

Increasing private participation in agriculture through privatization

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ABSTRACT

In reaction to worrisome performance of agricultural sector in Nigeria, the Federal Government has embarked on various programs and projects aimed at returning the sector to its enviable position. The government efforts have not yielded sufficient desired results, as the country still witnessed high cost of food, general cost of living and perpetual poverty. This paper suggested a redirection of the government efforts to privatization of agricultural enterprises, projects and programs, since it has been shown to have capacity to increase the efficiencies of the concerned enterprises. This study relied on secondary data from Malawi and primary data from private cocoa farmers in Oyo state in Nigeria. The empirical evidence from Malawi shows that technical efficiency of agro-allied industries increased from 65% before privatization to 72% after privatization. The determinants of technical efficiency of the agro-allied industries in Malawi are state ownership, monopoly, capital intensity, Multinational Corporation, and structural adjustment program. While state ownership and monopoly reduce the efficiency, the other three determinants increase it. This indicates that agro allied industries can be more efficient under private control than under the State (Government). The result of analysis of the primary data suggests that farmers that pay for their land are more technically efficient (63%) than those who did not (59%). This allay the fear that increased in cost, that is associated with privatization will not reduce the technical efficiency of the farmers. The paper recommends a gradual privatization of agricultural enterprises, projects and programs in Nigeria. This will not only increase their efficiency but also gender active participation and competition.

INTRODUCTION

The potential role of Agriculture in economic development in all economies, especially the developing ones, is well known. In Nigeria, the sector is the leading contributor to the GDP in spite of the dominant role of the crude oil in the external sector of the economy (Dittoh, 1994). The sector has however, suffered many reverses during the past couple of decades. From era of booming export trade in Agricultural commodities, the Nigerian agricultural sector has degenerated to an import dependent one. Subsequently, it has failed to generate significant foreign exchange, feed agro-allied industries, improve the living standards of farming households and provide effective demand for industrial goods and services. Another indicator of a depressed performance of the agric sector is the food crisis, which the country has witnessed; data from the World Bank (1990) shows that between 1980 and 1990, 17% of the entire population experienced food insecurity annually. This data further corroborate earlier findings of other agricultural experts about the precarious food situations in the country.

In reaction to the worrisome performance of the agricultural sector, the Federal Government has embarked on various programmes and schemes aimed at returning the sector to its enviable position in the Nigerian economy. The late 1970s witnessed

maximum intervention exemplified in unprecedented deluge of Agricultural policies, programmes, projects and institutions (Olayemi, 1994). Some of these include; National Accelerate Food Production (NAFP, 1973), River Basin Development Authority (RBDA, 1973), Green Revolution (GR, 1979). The 1980s and 1990s saw the establishment of such institutions as the Directorate for Food, Road and Rural Infrastructure (DIFRR, 1986), National Directorate for Employment (NDE, 1987) and National Land Development Authority (NALDA, 1991).

These Governments' efforts have not yielded sufficient desired results, as the country still witnessed increasing high cost of food, general cost of living and perpetual poverty. This may call for redirection of Government focus for better performance of Agriculture in Nigeria.

The main economic justification for privatization of these projects and programmes is that it promotes economic efficiency (Chirwa, 2001). This paper therefore examine the impact of privatization of state owned enterprise on their economic efficiency using secondary and primary data from Malawi and Nigeria (Oyo State) respectively.

The specific objectives of this study are:

1. To examine the technical efficiency of agro- allied industry before and after privatization.
2. To determine the factors that influence privatization of agro-allied industry.
3. To determine the effect of paying for factor of production (land) on the technical efficiency of cocoa farmers in Oyo State.
4. Economic Efficiency and Privatization.

Several alternative theories explain the superiority of private ownership over public ownership, and the economic efficiency gains that are likely to emerge from the transfer of ownership control of assets from the public to private investors. First, the property rights theory explains differences in the performance of private and public enterprises in terms of marketed differences in attention of property rights (Furubton and Pejovich, 1972). Property rights in public enterprises are alternated partly because property rights cannot be easily transferable. The problem of transferability implies that the cost and rewards of economic activities do not accrue more directly to individuals responsible for the property rights. The link between the private owner (the tax payer) and the manager of the public firm is extremely long, weak and tenuous, making monitoring of public managers' behavior difficult. The general conclusion from the property rights theory is that the more alternated property rights are the less productively efficient will be the enterprise because alternation weakens the reward/ penalties systems that are necessary for cost minimizing behavior.

Secondly, the principal – agent theory focuses on differences in the monitoring mechanisms and incentives which public and private managers face as agents of shareholders given welfare maximization for the former and profit maximization for the latter (Bos, 1991). The change in ownership from the public to the private sector has at least two effects, a change in the objective of weighted welfare function to profit maximization and a change in the incentive structure by linking reward to the level of performance under the private ownership. This shift towards profit maximization may imply higher price, thus forgoing allocative efficiency, but these may be an increase in operational or productive efficiency.

