



ECONOMIC EFFICIENCY OF CHILI PEPPER PRODUCERS IN THE VOLTA REGION OF GHANA



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Introduction: Vegetable cultivation is an important economic activity in rural and urban Ghana. This is because of its importance as a major source of quick employment and income generation for both the rural and urban poor. Ghana has been found to have a competitive advantage over other African countries in terms of chili pepper production. However, the average yield of chili pepper in Ghana is 8.30 Mt/ha, which is far below the achievable yield of 32.30 Mt/ha. This indicates the existence of yield gaps which needs to be closed through raising yield levels and land productivity on chili farms.

Specific Objectives

- ❖ Determine the productivity of chili pepper with respect to inputs
- ❖ Estimate the technical, allocative and economic efficiency levels of the chili farms
- ❖ Analyse the determinants of economic efficiency of chili farms
- ❖ To identify and rank the major farm level constraints confronting the chili farmers

Methodology:

This study adopts the modified translog stochastic frontier production and cost function models to determine the level of productivity of the inputs used, the current levels of technical, allocative and economic efficiencies and the major determinants of economic efficiency of the chili farms in the Volta region.

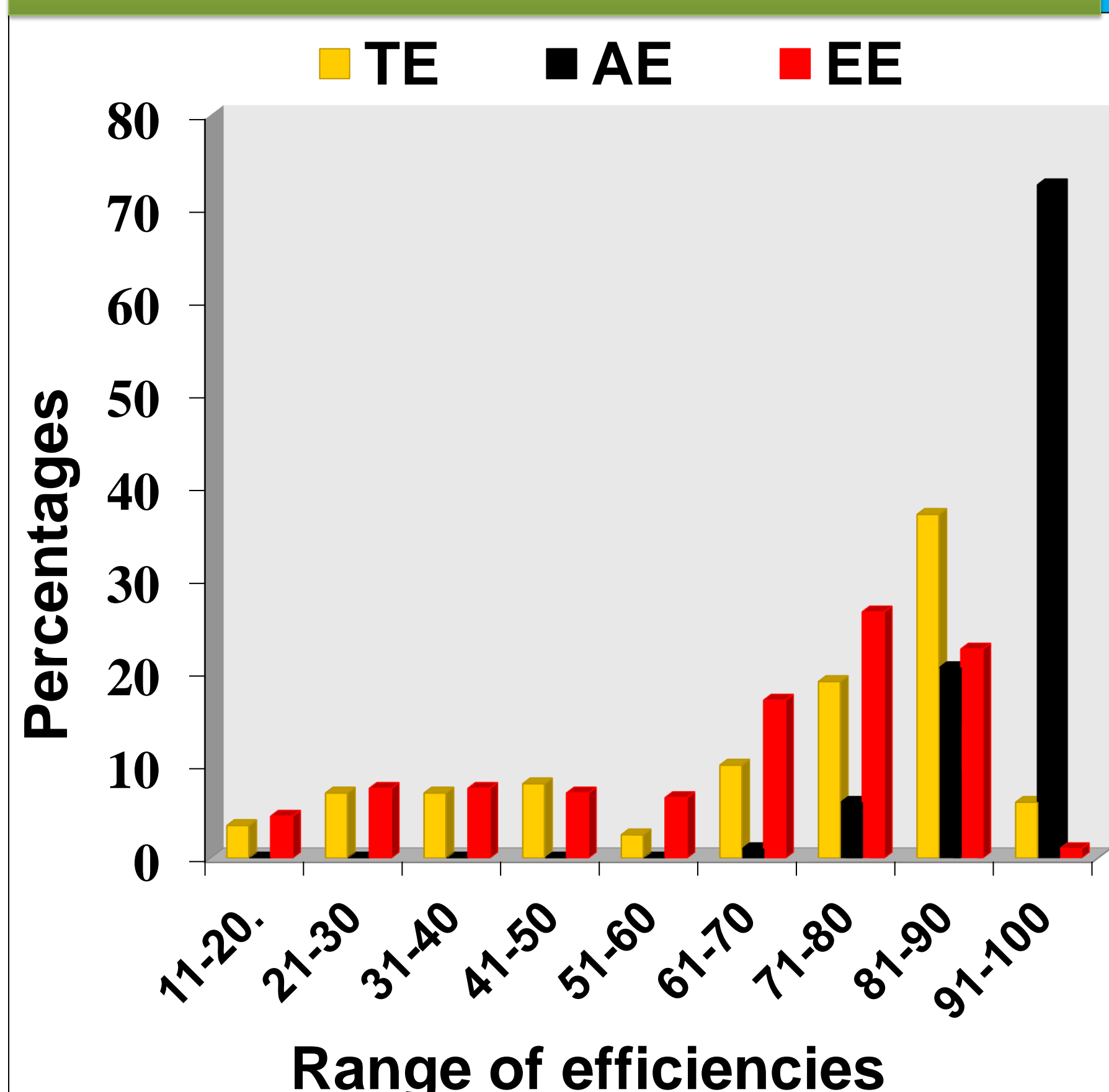
The Henry Garret ranking technique is used to rank the various farm level constraints militating against the attainment of the frontier output by the chili farmers.

