of the study with a target total population of 33 commercial/manufacturing state corporations in Kenya. The sampling techniques adopted by the study were simple random sampling and convenience sampling where a sample size of 30 commercial & manufacturing state corporations generated by Yamane (1967) formula participated in the study with two women engineer leaders from each of the 30 state corporations. . A structured questionnaire was the key data collection tool and an exploratory study was conducted to check the reliability and validity of the data collection instrument. Eighty-five questionnaires were received which showed a 64.39% response. Data was analyzed by Statistical Package for Social Sciences (SPSS).Further, the pearson coefficient of correlation (R) (r=.695, p=.000) indicated a strong positive association between affirmative action policies and women engineers leadership performance. The study recommends that family-friendly policies should be designed to support employees faced with balancing the challenging demands of work and family.

Key words: Workplace policies, affirmative action policies, family-friendly policies, performance, engineering.

1. Introduction

According to Kouzes and Posner (2011) leadership is an affiliation between those who seek to lead and their followers. For things to be done in an extraordinary way, the quality of relationship matters most. Workplace policies are the aspects utilized in corporations to inspire work to be done to improve organizational results (Caillier, 2012). Organizational work policies support the working conditions that women engineer leaders work in. These new leadership practices for instance open decision making policies were found to better performance of the women leaders (Boatman & Wellins, 2011). Though Kenyan women comprise above 50 per cent of the whole population Felix *et al.* (2016) they hold less than a quarter of top leadership posts in commercial & manufacturing companies across the globe. Thornton (2016) with a third of corporations having no women at all in senior positions due to varied factors. The Constitution of Kenya, 2010 has however, been concerned with gender aspects of affirmative action. The Constitution aims to draw in from the historic marginalization of women from the conventional society, hence, building autonomy for women to exercise authority in private and public economic space. Equally, the constitution offers the principle of equality before the law, it states that, 'every person is equal and has the right to equal protection and equal benefit of the law' (Constitution of Kenya, 2010). It is the obligation of the State Department of Gender Affairs under the Ministry of Public Service, Youth and Gender Affairs to ensure devising, appraisal and administration of gender-based polices.

2. Methods

This study is founded on deductive approach an affiliation of positivism philosophy which specifically highlights on theory background (Kothari, 2019). This study used descriptive research design, qualitative and quantitative methods as Creswell (2013) opines that descriptive design is appropriate because a set of variables are tested in their normal environment. This method allowed the collection of quantitative data which was evaluated quantitatively using descriptive and inferential statistics. The target population for the study was 33 commercial & manufacturing state corporations in Kenya. The firms were selected from the annotations made by R.O.K. (2009); the report revealed that Kenya Vision 2030 has reserved the state corporations for quick progression and improvement. All the women engineer managers of the commercial manufacturing state corporations in Kenya will participate in the study. The unit of observation was the level at which data was collected from women engineer leaders who were from the senior management and other lower level line managers/supervisors. Sampling was done to limit the number of respondents to represent the overall population which allows the researcher to gather substantive data that represents the general population. The sample size was generated using the Yamane (1967) simplified formula to compute sample sizes with an assumption of a 95% confidence level.

$$n = \frac{N}{1 + N(e)^2}$$

When n is the sample size, *N* is the population size, and *e* is the level of precision (in this case *e*=.05). There are 33 government commercial & manufacturing state corporations in Kenya. $n = \frac{33}{1+33(.05)^2} = 30$

Simple random sampling technique was applied hence a total of 30 commercial & manufacturing state corporations participated in the study concerning workplace policies and leadership performance. Two women engineer leaders were selected by convenience sampling. Self-administered questionnaires were used for the study as they are subtle or individual, hence increases the reliability of reaction. The pilot-study was done a week prior to the actual data collection week. The rule of thumb that 10% of the respondents is used for piloting exercise (Kothari, 2019).

3. Results

Women engineers' Leadership performance was the dependent variable of the study and was contextualized by efficiency and effectiveness. The main objective of the study was to identify the influence of workplace policies on women engineers' leadership performance in commercial & manufacturing State corporations in Kenya. Significant results were presented using Likert scale of 1 to 5 (Strongly Agree to Strongly Disagree).

3.1 Descriptive Results of Workplace Policies

Workplace policies was measured by two constructs namely: affirmative action policies and family-friendly policies professional development models and social networking models. Descriptive data results shown in Table 1. The mean score of affirmative action policies was 3.1606 showing that the respondents on average were in agreement with the responses. The mean score of family-friendly policies was 2.9268 suggesting that the participants were uncertain about the responses. The results are shown in Table 1:

Table 1: Workplace Policies Descriptive Results

Variable	Mean	Std. Deviation	Cronbach's alpha
Affirmativeaction_policies	3.1606	1.08937	.906
Family-friendly_policies	2.9268	.70778	.781
Valid N (listwise)			

Table two results shows that the respondents were neutral that policies aligned to the need to ensure equality of opportunities in commercial & manufacturing state corporations are significant in enhancing women engineers' leadership performance. They were also uncertain whether they contribute in improving individual development of the women leaders. The respondents were neutral that other stakeholders are required to be committed in ensuring that these affirmative action as well as other family friendly policies are implemented as indicated in a means score of 3.1606. From this study the respondents were neutral that top management of most commercial & manufacturing state corporations are publicly involved in advocating favorable policies that ensure diversity in leadership positions. Respondents also were neutral that child care and family commitments are only seen as women issues as indicated in a means score of 2.9268. Cronbach's alpha is appropriate to test the reliability of the proposed sub-variables (Ali *et al*., 2016). The findings showed affirmative action policies items had a coefficient of .906 while that of family-friendly policies items had a coefficient of .781. The variables affirmative action policies and family-friendly policies constructs were reliable because Cronbach's alpha of above the suggested .7 Ali *et al*. (2016) hence the study was reliable.

