

Influence Of Government Subsidies on Private Fertilizer Companies Performance in Nairobi Kenya.

Thuku Mary¹Dr. Julius Kahuthia² Dr. Ruth Kingoo³

¹Postgraduate Student, St Paul University

^{2,3}Department of Business Administration, lecturer St Paul University, Nairobi Kenya.

Abstract

The role of private manufacturing fertilizer companies is integral as it provides for 60% of the Kenyan fertilizer market while the government fills the 40%. The project therefore looked into the influence of government subsidies, on the performance of private fertilizer companies. The study was anchored on spillover theory. The project utilized a cross-sectional survey design on 830 employees of fertilizer manufacturing companies which was the target population. Systematic and random sampling was deployed on the 270 employees of the private fertilizer manufacturing companies. The study used primary data which was collected using close ended questionnaires. The data was analysed using SPSS version 25.0. Descriptive analysis was used to analyze the data set through the use of tables, figures, percentages, mean and standard deviations. Inferential and multiple regressions were used. The regression results indicated that the model explained 36.3% of the variation in firm performance ($R^2 = 0.363$; Adjusted $R^2 = 0.351$). The findings further revealed that government subsidies had a significant positive effect on performance ($\beta = 0.598$, $p < 0.04$), indicating that policy support influences operational outcomes. The study concludes that government subsidies significantly influence firm performance. It recommends that firms collaborate with government agencies to improve subsidy frameworks.

Keyword: subsidies, performance, fertilizer, private companies,

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I. Introduction

Globally the primary aim of startups is profitability and returns on investment. This therefore demands an organization to strategize and set goals towards achieving success in an organization. The degree to which an achievement is being or has been accomplished is called as performance (Gini, 2023). The positive achievement of every company relies on the organization abilities to swiftly identify and respond based on changes of the environment. The metrics of private firms are essential as they are the leading economic contributor. The manufacturing sector in Kenya has been identified a predominant player in achieving vision 2030 with current contributions in economy development and creation of jobs (Mwambi, 2023).

Changes in the economies due to various factors such as government subsidies has affected the performance of the private companies. The government embraced the use of subsidy use in 2007 to 2008 in Kenya due to the increase of oil globally which resulted to increase in the cost of fertilizers. The subsidy introduced by the government was covering 10% of the farmer needs which was later adjusted to 40% while the private sector covers 60% (Opiyo, 2023). The subsidy was introduced to increase food security and production by making the fertilizer easily accessible to farmers. The government invested a subsidy worth 23 million USD to reduce the food prices by minimizing the expenses incurred during production. (GMI, 2025). Over the years, the subsidy program has been modified to suit the needs of the farmers including provision of e-vouchers to allow the farmers to access the fertilizers at the agro dealer near them. Despite the benefits it has brought to the farmers, other stakeholders such as private manufacturing companies count losses. Fertilizer as subsidies by the government alters the demand and supply patterns, high levels of layover, few sales and returns to the company, as the prices of the private companies are high as the government one is low. A report by Tegemeo (2023) cites that one of the major challenges experienced by the private firms is the lack of partnership with the government in the distribution of the subsidy. Unfortunately, this has seen many private fertilizer companies face the challenge of being crowded out by the program (Ayalew *et al*, 2023).

Statement of the problem.

Environments surrounding businesses continue to change rapidly due to changes in government subsidies which all influence the performance of the firm. Failure to continually adapt to introduction of government subsidies forces results to be line in productivity and reduced competitiveness. Studies show that the global disruption in fertilizer input markets during the year 2021 and 2022 significantly affected the

profitability and supply chains especially in Africa (Ricker et al., 2024). This proves the need for any organization to continuously adjust their strategies in order to remain resilient in volatile environments.

The fertilizer companies in Kenya operate under the increased intervention of government subsidy programs with the aim of ensuring food security is enhanced and making sure that the fertilizer prices are stable for the farmers. However, empirical findings on the effects of such subsidies on firm performance remain mixed. For example, studies show that fertilizer subsidy programs can both stimulate market participation and distort private sector performance depending on implementation design and market conditions (Njagi et al., 2023; Ricker et al., 2024). Additionally, markets that are driven by subsidy have shown to influence the performance of the private fertilizer companies by crowding them out from participating in the sector by making the fertilizer inputs be accessible to the farmers even on a short-term basis (Njagi et al., 2023). These mixed outcomes create uncertainty regarding their net effect on private fertilizer firms' performance. Recent studies continue to explore on the influence of subsidy fertilizer to the farmers, the prices of food and outcomes of the subsidy nationally rather than the private fertilizer manufacturing and distribution firms (Ricker et al., 2024; Jayne et al., 2021). The study seeks to establish the influence of government subsidies on the performance of fertilizer companies in Nairobi.

