The Influence of Balanced Controls on the Organizational Performance of Pharmaceutical Companies in Kenya

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ABSTRACT

This study aimed to establish the influence of balanced controls on the organizational performance of pharmaceutical companies in Kenya. The study was anchored on the strategic leadership theory. Balanced organizational controls were measured by balancing financial controls with; strategic, sustainability, and autonomy controls. The study adopted a positivist research philosophy and a descriptive correlational design approach. A self-administered questionnaire was used to collect data through stratified random sampling. A respondent rate of 82% of the target 390 senior managers in pharmaceutical companies in Kenya was achieved. The study's null hypothesis was tested using an ordinal linear regression model to establish the relationship between dependent and independent variables. The study showed a result of Nagerlkerke Pseudo $R^2 = .068$, meaning that balanced organizational controls explained 6.8% of the variance in organizational performance. At the same time, parameter estimates established that balanced controls significantly predicted organizational performance, $\beta=.134$, $p \leq .05$, rejecting the null hypothesis that balanced controls do not significantly influence organizational performance. Consequently, the study recommended that pharmaceutical companies implement mechanisms to ensure balanced controls between short-term financial controls with strategic, autonomy and sustainability controls. Future studies could investigate the influence of balanced organizational controls on employee performance

KeyWords: Balanced Controls, Organizational Performance, Pharmaceutical Companies

I. INTRODUCTION

Organizational performance is evaluated differently in different contexts; In private organizations, organizational performance is often assessed through sustained profitability and long-term investments/balance sheet. In public organizations, society's interests are generally expected to be in the foreground and are often seen from a political viewpoint (Iqbal et al., 2019). The overall performance of an organization can be evaluated using financial and organizational performance, such as profitability and growth in market share, and non-financial organizational performance, such as customer perspectives and organizational growth and learning (Alatailat et al., 2019; Lasater et al., 2019). Organizational performance is a significant concern for business executives in which the actual results of an organization measured against the intended outputs directly derive from goals and objectives (Singh et al., 2019).

Strategic leadership practices, and choices that leaders make, to a large extent, determine the performance of an organization. Hence, the need to identify criteria that will make organizations succeed and help them achieve organizational goals. Pharmaceutical companies in Kenya are stratified into local manufacturing pharmaceutical companies, research and development pharmaceutical companies and generic pharmaceutical companies. The Pharmacy and Poisons Board is the pharmaceutical regulatory authority in Kenya established by law under the *Pharmacy and Poisons Act, Cap 244*. The Board regulates pharmacy practice and the manufacture and trade of drugs and poisons. The key objective of the Board is to improve the quality of life of Kenyans by ensuring the quality, safety and efficacy of pharmaceutical products and services (Pharmacy and Poisons Board, 2018). Pharmaceutical companies in Kenya have been experiencing deteriorating performance due to challenges associated with a lack of strategic direction and inadequate strategy implementation (Onu et al., 2018). Operating at less-than-optimum capacity utilization naturally results in relatively higher production costs and makes it harder for local producers to compete with imports. At the same time, pharmaceutical companies are facing stiff competition, employee incompetency, changing market demands, and industry regulation are problems experienced by pharmaceutical firms operating in Kenya (Kenya Pharmaceutical Association, 2020). Therefore, this study sought to determine the influence of balanced controls on organizational performance as contextualised in pharmaceutical companies in Kenya.

Oladimeji et al. (2019) found that while pharmaceutical leaders in Nigeria were enthusiastic about the opportunities, tapping into these opportunities requires strategic leadership and skills. The study recommended further research to review the role of balanced organizational controls in influencing performance in pharmaceutical companies. Locally, pharmaceutical companies in Kenya have been experiencing deteriorating performance, with reports indicating a drop of 6% in revenues in 2019 due to challenges associated with a lack of strategic direction and inadequate strategy implementation (Onu et al., 2018). Operating at less-than-optimum capacity utilisation naturally results in relatively higher production costs and makes it harder for local producers to compete with imports. Oluoch et al. (2021) established that balanced organisational controls were not crucial in influencing the financial sustainability of not-for-profit organizations and recommended further studies to evaluate the appropriateness of such controls in other contexts. Therefore, this study sought to determine the influence of balanced organisational controls on organizational performance as contextualized on pharmaceutical companies in Kenya. The study's objective was to establish the extent to which balanced organizational controls influenced the performance of pharmaceutical companies in Kenya.

