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AN ESTIMATION OF THE EFFICIENT SIZE OF SUGARCANE ENTERPRISE FOR FARMERS IN TRINIDAD

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Abstract

This research paper provides an estimation of the efficient size of operation for sugarcane farmers in Trinidad. The estimates were based on a sample of two hundred and twenty-seven farmers selected from a 1987 cost of sugarcane production survey. To identify the efficient size of operation the ordinary least square estimation technique was used. The identification of the efficient size of operation allowed us to test the hypothesis that the minimum point on the long run average cost curve was significantly greater than the present average enterprise size of six acres.

The long run total cost curve was estimated and the cubic functional form provided the best fit for the available data. Both the adjusted R^2 and the result from the Wald test indicated that the cubic functional form provided the best fit for the data. The results of the estimation process indicated that the optimal size was 32 acres of sugarcane and that 98% of the farmers operated at less than this enterprise size.

Keywords *: cost function, cost elasticity, efficient size, sugarcane, Trinidad*

THE INTERNATIONAL COMPETITIVENESS OF THE TABLE EGG INDUSTRY OF TRINIDAD AND TOBAGO

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Abstract

The research undertaken was four- fold. First, to investigate whether government policy provides protection and by extension, incentives for the local table egg farmers to remain in production. To do so, EPC's for all commercial farms in the industry were estimated to arrive at a weighted or industry EPC

The study also investigated whether the local tables egg industry had a comparative advantage or was efficient in the production of table egg. The Domestic Resource Cost (DRC) coefficient was used as a proxy of efficiency and comparative advantage. DRC's were calculated for the twenty-three farms.

Having established that the industry was competitive, a sensitivity analysis was conducted to determine the extent to which feed costs, the major production cost can be increased in order to reverse the competitive position of the industry.

A regression model, utilizing the technique of Ordinary Least Squares (OLS), was constructed to determine weather the various components of production costs, including feed, labour, utilities, land, chick, egg boxes, medication were significant in determining efficiency and comparative advantage in the table egg industry.

Results of the study showed that table egg producers are protected from imports through various instruments of government policy. Producers also had a comparative advantage in producing table eggs. The level of comparative advantage was highest among small producers, followed by medium and large producers. The sensitivity analysis however showed that a small increase in feed cost could reverse the competitive position of the industry.

The analysis also concluded that feed cost, as opposed to domestic resources, had the greatest potential for maintaining competitiveness in the industry.

BOOMING HYDROCARBON EXPORTS, DE-AGRICULTURALIZATION AND FOOD SECURITY IN TRINIDAD AND TOBAGO

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Abstract

During the 1970s the Trinidad and Tobago (T&T) economy experienced an oil boom because of increases in the level and production of crude oil and in the price each barrel of crude oil fetched on the international market. In the late 1990s to the present, the T&T economy has benefited from another hydrocarbon boom. This paper traces the trends in export agriculture, sugar and domestic agriculture during the first and second oil booms. Using the falling share of labour employed in a sector as a reflection of de-industrailization, the analysis reveals that during the first oil boom all three components of the agricultural sector were de-industrialised although in the period until 1993 these same sectors showed clear signs of re-industrialization. During the second oil boom these agricultural subsectors were again de-industrialised, although in the case of sugar and domestic agriculture output per employed worker increased. The paper argues that given the likelihood of further hydrocarbon driven growth, the food security issue requires that efforts be made to preserve the output level of the domestic agricultural sector.

The structural changes to the economies of the Caribbean over the last few decades has been phenomenal; there has been a substantial decline in the importance of the agricultural sector both absolutely and relatively, while the manufacturing, mining and tourism sectors has provided the impetus for growth and development. In no other Caribbean country has the fall off in agriculture been so marked as in Trinidad and Tobago; the only country in the region to possess significant oil reserves. However, it should be noted that this is a basis for concern, especially within the context of long term growth and food security.

PRIVATE RESPONSES TO PUBLIC INCENTIVES FOR INVASIVE SPECIES MANAGEMENT

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Abstract

In this paper the impact of public policies such as subsidies and taxation on invasive species management is explored in a Markov chain process framework. Private agents react to public incentives based upon their long term expected profits and have the option of taking measures such as abatement, monitoring and reporting. Conditions for perverse incentives are derived. The impact of sequencing of taxation and subsides on spread of risks is explored. One key finding of this paper is that excessive regulation may sometimes exacerbate the invasive species problem

Keywords: *Invasive Species, Markov process, Perverse Incentives, Taxation and Subsidies.*

COPPER MINING AND ENVIRONMENTAL COSTS IN DOMINICA

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Abstract

A proposal from an international mining company to establish a copper mining operation in the Caribbean island of Dominica could be highly favourable, given the potential for financial benefits associated with such a project. On the downside, such projects are often associated with environmental damage. The area targeted for this copper mine was a rainforest in the north-eastern portion of Dominica occupying around 12 percent of the island's total land area.

A critical question is therefore whether copper mining could be a viable alternative to agrarian uses of the targeted area, if both financial and environmental costs are taken into consideration.

A Contingent Valuation Survey of Dominicans and Visitors allowed for inclusion of non-market costs in the analysis. Cost-Benefit and sensitivity analyses were carried out to assess project feasibility. The results indicated that NPV was negative under conservative assumptions. NPV was sensitive to changes in the price of copper and the inclusion of environmental costs did affect the level of price increase required to make NPV positive.

