

## ABSTRACT

## PERENNIAL SUPPLY UNDER RISK:

## THE CASE OF THE JAMAICAN

## COCOA INDUSTRY

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Supply elasticities derived from supply response models indicate the speed and magnitude of output adjustment in response to changes in economic factors and hence they have important policy implications.

In recent times, risk considerations have become necessary in the analysis of the agricultural sector. However, in general, supply response models for perennial crops and in particular those incorporating explicitly the element of risk have been lacking. This study is therefore an attempt to use a supply response model which incorporates explicitly the element of risk, to investigate the primary factors which have been responsible for the declining trend in the Jamaica Cocoa Industry.

Three main hypotheses were tested in this study namely:

- (a) That risk and the farmers' attitudes towards it play a significant role in determining output response in perennial crops.
- (b) That Jamaican cocoa farmers are risk-averse, that is, they prefer a smaller variance of income to a larger one for a given expected income.

- (c) That farmers respond positively to incentives such as higher real prices or increased profitability even when there are risks associated with production.

In order to test these hypotheses a short and a long run supply function were specified and estimated using ordinary least squares regression techniques.

The results of the study showed that risk and the farmers' attitudes towards it play a significant role in determining both the short and the long run supply of cocoa. The results also showed conclusively that Jamaican cocoa farmers are risk-averse in both the short and the long run. Jamaican cocoa farmers were found to be positively price responsive in both the short and the long run.

The study concluded that the primary cause of the declining trend in the Jamaica Cocoa Industry was low real prices to farmers.