Thirdly, the public choice theory takes the bureaucratic approach in which public enterprises are seen as an instrument of enhancing the utility functions of politicians such as maximizing of votes and the budgets (Boycko et al, 1990), proponents of the public choice theory hold that the government departments pursue objectives that do not maximize profits and usually pursue goals such as maximizing budget, risk aversion, employment and investment. Boycko et al (1996) propose a model of privatization within a framework of public choice theory. The model shows that privatization will lead to effective restructuring of state owned enterprises that are currently producing at inefficiently high levels to maximize employment only if cash flow right and control right pass from the government to the private hands (particularly managers' hands). This will make it difficult for the government to bribe managers to produced at inefficient levels by offering them operating subsidies. Therefore cutting the "soft budget constraint" is vital to improving performance.

Fourthly, organizational theory emphasizes the role of organizational characteristics in determining the performance of firms (Martins and Parker, 1997). They argue that differences in the performance of public and private firms are influenced by differences in management, goals, labour, communication and reporting systems, organizational structure, and the nature and location of business. In all the four theories of privatization, there is a consensus that ownership matters and affect the internal efficiency of firms (cost – minimization behavior) and the allocative efficiency in the market place (Chirwa, 2001).

METHODOLOGY

This study relied on secondary and primary data. The primary data is from the study of Chirwa (2001) in which he examined the effects of privatization on technical efficiency of manufacturing industries in Malawi. Actually the study make use of only data from agro-allied industries out of all the manufacturing industries considered by Chirwa (2001). The primary data is generated from 271 cocoa farmers in Oyo State. The farmers were grouped into 2 categories, those that paid for their land and those who did not (land is the most critical factor in agriculture in Africa [Upton, 1973]). This is done because privatization entails paying the appropriate price for the factors of production (Bos, 1991). Farm level information was collected from the randomly selected farmers and was analyzed using stochastic frontier production function through Computer Program Frontier Version 4.1.

RESULTS AND DISCUSSION

Table 1 shows that out of 21 companies privatized in Malawi 13 of them (62%) are agro - allied companies. The government of Malawi was holding on the average 48% of the total equity before privatization, which was reduced to 14% after privatization. On the sector basis, the government had 48% equity in agro-allied industries, which was reduced to 19 % after privatization. The Malawi government implemented privatization programme following the poor performance of a state enterprises in the early 1980s (Adam, 1994). The government reform strategies included review of corporate objectives, introductions of performance related incentives, increasing the autonomy of management in recruitment and firing of employees. All these were done to improve the efficiency and effectiveness of the parastatals and institutions in the country.

Table: Types of companies that were privatized in Malawi (1984 – 1998).

Company	Product	Sector	YEP	GEBP (%)	GEAP (%)
Enterprise Cont. Ltd	Plastic	Manufacturing	1984	22	0
Carlsberg Ltd	Beverage	Agro-allied	1984	27	0
M. Distilleries Ltd	Beverage	Agro-allied	1984	41	0
M. Pharm. Ltd	Chemical	Manufacturing	1984	100	0
N. Radio Company	Radio Assembly	Manufacturing	1984	60	0
B&C Ltd	Metals	Manufacturing	1987	31	0
Advax Ltd	Rubber	Agro- allied	1987	50	0
Lever Brothers Ltd	Chemical	Manufacturing	1987	20	0
PEW Ltd	Transport	Transport	1987	87	0
National Oil Industry	Food Processing	Agro-allied	1991	77	23
Admarc Canning	Food processing	Agro-allied	1991	100	0
Grain Milling	Food Processing	Agro-allied	1991	75	25
Wood Industries	Wood	Agro-allied	1991	100	0
Portland Cement	Non-Metallic	Manufacturing	1993	51	49
Packaging Ind.Ltd	Paper	Agro-allied	1996	34	40
Encor Products Ltd	Metal	Manufacturing	1996	23.3	0
Dwangwa Sugar Corp	Food Processing	Agro-allied	1996	14	51
Illovo sugar Corp	Food Processing	Agro-allied	1996	4	40
Dlantyre Dairy Ltd	Food Processing	Agro-allied	1998	60	40
Optichem Malawi	Food Processing	Agro-allied	1998	60	40
Average(%)	-	-	-	48.40	14.19

YEP =Year of Privatization, GEBP = Government Equity Before Privatization, GEAP =Government Equity After Privatization.

Source: Chirwa, 2001

Table 2 shows that the technical efficiency of agro – allied industries was 65% before privatization, which increased to 72% after privatization. This suggest that if privatized and non – privatized industries were given the same bundle of goods, the privatized industries will produce about 7% above non – privatized industries. This explains the fact that privatized agro-allied industries are less inefficient than government owned agro-allied industries.

Table 2 : Technical efficiency scores in privatized agro - allied industry in Malawi.

Technical Efficiency	Average
Before Privatisation	0.65
After Privatisation	0.72
Mean Change	0.07*

Source : Computed from Table 2 of Chirwa(2001).

* = significant at 5% level, using t-statistics given as $t = \frac{MAP - MBP}{SEAP + SEBP}$, where MAP =Mean Technical Efficiency After Privatization, MBP =Mean Technical Efficiency Before Privatization, SEAP = Standard Error of Technical Efficiency After Privatization, SEBP = Standard Error of Technical Efficiency After Privatization.