GLOBALIZATION EQUITY AND JUSTICE IN SMALL NATION STATES

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Abstract

The effects of globalization on smaller nation Caribbean states have not been thoroughly examined, and the trade performance of these states has not been evaluated since the WTO came into existence. In this paper, we report on a study that conducted a comparative analysis of selected Caribbean nation states with other countries at different stages of development to determine their levels of performance from 1990 to 1995, the period before the WTO began full operation, and the period 1996 to 2002, the period after globalization. The selected Caribbean countries were Cuba, Haiti, Dominican Republic, Jamaica, Trinidad and Tobago, and Suriname. The measures for comparison are changes in GDP per capita, capital investment as a percentage of GDP, foreign direct investment, current account balance, trade balance, export services, infant mortality, literacy rates, and agricultural and service labor force change. We also compared the economic and social performance of these countries with those of selected countries of North America, South and Central America, Europe, Asia, and Africa. The economic performance of the Caribbean states varied and compared favorably with other developing economies and developed economies, but the socioeconomic indicators worsened for Suriname and other nation states. The current account and the trade balances were negative for Cuba, Haiti, Jamaica, Dominican Republic, Guyana and Trinidad and Tobago, in spite of their positive changes in GDP per capita since the WTO came into operation. No factors provide evidence of how well the countries are likely to perform in the future with the implementation of the WTO. In general, the Caribbean states performed worse before, rather than after, the implementation of the WTO. Model results show that the Caribbean states should concentrate on the export of services and the increase of the agricultural labor force to stimulate significant economic growth. The factors influencing the growth of other regions vary, but export of services seemed to have a general effect on economic growth. In terms of social indicator improvement, countries in Asia and Africa should reduce infant mortality while North America and South America could benefit from improvement in literacy rates.

ENVIRONMENTAL PERCEPTIONS AND BEHAVIORAL CHANGE OF HILLSIDE FARMERS: THE CASE OF HAITI

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Abstract

Land degradation is one of the most serious problems facing resource-poor tropical hillside farmers. Studies examining determinants of farmers' decisions to invest in land improvement technologies have focused on economic and financial factors, neglecting individuals' perceptions and awareness of the problems and how they affect land use and behavioral change that enhance environmental sustainability. This study examines Haitian peasants' environmental behavior structure using a structural equation modeling approach. Specifically, the study examines the effects of perceived susceptibility, seriousness, benefits, and barriers to change on attitude, and the causal effect of attitude on behavior. The influence of the level of resources extracted from the land per capita on perceptions, attitude, and behavior is examined. Results show that Haitian peasants' attitudes toward the environment are significantly affected by their perceived susceptibility and severity of land degradation. The path coefficients linking perceived susceptibility, severity, and benefits to attitude are 0.49 (t=5.43) and 0.21 (t=3.78), respectively. A positive attitude toward the environment seems to cause a greater inclination to behavioral change. The coefficient from attitude to behavior is 0.21 (t=3.81). The results indicate that agricultural productivity significantly shapes hillside farmers' perceptions of susceptibility to and severity of land degradation. Per capita resource extraction significantly affects people's perceptions of the benefits of good environmental quality and the barriers to behavioral change.

U.S. IMPORT DEMAND FOR TILAPIA FROM SELECTED FTAA COUNTRIES

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Abstract

Seafood consumption in the U.S. has increased over the period 1990 to 2003. A large percentage of the seafood consumed in the U.S. is imported. The most important seafood products imported to the U.S. are shrimp, Atlantic salmon, tilapia, catfish, crayfish, mussels and a mixture of mollusks. In 2003, the U.S. imported 199 million pounds of tilapia and tilapia products, at a value of $241.2 million, a 38% increase from the previous year. The seafood market has been considered an important foreign exchange earner for the Caribbean Common Market (CARICOM), and Free Trade Area of the Americas (FTAA) member countries. Jamaica is the only CARICOM country that exports tilapia products from aquaculture sources to the U.S. In 2003, Jamaica exported 39,950 pounds of frozen tilapia fillet to the U.S. at a value of $77,952 (Aquaculture Outlook, 2004). Given that tilapia culture may be a promising enterprise for CARICOM and FTAA member countries, it is important to evaluate changes in U.S. market demand for tilapia from CARICOM countries. A Source Differentiated Almost Ideal Demand System (SDAIDS) model was used to conduct an import demand study for tilapia and tilapia products in the U.S. The own price elasticity of Jamaica frozen fillet was found to be -0.23, and significant which means that it is price inelastic and which means that increases in exports, other factors remaining constant, may lead to a fall in total revenue. The Jamaican frozen fillet is complementary to that of the rest of the world (ROW) and fresh fillet from Ecuador, but competitive (substitute) to fresh-frozen fillet from Thailand. Fresh fillet from Ecuador, with a cross price elasticity of 0.29, is a substitute for the fresh fillet from Costa Rica. The fresh fillet from Costa Rica is complementary to the fresh-frozen from Thailand. The fresh fillet from Honduras with a cross price elasticity of 1.13 is a substitute for the fresh fillet from Ecuador. However, the fresh fillet from Honduras is a complement to the frozen fillet from Thailand. The FTAA member states, other than Ecuador, are not major players in the frozen whole tilapia market. Large non-member countries, such as Thailand, Taiwan, and China, may be serious threats to CARICOM and FTAA member country tilapia products in the U.S. market. The FTAA member countries have concentrated on the fresh-frozen fillet and may have a comparative advantage for this product line because of proximity to the market.