

ABSTRACT

An Analysis of the Response of Banana Farmers in St. Vincent and the Grenadines to the World Trade Organisation's Ruling on the European Banana Regime.

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Bananas have been grown in St. Vincent and the Grenadines for over 40 years.

Although several changes have taken place over these years, none is as profound and far reaching in its effect on banana farmers as the ruling of the Dispute Panel of the WTO on the European banana regime.

The empirical techniques used in the study to solicit and analyse banana farmers' response to the World Trade Organisation (WTO) Dispute Panel ruling on the European Banana Regime include *inter alia*:

- Survey Method
- Chi-square Analyses using contingency tables and
- The Logistic Regression Analysis.

The Chi-square test examines simultaneously the proportions of items in all the categories into which a population has been divided. If a population has been divided into three categories, for example, the chi-square test will examine the hypothesis that the proportions in all three categories have the three specified values.

In this thesis, the chi-square statistic is used to test the level of independence between the variables used in the contingency tables that: age, gender and education level affect farmers' knowledge of the World Trade Organisation (WTO) and its dispute panel ruling on the European banana regime, farmers' knowledge of the consequences of the ruling, and their willingness to continue producing bananas.

The logistic regression model (LRM) is used to estimate a model in which the dependent variable is dichotomous or binary in nature, and takes on values of one and zero. The logistic model can be expressed as:

$$\ln(P_i/1-P_i) = \beta_1 + \beta_2 \text{ Profit} + U_i$$

Where P_1 is the probability of the event occurring -- in the case of the study, this farmer's willingness to continue banana production. The probability of farmers not being willing to continue production is represented by $(1-P_1)$. The ratio $P_1 / (1-P_1)$ is known as the odds of the event ratio, which is simply the odds in favour of the event occurring. The natural log of this odds ratio is called the logit, hence the logit model. The logistic regression model expresses the log of the odds ratio as a linear function of explanatory variables. The model is estimated using the maximum likelihood method (ML).

The logistic regression analysis was used to test the research hypothesis of the study, i.e., farmers' willingness to continue banana production depends on age, gender, level of education (farm), years in banana production, area cultivated with bananas, banana yield per acre, percentage farm family income from bananas and banana profits. This relationship is expressed as:

$$\ln(P_i/1-P_i) = \alpha + \beta_1 \text{ Age} + \beta_2 \text{ Gender} + \beta_3 \text{ Form} + \beta_4 \text{ YRSB} + \beta_5 \text{ BAREA} + \beta_6 \text{ BYLD} + \beta_7 \text{ INCOM} + \beta_8 \text{ Bprofit} + U_i$$

The study concluded that Vincentian banana farmers are not knowledgeable about the WTO and its ruling on the European banana regime. The study also concluded that

males are more knowledgeable than females and that education was positively correlated with knowledge of the WTO and its ruling on the European banana regime. Most importantly, the study concluded that age and profit are the two variables which would influence farmers willingness to continue banana production in the absence of the preferential market and falling banana prices.

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