II. METHODOLOGY

Study Location

The researcher collected data under NACOSTI Ref.102927 from pharmaceutical companies across the country, focusing on the Nairobi City industrial area and its periphery towns, including Kitengela, Thika, Kikuyu and Kiambu, as most of the pharmaceutical companies are headquartered in Nairobi and its environs.

Research Design

The current study adopted a descriptive correlational research design. This design allowed the researcher to identify the direction and degree of the associations among variables without manipulating the variable.

Sample Size and Size

The study's target population was the 1752 senior managers of 584 pharmaceutical companies registered by the Pharmacies and Poisons Board (PPB). Three hundred ninety senior managers were proportionately sampled using a stratified random technique, and a respondence rate of 82% was achieved.

Study Instrument

The study applied closed-ended questionnaires using a 5-point Likert scale; (1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), 5 = Strongly Agree (SA)). The Likert scale was preferred because it enabled the researcher to convert responses into a quantitative format for easy data analysis using computer-based software.

Pilot Study

A pilot study was done to establish instrument reliability and validity. The reliability considered the value of Cronbach's alpha (α). Similarly, construct validity was enlisted to ensure all sections of the research instrument returned consistent results, as highlighted in Tables 1 and 2.
As indicated in Tab.1, the composite reliability value for balanced controls was .804, greater than the .7 threshold for reliability.

Table 1:
Reliability of Study Instrument

Study Variables	Variable Constructs	Cronbach Alpha Coefficient (α)	Number of Items
Balanced Organization Controls	•Strategic controls •Sustainability Controls •Autonomy Control	0.804	3

Table 2 shows that the value of the composite test for the study was >.7, indicating that all the variables in the study attained construct validity. The study also tested content validity using the Average Variance Extracted (AVE) approach. The AVE test aimed to attain an average value measurement of =>.5. From the study results, all the variables attained the threshold (AVE=>.5). Furthermore, the AVE values were ideally averaging over 0.7. This implied that the measurement scales revealed a satisfactory measurement of content validity.

Table 2:
Validity of the Instrument

Variables	Composite value	Average Variance Extracted (AVE)
Organizational Controls	0.815	0.683

Data Collection Procedure

The research procedure included obtaining permission to conduct the research, testing research instruments to determine their reliability and validity, administering the instruments, and ethical considerations that had to be observed during data collection. The first step was to seek permission to conduct research from study supervisors from Chandaria Business School, USIU-A. After this, NACOSTI and the Ministry of Basic Education were approved. Finally, responding firms were contacted, and questionnaires were delivered for later collection by research assistants.

Data Analysis

Data collected from the field was cleaned and coded for data entry. The analysis involved descriptive and inferential statistics in which the hypothesis was tested through correlation analysis, chi-square test, One-way ANOVA, R-square and parameter estimates.

Ethical Considerations

The field exercise observed all research ethics, including observation of the confidentiality clause, consent agreement by respondents, and displaying all research letters of authorization whenever requested by the research assistants.

III. RESULT

The study performed both descriptive and inferential statistics. The inferential statistics comprised correlation analysis, chi-square, one-way ANOVA, ordinal logistic regression, and parameter estimates. A Likert scale of 1 to 5 was used, with 1 as strongly disagree, 2 as disagree, 3 as neutral, 4 as agreed, and five as strongly agree. The statistical tests conducted were descriptive and inferential statistics to establish hypothesis testing using the ordinal logistic regression model.