A total of 200 chili farms were sampled from four districts of the Volta region using a multi-stage purposive and random sampling techniques.

Results

Production variables	Elasticity	Technical and Allocative Inefficiency Estimates		
		Variable	Estimate (TE)	Estimate (AE)
Farm size	0.187*	Gender	0.028	-0.088***
Hired labour	0.133**	Education	0.207*	-0.003
Family labour	-0.228***	Extension visit	-0.072*	0.006**
Price of fertilizer	0.267***	Experience	0.107**	0.022***
Quantity of seed	0.180**	Age	0.030**	0.002*
Othercost	0.447***	Age*Experience	-0.003**	-0.004***
RTS	0.987	Source of labour	-0.171	-0.045**
Cost variables	Elasticity	Off-farm income	-0.221	-0.040**
Price of farm land	0.043***	Access to Irrigation	0.633**	-0.013
Price of Hired labour	0.419***	Credit	0.278*	0.051***
Price of Family labour	0.380***	MFBO	-0.315*	0.019
Price of fertilizer	0.074***	***, **, * corresponds to 1%, 5% and 10% level of significance respectively.		
Price of seed	0.036***			
Othercost	0.071***			

Distribution of Efficiency Scores



Conclusions

- Chili pepper output is greatly influenced by farm size, hired labour, family labour, price of fertilizer, quantity of seed and othercost of production.
- Chili farms are also found to be on the rational stage of production.
- Chili farms in the study area are economically less efficient and this stems largely from the relatively high level of technical inefficiency of the farmers.
- There is the presence of technical, allocative and economic inefficiencies among the chili pepper producers and economic efficiency is greatly influenced by farmers' socio-economic, institutional and technical factors.
- Access to credit, lack of markets and lack of irrigation facilities are the key limiting factors to the attainment of the frontier output of chili pepper in the study area.

Policy Recommendations

- Farmers should increase the usage of those inputs that have the potential to increase chili output and reduce those that reduce chili output.
- The study recommends policies and programs that aims at attracting the teaming youth into chili pepper cultivation to be pursued by giving them incentive packages.
- Intensive extension service delivery which aims at raising the technical knowledge of the chili farmers should be pursued by recruiting more extension agents and resource them.
- The study also recommends the formation of associations by the chili farmers so as to create the platform for the sharing of technical knowledge among the experienced and younger farmers.
- Experienced chili farmers are also advised by the study not to be complacent but rather complement their know-how with advisory services given by extension agents.
- Policy makers should also focus on policies that will facilitate chili farmers access to low interest bank loans in the form of inputs.

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