Technical Efficiency Of Rice Farming And Its Determinants

Efficiency is a very important factor for measuring productivity. In an economy where resources are scarce and the opportunities to use new technologies are limited, inefficiency studies indicate the potential possibility to raise productivity by improving efficiency without developing new technologies or increasing the resource base. the objective of this study is to analyze the technical efficiencies of small scale rain-red and irrigated rice production in Adamawa State, Nigeria.

First title in a major new seriesAddresses improving water productivity to relieve problems of scarcity and competition to provide for food and environmental securityDraws from scientists having a multitude of disciplines to approach this important problemIn a large number of developing countries, policy makers and researchers are increasingly aware of the conflicting demands on water, and look at agriculture to be more effective in its use of water. Focusing on both irrigated and rain-fed agriculture, this book gives a state of the art review of the limits and opportunities for improving water productivity in crop production. It demonstrates how efficiency of water use can be enhanced to maximize yields. The book represents the first in a new series of volumes resulting from the Comprehensive Assessment of Water Management in Agriculture, a research program conducted by the CGIAR's Future Harvest Centres, the Food and Agriculture Organization of the United Nations and partners worldwide. It will be of significant interest to those working in areas of soil and crop science, water management, irrigation, and development studies.

Rice Production in CambodiaInt. Rice Res. Inst.

"However, socio-economic factors were unable to explain the level of technical efficiency among farmers, when evaluated using a standard regression approach. By using a simple t-test to compare the mean level of efficiency of different groups of farmers, some significant differences emerged. Farmers who used credit were found to be more efficient than those who did not. Moreover, experienced farmers were more efficient than less experienced farmers. Also, farmers with less than 7 years of education were more efficient than more educated farmers." --

Cambodia has a potential advantage in agricultural production due to significant amounts of fertile land and high levels of agricultural employment, but rice production and commercialization remain well below potential. This study uses a farm investment climate assessment to provide evidence on key areas where government investments and policy reforms can lead to higher levels of rice production and commercialization in small farms. Improving output markets through domestic milling and increasing the area irrigated are found to be related to increased production efficiency, commercialization, rice sold, and value of sales.

This book consists of five main self-contained chapters that all deal with the analyses on current rice farmers' status (Technical efficiency, life improvement, agricultural policy, price insurance) and impact-estimates of industrial water pollution on rice production in Vietnam. The specific objectives are: (1) - to measure the technical efficiency (TE) of rice production and identify its determinants. (2) - to investigate the factors affecting farmers' quality of life. (3) - to analyze the effectiveness and impacts of agricultural policies on rice farmers. (4) - to estimate the potential for market-based insurance schemes of rice producing households. (5) - to calculate the damage of rice production caused by water pollution.

• New York Times bestseller • The 100 most substantive solutions to reverse global warming, based on meticulous research by leading scientists and policymakers around the world "At this point in time, the Drawdown book is exactly what is needed; a credible, conservative solution-by-solution narrative that we can do it. Reading it is an effective inoculation against the widespread perception of doom that humanity cannot and will not solve the climate crisis. Reported by-effects include increased determination and a sense of grounded hope." —Per Espen Stoknes, Author, What We Think About When We Try Not To Think About Global Warming "There's been no real way for ordinary people to get an understanding of what they can do and what impact it can have. There remains no single, comprehensive, reliable compendium of carbon-reduction solutions across sectors. At least until now. . . . The public is hungry for this kind of practical wisdom." —David Roberts, Vox "This is the ideal environmental sciences textbook—only it is too interesting and inspiring to be called a textbook." —Peter Kareiva, Director of the Institute of the Environment and Sustainability, UCLA In the face of widespread fear and apathy, an international coalition of researchers, professionals, and scientists have come together to offer a set of realistic and bold solutions to climate change. One hundred techniques and practices are described here—some are well known; some you may have never heard of. They range from clean energy to educating girls in lower-income countries to land use practices that pull carbon out of the air. The solutions exist, are economically viable, and communities throughout the world are currently enacting them with skill and determination. If deployed collectively on a global scale over the next thirty years, they represent a credible path forward, not just to slow the earth's warming but to reach drawdown, that point in time when greenhouse gases in the atmosphere peak and begin to decline. These measures promise cascading benefits to human health, security, prosperity, and well-being—giving us every reason to see this planetary crisis as an opportunity to create a just and livable world.

A Practitioner's Guide to Stochastic Frontier Analysis Using Stata provides practitioners in academia and industry with a step-by-step guide on how to conduct efficiency analysis using the stochastic frontier approach. The authors explain in detail how to estimate production, cost, and profit efficiency and introduce the basic theory of each model in an accessible way, using empirical examples that demonstrate the interpretation and application of models. This book also provides computer code, allowing users to apply the models in their own work, and incorporates the most recent stochastic frontier models developed in academic literature. Such recent developments include models of heteroscedasticity and exogenous determinants of inefficiency, scaling models, panel models with time-varying inefficiency, growth models, and panel models that separate firm effects and persistent and transient inefficiency. Immensely helpful to applied researchers, this book bridges the chasm between theory and practice, expanding the range of applications in which production frontier analysis may be implemented.