Descriptive of the Study Constructs

From the results presented in Table 3, the respondents agreed that balanced controls influenced organizational performance through strategic controls (M=3.71, SD=.70), sustainability controls (M=3.62, SD=.95) and autonomy controls (M=3.88, SD=.70). It was also established that balanced controls affected profitability through strategic controls (M=3.89, SD=.86), sustainability controls (3.76, SD=.88) and autonomy controls (M=3.72, SD=.82). Balanced controls also influenced customer perspective through strategic controls (M=3.90, SD=.89), sustainability controls (M=3.85, SD=.80) and autonomy controls (M=3.76, SD.85). Finally, the respondents agreed that balanced controls affected learning and growth through strategic controls (M=3.71, SD=.93), sustainability controls (M=3.77, SD=.93) and autonomy controls (M=3.82, SD=.93).

Table 3:
Mean and Standard Deviation Balanced Organizational Controls

Balanced Organizational Controls	**N**	**M**	
My leader has established a balance between long term strategic controls and short-term financial control	320	3.71	0.70
My leader has established a balance between sustainability controls and financial controls	320	3.62	0.95
My leader has established a balance between autonomy control and financial controls	320	3.88	0.70

Influence of Balanced Organizational Controls on Profitability	**N**	**M**	**SD**
My Organizational profitability is influenced by my leader establishing balance between strategic and financial controls	320	3.89	0.86
My Organizational profitability is influenced leaders establishing balance between sustainability & Sustainable controls	320	3.76	0.88
My Organizational profitability is influenced by my leader establishing balance between autonomy and financial controls	320	3.72	0.82
Influence of Organizational Balanced controls on organization's Customers' Perspective	**N**	**M**	**SD**
My organizational customer perspective is influenced by my leader establishing balance between strategic &financial control	320	3.90	0.89
My organizational customer perspective is influenced by my leader establishing balanced sustainability & financial controls	320	3.85	0.80
My organizational customer perspective is influenced by my leader establishing balance between autonomy and financial controls	320	3.76	0.85
Influence of Organizational Balanced Controls on Organizational Learning and Growth Perspective	**N**	**M**	**SD**
My organizational learning and growth perspective is influenced by my leader establishing balance between strategic controls and short-term financial control	320	3.71	0.93
My organizational learning and growth perspective is influenced by my leader establishing balance between sustainability controls and financial controls	320	3.77	0.93
My organizational learning and growth perspective is influenced by my leader establishing balance between autonomy and financial controls	320	3.82	0.93

Correlation Analysis for Balanced Controls and Organizational Performance

Pearson's correlation analysis test was conducted to determine the relationship between balanced controls and organizational performance. As indicated in Table 4, there was a significant correlation between the independent variable Balanced controls and dependent variable organizational performance r (320) =.241, p<.05. This shows that as balanced control increases, there is an increase in influence on organizational performance.

Table 4:
Correlation Analysis of Balanced Control and Performance

		Balanced Control	Performance
Balanced Control	Pearson Correlation	1	
	Sig. (2-tailed)	.002	
	N	320	
Organizational Performance	Pearson Correlation	.241*	1
	Sig. (2-tailed)	.012	.000
	N	320	320

Chi-Square Test on Balanced Controls and Performance

A Chi-square test was used to check the strength of the association between the two variables. The results in Table 5 indicate a statistically significant association between balanced organizational control and organizational performance χ^2 (312, N = 320) = 403.122, p<.05.

Table 5:
Chi-square Test on Balanced Organizational Control and Performance

Chi-square Test	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	403.122[a]	312	.001

Likelihood Ratio	345.474	312	.738
Linear-by-Linear Association	42.332	1	.000
N of Valid Cases	320		

a. 390 cells (100.0%) have expected count less than 5. The minimum expected count is 01.
*b. *Chi-square is significant at p <. 05 level*

One-Way ANOVA Test between Balanced Controls and Demographics

One-way ANOVA was carried out to determine whether there were any significant differences between the means of balanced controls and demographic variables of gender, age bracket, position in the organization, work experience in the pharmaceutical company, and the highest level of education. Results displayed in Table 6 indicate that significant differences between the means of balanced controls and demographic variables occurred for the position in the organization, $F(4, 316) = 2.842$, $p \leq .05$ and Highest academic levels in the pharmaceutical company, $F(4, 316) = 0.789$, $p \leq .05$.