Objective of the study

To find out the influence of government subsidies on the performance of private fertilizer companies in Nairobi Kenya.

Theoretical review

Graham Staines opined the spill over theory in 1980. The theory indicates that different areas have different attitudes, feelings and emotions and can have an overflow in other areas whether positively or negatively. The overflow of negativity or positivity is transmitted from one subsystem to another subsystem (Calderwood et al, 2021). A unit increase in government subsidies will result to an overflow in the company whether positive or negative. For the farmers then there is a positive overflow in the purchasing and consumption power. The use of government subsidies can have either a favorable or unfavorable overflow on both based on its implication. For instance, the provision of free or fertilizer incentives by the government country wide will reduce the purchases in the private companies thus affect their performance (Minot et al, 2020). On the other hand, collaborations by the government with the private fertilizer companies in providing government subsidies will create business opportunities with the private fertilizer companies thus increase the productivity (Takeshima et al, 2023). When the subsidies complement private fertilizer markets can strengthen supply chains, improve farmers' access to inputs, and support higher agricultural productivity, whereas poorly designed programs that bypass private firms may crowd out commercial sales and weaken market development. It's instrumental to use this theory in this study because it shows the relations of government subsidies and performance of the private fertilizer companies.

II. Literature Review

Ricome et al. (2024) did a study in Senegal on the influence of government fertilizer subsidies on input use together the income. The study conducted a survey on 936 farmers using stratified sampling using a two-stage sampling method. The study provided subsidized seeds and fertilizers which were given to the respondents as control and experimental groups. Some respondents received seeds and fertilizers while others received fertilizer or seeds only. The study finding established that commercial use of fertilizer is higher for non-recipients than for a recipient which is an indication that ISP crowds out private fertilizer sales to farmers. The study further notes that use of subsidized fertilizers by the farmers is limited due to unavailability of the subsidized fertilizer. The criteria for selecting farmers are unclear thus many don't receive it. With these findings, the correlations maybe biased and cannot be used conclusively as they show that private fertilizer companies are being crowded out, yet notes that majority of the farmers do not receive the subsidized fertilizer. There is need therefore to bridge the gap by bringing in information that is not based on the farmers but the private fertilizer companies.

A study was done by Takeshima et al (2023) in Nigeria to evaluate the impact of fertilizer subsidies on the commercial fertilizer companies in Nigeria. The study used secondary data which was derived from the National survey on agricultural export commodities (NSAEC) and Nigeria living standard measurement survey. The findings posit that higher subsidy rates are associated with market fertilizer prices being low which generally results to the reduced profits for the private fertilizer companies. Further the study suggests that private fertilizer companies are crowded out by the fact that farmers use a single source in obtaining their fertilizer. The results show that subsidized fertilizer crowds out the private fertilizer companies by 19-35%. In Kenya, there are so many distributors of fertilizers as compared to Nigeria thus farmers have different sources of

obtaining the fertilizer. The study will bridge the gap by bringing more input from both primary and secondary data for conclusive analysis as compared to this study.

III. Research Methodology

The study adopted a descriptive cross sectional survey designs since data is collected from a population one off and the results can be inferred. The study considered 830 employees of private fertilizer manufacturing companies within Nairobi County. The fertilizer companies chosen included Elgon Kenya limited, OCP Kenya limited, Yara, Amiran and ETG Company within the Nairobi County. The organizations were chosen because they have their central operations in Nairobi and have been in operations for more than ten years of service thus, they provided the needed information regarding this study. Stratified sampling was applied since the companies selected need good representation to private fertilizer companies in Kenya while simple random sampling was applied to select fertilizer company's employees

Table 1.1 Sample Size

Company	Frequency	Sample %	reference	Sample size
Elgon Kenya	332	40		108
ETG Company	154	19		51
Amiran	256	31		83
Yara	66	7		20
OCP	22	3		8
TOTAL	830	100		270

Source: Survey data 2026.