Table 3 shows that state ownership is associated with lower levels of technical efficiency and the coefficient is statistically significant at 1%. The effect of monopoly on technical efficiency is negative and significant at 10%. This indicates that technical efficiency may decline in imperfectly competitive market. In monopoly environments, especially where regulation exists, incentives for efficiency are eroded and most studies do not support the hypotheses that private enterprises are more efficient than state owned enterprises except in health related services (Chirwa, 2001; Vining and Boardman, 1992). The table also shows a significant and positive relationship between technical efficiency and capital intensity. This suggests that technical efficiency is higher in capital-intensive activities. The relationship between multinational and technical efficiency is positive and significant suggesting that multinational companies are more efficient than non-multinational companies. The significant and positive relationship between Structural Adjustment Program [SAP]and technical efficiency supports the argument that, SAP that aim at correcting market rigidities, provided incentives for efficient allocation of resources in agro allied industries.

Table 3: Sources of Technical efficiency in agro – allied industries in Malawi

Independent Variable	Coefficient	t-ratio
State Ownership	- 0.195*	- 4.153
Monopoly	- 2.041***	1.69
Capital Intensity	0.0052*	4.189
Multinational Corporation	0.0470*	4.160
Structural Adjustment Program (SAP)	0.0470*	2.116
R ²	0.48	

Source: Computed from Table 3 of Chirwa (2001).

*Significant at 1%

**Significant at 5%

***Significant at 10%

The fear of privatization of enterprises in Nigeria is that it will increase the product/input prices. The fear may be genuine because ‘soft budget constraint’ (Chirwa, 2001) will be removed, but the increase in cost will be offset by the resultant improved efficiency, effectiveness and quality product associated with privatization.

Table 4 examines the technical efficiency of cocoa farmers in Oyo State that pay for their farmland (PL) [Increased cost] and those who did not (PN). This is important because farmland is important factor of production in Africa (Upton, 1973). In fact it is on it other factors of production are based (Olayide, 1980).

Table 4 shows that the technical efficiency of PL farmers (63%) is more than technical efficiency of PN (59%) farmers. Indicating that farmers that incurred cost on their farmland are more efficient than those who did not. This means that if agricultural enterprises are privatized with the associated change in cost structure, their efficiency will increase.

Table 4: Technical efficiency of cocoa farmers that pay for their farmland (PL) and those who do not (PN).

Farmers	Minimum	Maximum	Mean
PL	0.20	0.99	0.63
PN	0.11	0.92	0.59
Difference	0.09	0.07	0.04**

Source: Computed from field survey data, 2002.

**Significant at 5%

Conclusion

The study examines the relationship between privatization and technical efficiency of agro – allied industries using cases of Malawi and cocoa farmers in Oyo State Nigeria. The study supports privatization of agricultural enterprises because of the improved technical efficiency associated with it. The study then recommends systematic privatization of the relevant government controlled enterprises to improve their efficiencies and performance.

REFERENCES

- Adam, C (1994): Privatization and structural Adjustment in Africa in W. Van der Geest (ed). *Negotiating Structural Adjustment in Africa*. James Currey, London.
- Bos, D (1991): *Privatization: A theoretical Treatment*. Oxford University Press, Oxford.
- Boycko, M; A. Shleifer, and R.W. Vishny (1996): *A theory of Privatization*. *Economic Journal* 106: 309- 319
- Chirwa, E.W (2001). *Privatization and technical efficiency: Evidence from the manufacturing sector in Malawi*. *African Development Bank* 277 – 307.
- Dittoh, J.S (1994): *Critical issues in planning for sustainable Agricultural Development in Nigeria*. A seminar paper presented at the center for Econometric and Allied Research, University of Ibadan, Ibadan.
- Furubton, E. and S. Pejovich (1972): *Property rights and Economic Theory: A survey of literature*, *Journal of Economic literature* 10(4): 1137- 1162.
- Martins, S. and D. Panker (1997): *The impact of privatization ownership and corporate performance in the U.K*; Routledge, London.
- Olayemi, J.K (1994): *Agricultural policies for sustainable Development, Nigeria’s experience in Ikpi*, A. E and J. K Olayemi (eds). *Sustainable Agric. and Economic Development in Nigeria*.
- Olayide S.O. (1980): *Characteristics, Problems and significance of small farmers scale in Nigeria*. In Olayide, S.O. J.A. Eweka and U.C Bello – Osagie (eds). *Nigeria Small Scale Farmers. Problem and Prospects in Integrated Rural Development*. CARD Ibadan Pg 3.
- Upton, M (1973): *Farm management in Africa. The principle of production and planning*. Oxford University press, London.
- World Bank (1990). *Sub-Sahara Africa: From Crisis to Sustainable Growth*, World Bank Washington D.C.
- Vining, A.R and A.E Boardman (1992): *Ownership versus competition: The causes of Government Enterprise Inefficiency*. *Public choice* 73(2); 205 – 239