Table 6:
One-Way ANOVA for Balanced Control and Demographic Variables

		Sum of Squares	df	Mean Square	F	Sig.
Gender	Between Groups	6.324	4	1.581	1.713	0.501
	Within Groups	93.248	316	0.295		
	Total	99.572	320			
Position in Organization	Between Groups	40.2981	4	10.075	2.842	0.001
	Within Groups	784.342	316	2.482		
	Total	824.6401	320			
Work Experience	Between Groups	11.328	4	2.832	1.902	0.721
	Within Groups	684.214	316	2.165		
	Total	695.542	320			
Highest Academics	Between Groups	124.402	4	31.101	0.789	0.021
	Within Groups	764.284	316	2.419		
	Total	888.686	320			

Ordinal Logistic Regression for Balanced Controls and Performance

Pseudo R-square provided the coefficient of determination based on the log-likelihood for the regression model, and this was then compared to the log-likelihood of the baseline model. Results, as presented in Table 7, indicate the Pseudo R-square results for balanced control using the Nagelkerke R-Square, R^2 =.068, implying that balanced organizational control explained a variation of 6.8% in organizational performance.

Table 7:
Pseudo R-Square for Balanced Organizational Controls on Performance

Link Function	Logit
Cox and Snell	.061
Nagelkerke	.068
McFadden	.071

**Link function: Logit*

Parameter Estimates of Balanced Controls for Performance

The model for the influence of balanced controls, X, on organizational performance, Y, is given below;

$$\mathbf{logit[P(Y \leq j)] = \alpha j - \beta X}$$

Model fitting test results in Table 8 indicated a Log Likelihood[b] of 4.171, showing that the model was fit and predicted the influence of the independent variable (balanced organizational control) on the dependent variable (organizational performance). Bayesian Information Criterion (BIC) means that other factors held constant, balanced organizational control constructs as an independent variable is responsible for 6.2 positive change in organizational performance of the various pharmaceutical firms in Kenya, conclusively, based on the chi-square scores of above critical chi-square value at four (4) degree of freedom 3.841 (6.305 for balanced organization control).

Table 8:

Parameter Estimates for Balanced Organization Controls

(a) Goodness of Fit[a]

	Value
Log Likelihood[b]	4.171
Akaike's Information Criterion (AIC)	11.455
Finite Sample Corrected AIC (AICC)	11.507
Bayesian Information Criterion (BIC)	6.208
Consistent AIC (CAIC)	20.348

(b) Hypothesis Testing (Wald Chi-square)

	Wald Chi-Square	df	Sig.	B	Std. Error	95 Percent Wald Confidence Interval		
						Lower	Upper	Wald Chi-Square
(Intercept)	22.720	4	.000	2.89	.7982	2.402	6.191	22.72
Balanced Control	6.305	4	.005	.134	.6671	.834	1.322	6.305

IV. DISCUSSION

Correlation analysis results determined that balanced controls had a positive and significant relationship with organizational performance, r (320) =.241, p≤.05. The findings are congruent with Haiku et al. (2018) in their study of 58 Scandinavian transport firms, correlation analysis results indicating that balanced organizational controls had a significant influence on transport sector performance r (58) =.509, p≤.05. They argued that balanced organizational controls that were tied to global objectives provided incentives for increased collaboration amongst the transportation firms thus achieving a global harmonised strategy.

On the contrary, in Indonesia, Kariyawasam (2018) correlation results indicated that there was a nonsignificant influence of organizational controls on operational strategies that guide the firm's performance r (47) =.017, p>.05. The study specifically determined that total quality control was crucial to the implementation of operational strategies that improved organizational performance, yet organizational controls could hinder this.