The research adopted a sample size of 270 employees from private fertilizer companies who were requested to fill in the questionnaire through random sampling. Data were collected using structured close-ended questionnaires since they are easy to administer, facilitate uniform responses, minimize interviewer bias, and enable efficient quantitative analysis. To pretest and validate the questionnaires, the researcher carried out a pilot study. The researcher pilot was tested for appropriateness on 10 customers of Kiambu fertilizer limited. Questionnaires with the raw data from the field was checked for completeness and consistency in responses and coded. Collected data was coded and analyzed then presented in tabular form and figures. Ordinary Least Square method was used in establishing coefficients of regression through multiple regressions to show the extent of influence of government subsidy of Private fertilizer companies. Analysis of variance (ANOVA) was used in testing the level of significance of the variables on the dependent variable at 95% level of significance. Inferential statistics was applied to establish the relationships among the study variables, and the following regression model was used:

IV. Results and Discussion

Out of 270 targeted respondents, 219 returned fully completed questionnaires, which translate into an 81 percent response rate which is excellent for the study based on assertions by Mugenda and Mugenda (2003).

The study sought to establish the level of agreement relating to statements on the influence of government subsidies on performance of fertilizer companies in Nairobi.

Table 1.2 Statements Regarding Government Subsidies.

Government Subsidies	Mean	Standard deviation
Subsidized fertilizers by the government do not affect our organization	1.995	0.810
The government partners with our company in distribution	2.064	0.827
Our company has its solid customers who are loyal despite subsidies	3.046	0.845
Subsidies by the government leads to poor performance of our company	4.129	0.783

Source: Survey data 2026.

These findings revealed that general consensus was adopted by the respondents to show that government subsidies have an effect on the performance of privately owned fertilizer companies. The respondents agreed to a great extent that Subsidies by the government leads to poor performance of our company shown by a mean of 4.129. The respondents held moderate views that our company has its solid customers who are loyal despite subsidies shown by a mean of 3.046. The respondents disagreed to a great extent that the government partners with our company in the distribution shown by a mean of 2.064 and subsidized fertilizers by the government do not affect our organization shown by a mean of 1.995. In general, the evidence indicates that government subsidies were enacted to benefit farmers; however, they present considerable barriers to the performance and financial success of privately owned fertilizer manufacturers. This aligns with Tegemeo (2023), which states that the lack of alliances with the government in distribution is a challenge to the private firms, which only worsens their inability to compete with subsidized fertilizers. This follows the findings by Takeshima et al. (2023) who reported that subsidy rates and resultant low market prices decrease commercial application of fertilizers and resulting profits by private businesses.

The study sought to establish the level of agreement relating to statements on performance of fertilizer private companies.

Table 1.3 Statements Regarding performance of fertilizer companies

Performance of Private Companies	Mean	Standard deviation
Our company has experienced growth and expansion in the last 2 years	4.309	0.868
We have high levels of clientele satisfaction	4.269	0.827
I am satisfied working for our company	4.183	0.880
Our operations are efficient and effective	4.269	0.891
Diversification improves the performance	3.900	0.877

Source: Survey data 2026.

According to the results above, the respondent indicated to a great extent that Fertilizer Company has experienced growth and expansion in the last 2 years shown by a mean of 4.309, there is high levels of clientele satisfaction and the operations are effective and efficient shown by a mean of 4.269 for both of them. The respondents further agreed to a great extent that they are satisfied working for the company shown by a mean of 4.183 and diversification improves the performance shown by a mean of 3.900. The standard deviation was less than 1 which is an indication that the respondents held similar views.

Regression Analysis

Table 1.4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.603 ^a	.363	.351	.46577

The value of R Square = 0.363 means that about 36.3 percent of the variation in performance of fertilizer firms can be attributed to the four macro-environmental factors under investigation. The other factors that were not incorporated in this model contributed to 63.7 percent of variation.

The adjusted R Square = 0.351 once again makes it clear that the model is robust as adjusted to the number of predictors included in the model. The model depicts that changes in the performance of fertilizer companies shown by. 35.1% can be attributed to changes in government subsidies change in government subsidies at a 95%confidence level.

Table 1.5: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	Constant	1.954	0.453		4.313	.002
	Government Subsidies	0.598	0.201	.0323	2.717	.004

Government subsidies had a positive and significant effect on firm performance by the value of 0.598 and with a 0.004 level of significance which is below the p significance level value of 0.005. This is an indication that one unit increase of government subsidies while other factors are held constant, will result to one unit increase in the performance of the fertilizer companies by 0.598. This implies that changes in government subsidy have a statistically significant positive influence on the performance of private fertilizer firms. Although subsidies may introduce competitive pressure from government-subsidized products, they may also expand overall fertilizer demand in the market, thereby indirectly improving the sales performance of private firms. This is contradictory with other studies carried out that show that government subsidies have an inverse significant on the performance of the firms.

The regression equation is as shown below;

$$Y = 1.954 + 0.598 X_1$$

Retaining government subsidies practices continuously to zero, will result to performance of the private fertilizer companies at 1.954.