3.2 Workplace Policies and Leadership Performance Correlation Results

Correlation analysis was done to appreciate the association between workplace policies and leadership performance. Correlation is a practice concerned with link between variables. The study examined correlation between variables (affirmative action policies and family friendly policies) and leadership performance. The results are shown in Table 2:

Table 2: Workplace Policies Correlation Results

		Affirmativeaction_policies	Family-friendly_policies	Leadership_Performance
Affirmativeaction_policies	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	132		
Familyfriendly_policies	Pearson Correlation	-.107	1	
	Sig. (2-tailed)	.222		
	N	132	132	
Leadership_Performance	Pearson Correlation	.695**	-.040	1
	Sig. (2-tailed)	.000	.653	
	N	132	132	132

**. Correlation is significant at the 0.01 level (2-tailed).

The results show that women engineers' leadership performance and affirmative action policies possess a strong (r= .695, p= .000) positive correlation while women engineers' leadership performance and family friendly policies have very weak (r=- .040, p= .653) negative significant relationship. This was attributed to having close values to 1 which showed a higher degree of correlation (Kothari, 2004). This meant that the variables are related.

3.3 Workplace Policies ANOVA Test

Analysis of Variation (ANOVA) test was carried out determine whether the general model had a significant fit of data. Creswell (2013) asserts that ANOVA is a procedure for analyzing the items that there was no significant variance among additional sample means. It computes the assumption by relating two different appraisals of the population inconsistencies. The positive significant relationship is seen between family friendly policies and women engineers' leadership performance (F = 60.466, p= .000) as pointed out in Model 1. After the moderator was introduced i.e. organizational culture F value improved (F = 75.620, p= .000) as revealed in Model 2 and revealed that there was significant connection between workplace policies and women engineers' leadership performance. Both models had p-value of less than .05, showing that the predictor variables expounds the variance in the dependent variable workplace policies on women engineers' leadership performance.

3.4 Regression Results of Workplace Policies

Regression analysis was carried out to establish whether family friendly policies and affirmative action policies had any significant effect on women engineers' leadership performance in commercial manufacturing state corporations in Kenya. The regression coefficients results of the workplace policies measures was hypothesized as follows:

H_{01}: There is no statistically significant influence of workplace policies on leadership performance in state corporations in Kenya.

The regression coefficients results of workplace policies measures i.e. affirmative-action policies and family-friendly policies. Affirmative-action policies (supported by β=.698, p-value = .000) and family-friendly policies (supported by β=.035, p-value = .580). It explains that affirmative-action policies has statistically significant influence on women engineers' leadership performance in state corporations in Kenya, while family-friendly policies has no significant influence on women engineers' leadership performance in commercial & manufacturing state corporations in Kenya as shown on the model below:

$$Y_i = 1.249 + 0.675X_1 \quad \text{..... (1.1)}$$

Where, X_1 – Affirmative-action policies

In concluded, there was statistically significant association of affirmative-action policies and leadership performance. The hypothesis was tested by combining regression model between women engineers' leadership performance and affirmative-action policies. From the results, it showed that workplace policies has noteworthy effect on women engineers' leadership performance since the p value of the slope is less than 0.05. This shows that the null hypothesis is rejected. It can be established that there is significant association between women engineers' performance and workplace policies. The model is obtained by as shown:

$$Y_i = 0.468 + 1.008X_1 \quad \text{..... (1.2)}$$

Where X_1 is Workplace Policies

The hypothesis was tested to test the moderation effect of organizational culture on work policies and women engineers' leadership performance:

H_{02}: There is no statistically significant moderating effect of organizational culture on workplace policies on women engineers' leadership performance in commercial & manufacturing state corporations in Kenya. Moderated regression analysis aimed to establish whether workplace policies measures moderated with organizational culture had notable significant effect on women engineers' leadership performance in commercial & manufacturing state corporations in Kenya. The results showed that the regression coefficients results of the moderated workplace policies measures. The interaction variable between workplace policies has a p-value of 0.000 ($p<0.05$). This shows that the moderating variable, organizational culture has significant moderating effect on workplace policies measures on women engineers' leadership performance in commercial manufacturing state corporations in Kenya. Therefore, the null hypothesis is rejected. The moderated regression model is summarized as shown below:

$$Y_i = 0.275 + 1.389 X_1 \quad \text{..... (4.9)}$$

Where X_1 is Workplace Policies

In conclusion, there is no moderation effect of organizational culture on workplace policies in women engineers' performance in state corporations in Kenya.