On the contrary, in their study, Chi-square results, Gadenne et al. (2018) determined that controls negatively influenced firms' performance. Specifically, the Chi-square test showed a statistically insignificant association between balanced organizational controls and organizational performance, χ^2 (92, N = 132) = 79.119, p≥.05. In a study; the scholars established that increasing the level of an organization's focus on its objectives could negatively be associated with under-performance of one or more sustainability performance indicators. This was more so when the organizational controls were not well-articulated. Also convergent to the current findings is Stouthuysen et al. (2017), in which the Chi-square test showed a statistically significant association between balanced organizational controls and organizational performance, χ^2 (76, N = 227) = 119.332, p<.05 demonstrating the high significance of strategic controls influencing the attainment of objectives and thus organizational performance. Dubey (2019), in studying the life cycle of pharmaceutical firms, pointed out that balanced controls were a critical aspect in the pursuit of performance, noting that innovations that characterise the industry are best beneficial to the firm if there is robust control. This is also supported by Golensky and Hager (2020), who observed that the pharmaceutical industry, unlike non-profit organisations, requires solid financial controls to mitigate the high cost of research and development (R&D).

Elsewhere, Dieleman and Koning (2019) results for One-way ANOVA determined there were significant differences between the means of balanced controls and demographic variables for two aspects of demographics, F (2, 90) = 1.117, p ≤ .05 and F (2, 90) = 1.226, p ≤.05. Dieleman and Koning (2019) therefore concluded that any form of controls was a means of ensuring that performance parameters were remaining on course at all times of the financial as well as operational year. Overall balanced controls have resulted in organizations' focus on implementing all aspects of budget and resource allocation, thus enhancing organizational performance.
On the contrary, in a study by Saragih (2018), One-way ANOVA results determined that job autonomy had a negative influence on the customer perspective of firms, F (3, 112) = 1.003, p ≥ .05 and F (3, 112) = 0.086, p ≥.05. The study established that structural relationship in job autonomy did not significantly influence job stress in the construct of autonomy as a driver of organizational performance. Furthermore, Saragih (2018) results demonstrated that self-efficacy partially mediated the relationship between job autonomy, job satisfaction, and job performance. However, these organization controls did not lead to improved firm performance.

Finally, Polychroniou and Trivellas (2018) results of Ordinal logistic regression analysis (Negerlkerke Pseudo R-Square) revealed that the balanced organizational controls model explained 8.7% of the variance in organizational performance (R2 = .087) of Spanish pharmaceutical firms. The results thus were in line with the current results. Other results whose ordinal logistic regression analysis showed a positive and significant influence on organizational performance include Johnson (2017) and Khan (2017), with Ordinal logistic regression analysis (Negerlkerke Pseudo R-Square) indicating a 6% and 7.1%, respectively, influence of organizational performance by balanced controls.

However, another study in Scandinavian local pharmaceutical firms by Sihag and Rijsdijk (2019) indicated Ordinal logistic regression analysis (Negerlkerke Pseudo R-Square) results where only a mere 0.32% influence of organizational performance was by balanced controls. This was pointed out by Sihag and Rijsdijk (2019), that failure to plan outcomes, behavior, and clan controls failed

to enhance performance. From the preceding studies, organisational controls may hinder organisational performance, implying that not all controls were beneficial.

Conclusion

The study, therefore, concluded that establishing balanced organizational control significantly influenced the organizational performance of pharmaceutical companies in Kenya.

Recommendations

Consequently, the study recommends that leadership establishes a balance between short-term financial goals and long-term strategic goals. Additionally, implementing a balanced scorecard to ensure focus on both financial and non-financial key performance indicators could help achieve sustainable organizational performance; future research could investigate the influence of establishing balance organization controls on employee performance in different contexts, such as the service industry.

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