V. Conclusion

This study concluded that government subsidies have a positive and a statistically significant influence on the performance of the private companies in Nairobi. Although subsidized fertilizers may create competitive pressure and reduce the market share of private firms and lead to crowding out in some instances, the findings indicate that subsidies may also stimulate overall fertilizer demand by increasing farmers' purchasing power, thereby generating indirect market opportunities for private manufacturers. The study also concludes that government subsidies are a powerful indicator of the performance of firms, which justifies their role in making the industry successful and stable. Comprehensively, government subsidies prove to be a decisive external factor, which astute private fertilizer businesses must strategically address to stay competitive and generate long-term sustainability in the business.

VI. Recommendation

To alleviate the adverse effects of government subsidies, private fertilizer firms should team up with the government to design balanced subsidy policies that minimize market disruptions. Facing the effects of subsidized fertilizers, companies can seek ways of penetrating niche markets or value-added services to remain profitable.

Areas of further study

Further research should be carried out to establish the measure of the effectiveness of the existing government subsidy models in reducing market distortions.

References

- [1]. Ayalew, H., Karugia, J., Olwande, J., & Breisinger, C. (2024). *Subsidizing resilience: Evaluating Kenya's fertilizer subsidy program amid global shocks*. International Livestock Research Institute (ILRI) and International Food Policy Research Institute (IFPRI).
- [2]. Gini, K. B., & Agala, H. O. (2023). The impact of macro-environmental factors on business performance in Nigeria. *International Journal of Research and Innovation in Social Science*, 7(11). <https://doi.org/10.47772/IJRIS.2023.7011144>
- [3]. Government of Kenya, Ministry of Industrialization. (2020). *Ministry of Industrialization*. <https://www.industrialization.go.ke>
- [4]. Jayne, T. S., Liverpool-Tasie, L. S. O., & Mason, N. M. (2021). Input subsidy programs and agricultural transformation: A review of recent evidence from sub-Saharan Africa. *Food Policy*, 102, 102111. <https://doi.org/10.1016/j.foodpol.2021.102111>
- [5]. Liverpool-Tasie, L. S. O., & Takeshima, H. (2023). Fertilizer subsidies, private input markets, and agricultural productivity in sub-Saharan Africa: Recent evidence and policy implications. *Food Policy*, 118, 102487. <https://doi.org/10.1016/j.foodpol.2023.102487>
- [6]. Makau, J. M., et al. (2016). *An assessment of the effect of a national fertiliser subsidy on farmer participation in commercial fertiliser markets in the North Rift and Western Kenya*. African Association of Agricultural Economists.
- [7]. Minot, N., & Benson, T. (2020). Fertilizer policies and implications for African agriculture. In A. Badiane & T. Makombe (Eds.), *2020 Annual Trends and Outlook Report: Sustaining Africa's agrifood system transformation*. ReSAKSS, International Food Policy Research Institute (IFPRI).
- [8]. Mugenda, O. M., & Mugenda, A. G. (2003). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: African Centre of Technology Studies.

- [9]. Njagi, T., Olwande, J., Opiyo, J., & Simba, Z. (2023). *A rapid assessment of the effects of the general fertilizer subsidy on private sector fertilizer markets*. Tegemeo Institute of Agricultural Policy and Development, Egerton University.
- [10]. Opiyo, F., Kimathi, S., & Olwande, J. (2023). *Rapid assessment of Kenya's National Fertilizer Subsidy Program*. CGIAR Initiative on National Policies and Strategies.
- [11]. Opiyo, J., Simba, Z., Njagi, T., & Olwande, J. (2023). *A rapid assessment of the effects of the general fertiliser subsidy on private sector fertiliser markets*. Tegemeo Institute, Egerton University.
- [12]. Ricker-Gilbert, J., Mallory, M. L., Ogunbayo, I., Akano, O., Goeb, J., Burke, W., Jayne, T., Obinefo, I. M., Peng, R., Mulenga, B., Agyei-Holmes, A., Olwande, J., Mpenda, Z., & Pangapanga-Phiri, I. (2024). *Causes and consequences of the 2021/22 fertilizer price spike on sub-Saharan Africa: Lessons learned and implications for future actions*. Purdue University.
- [13]. Ricome, A., Barreiro-Hurle, J., & Fall, C. S. (2024). Government fertilizer subsidies, input use, and income: The case of Senegal. *Food Policy*, 124, 102623. <https://doi.org/10.1016/j.foodpol.2024.102623>