4. Discussion

4.1 Summary of Research Hypotheses

The aim of this study was to find out the moderating effect of organizational culture on women engineers' leadership performance in commercial manufacturing state corporations in Kenya. Correlation and regression analyses were applied to establish the link and strength of workplace policies to give conclusions on this study.

Table 3: Summary of Research Hypotheses

Null Hypothesis		Comments
1.	There is no statistically significant influence of workplace policies on leadership performance in state corporations in Kenya.	Rejected
2.	There is no statistically significant moderating effect of organizational culture on leadership performance in state corporations in Kenya.	Rejected

4.2 Discussion of Key Findings

The overall outcome of the study designate that actual key outcomes provide answers to the research findings. The study results indicate that distribution of workplace policies has a significant and positive association between affirmative action policies and women engineers' leadership performance in commercial manufacturing state corporations in Kenya. The study also revealed that there was no moderation effect of organizational culture on workplace policies measures i.e. affirmative-action policies and family friendly policies. An interesting finding established that the participants were uncertain that top management in commercial manufacturing state corporations publicly advocate for the need for gender diversity. In contrast Leahy (2011) found out that the importance of gender equality legislation is to realize equal prospects for women engineers. The study revealed that most participants were uncertain that their corporations support equality in getting leadership opportunities. This is in consistent with Kassily and Onkware (2010) study which revealed that stereotypes of women roles and family responsibilities have often demeaned women engineers. This study revealed that when women have been integrated in coming up work place policies, their representation in senior leadership positions is improved.

4.3. Organizational Culture

This study was also to assess the moderating effect of organizational culture on workplace policies women engineers' leadership performance in commercial manufacturing state corporations in Kenya. Organizational culture was measured by one construct involvement culture. The findings show organizational culture has significant positive moderating aspect of workplace policies women engineers' leadership performance. The pearson coefficient of correlation (R) ($r=.775$, $r=.000$) also indicated a strong moderating positive relationship of involvement culture on workplace policies and women engineers' leadership performance in state corporations in Kenya. This is consistent with Boedker *et al.* (2011) who revealed that when any information is widely shared, members within a corporation are able to get the right information when they need it. This would help in imparting strong integrated behaviors and values are developed, a strong involvement culture emerges.

4.4 Women Engineers' Leadership Performance

Leadership performance was measured by efficiency and effectiveness. The growth correlation matrix showed the correlation analysis with various degree of interrelationship between the independent variable and the dependent variable, leadership performance. The Pearson correlation coefficient was produced at .01 significance level (2-tailed). The study indicated positive relationship between perceptions, competency skills, workplace policies and role models. The results therefore, imply that workplace policies significantly influenced women engineers' leadership performance in commercial manufacturing state corporations in Kenya. However, the study revealed that majority of responses agreed that customers derived satisfaction from the organizations leadership efficiency as women engineer leaders were projected to heighten service delivery as success of the organization was dependent on team work provided by leaders from various levels of management. This was because the leaders in these organizations were able to achieve organizational goals in their work operations as customer service had been boosted by the team of committed leaders. This study is consistent with Kieu (2010) who established that effective leadership can be achieved by leader commitment and higher motivation of the followers. These strategies recommended by leaders are often inculcated in the organizations goals as the organizations recognized women strengths in their tasks as their performance was key in the success of the organization. These study findings were also in agreement with Muchiri, Cooksey, DiMilia, and Walumbwa (2011) who posit that gender and management level have a significant influence on leadership performance.

5. Conclusions

The study generally concluded that workplace policies influence leadership performance as demonstrated by requisites of women engineers' leadership performance. Review of literature lays the foundation for the current study. Regression results revealed statistically significant positive association of affirmative action policies and women engineers' leadership performance in commercial manufacturing state corporations in Kenya. The conclusion was based on the aspect of affirmative action in the Constitution of Kenya. State corporations had to observe to the reforms by the constitution concerning staff recruitment and promotion. The study also concluded that undefined organizational structures and promotional procedures also discourage inspiration of women engineers in managerial positions. The findings also showed that there was negative statistically significant relationship between family friendly policies and women engineers' leadership performance. This was because, the study revealed that there were less cases of unsuitable enactment of policies that deter women engineers' engagement leadership positions. It was also determined that women engineers are aspiring to balance work and family roles in their leadership positions.

6. Recommendations

The study recommends that the family-friendly policies should be formulated to support employees faced with balancing the challenging demands of work and family. In addition, in regard to workplace policies it is suggested that a quota law is provided as an initial step that women need in order to break the cycle of exclusion from corporate ranks. This can break the fear of not being able to find qualified women in leadership positions. Further the study also recommends that state corporations should also adopt policy guidelines based on quota requirements for women appointment in state corporations. This could also encourage more placement of women engineers in various leadership posts. The study also endorses that it would be meaningful to study other essentials of organizational culture which includes norms, approaches, experiences, beliefs and values of an organization. This would be helpful to establish its correlation with women engineers' leadership performance. From this knowledge, personal and professional experiences that women engineers experience would benefit researchers and policy makers.

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