The study estimated profitability, technical, allocative and economic efficiencies;determined resource-use efficiency and the determinants of technical efficiency in rain-fed upland rice production in Osun and Oyo States of Nigeria.Data obtained were analyzed using descriptive statistics, gross margin analysis and the stochastic frontier production function analysis.Results showed that paddy growers in Osun State earned average gross margin/ha of N34,181.38 while their counterparts in Oyo State received

N25,448.84 with average profit per grower being N41,132.74 and N44,476.8 respectively.Results of the stochastic frontier production function analysis showed that land was the most productive resource with elasticity of production of 0.961 and 0.314 for Osun and Oyo States respectively. Results of efficiency measurements showed an average of 90.1% in technical efficiency, 92.0% in allocative efficiency and 83.4.0% in economic efficiency for Osun State.On the other hand, Oyo State paddy producers recorded an average of 94.3%in technical efficiency,88.9%in allocative efficiency and 84.0%in economic efficiency.

This study analyzed the financing gaps relative to production frontier of rice farmers in Southwestern Nigeria. A multistage sampling technique was used to collect cross sectional data from 360 rice farmers selected from three States in the region. A Cobb-Douglas stochastic frontier and an adapted form of Harrod-Domar (HD) Growth model was employed to determine the financing gap required for the farmers to be at the frontier level. The empirical results of the frontier model show that quantity of labor, quantity of rice as planting material and herbicides were statistically significant in explaining the variations in the efficiency of rice production in Nigeria. However, age, gender, farming experience, household size, access to credit, access to information, adoption of improved variety and location of rice farmers as sources of technical inefficiencies. As revealed by the result of the HD growth model, the average amount of credit per season that farmers had access to was, ?38,630.56 while the mean financing in the form of credit required to produce at the frontier level was ?193,626.50, showing a financing shortfall of about 80%. As unravelled by the result of the study, it can thus be concluded that technical efficiency of rice farmers can be improved by improving access to timely credit and agricultural information for improving rice productivity. These findings suggest that filling the financing gap of smallholder rice farmers will improve rice productivity in Nigeria. The study, therefore, recommends that strengthening the existing technology by building farmers' capacity on farm management practices would be surest means of improving rice productivity growth in Nigeria. This would not only contribute to the intensification of rice production in Nigeria to meet its increasing rice demand, but also improve rice farmers' productivity and their households' incomes.

"Concerns about the sustainability of conventional agriculture have prompted widespread introduction of integrated pest management (IPM), an ecologically-based approach to control of harmful insects and weeds. IPM is intended to reduce ecological and health damage from chemical pesticides by using natural parasites and predators to control pest populations. Since chemical pesticides are expensive for poor farmers, IPM offers the prospect of lower production costs and higher profitability. However, adoption of IPM may reduce profitability if it also lowers overall productivity, or induces more intensive use of other production factors. On the other hand, IPM may actually promote more productive farming by encouraging more skillful use of available resources. Data scarcity has hindered a full accounting of IPM's impact on profitability, health, and local ecosystems.

Study conducted in the Birbhum District, West Bengal, India.

Provides a comprehensive approach to productivity and efficiency analysis using economic and econometric theory.

Rice in the Cambodian economy: past and present; Topography, climate, and rice production; Soils and rice; Rice-based farming systems; Rice ecosystems and varieties; Pest management in rice; Farm mechanization; Capture and culture ricefield fisheries in Cambodia;

Constraints to rice production and strategies for improvement.

Agriculture in Developing Countries: Technology Issues presents an experimental approach of testing new possibilities and combinations to match the changes taking place in the agricultural production environment of developing countries. While emphasizing the importance of combining scientific and indigenous knowledge, this book argues that sustained agricultural development can be achieved only by promoting farmers` participation in technology development. It provides empirical evidence for this, using recent primary data from across Asia. This book is topical considering that the agriculture scenario in many countries has been undergoing a transformation due to various factors such as changes in governments` macroeconomic policies and climatic variations. The book also highlights that in order to minimize the negative impact of farmers` own yield gaps (the difference between farmers` own potential and actual yields) on their income levels, it is important that new approaches to agricultural technological development be employed in the form of more opportunities rather than a single crop production technology.

This book is about analyses of policy and productivity of Indonesian rice production. The theme of this book was inspired by the fact that Indonesian people still depend on rice as the calorie intake. As a source of calories for more than 250 million of people, rice is politically and economically strategic. As well, Indonesia is considered an agrarian country where about half of the people work in the agricultural sector. In the policy aspects, it covers a brief historical and political economies that underlie government interventions to achieve self-sufficiency of rice, and eventually food security. The interventions include price policy, institutional and technological changes. In the productivity aspects, it covers production efficiencies, sustainability performance and sustainable productivity growth.

Abstract: In this paper we examine sources of technical efficiency for rice farming in Bangladesh. The motivation for the analysis is the need to close the rice yield gap to enable food security. We employ the DEA double bootstrap of Simar and Wilson (2006) to estimate and explain technical efficiency. This technique overcomes severe limitations inherent in using the two-stage DEA approach commonly employed in the efficiency literature. From a policy perspective our results show that potential efficiency gains to reduce the yield gap are greater than previously found. Statistically positive influences on technical efficiency are education, extension and credit, with age being a negative influence

Although a large literature highlights the impact of personality traits on key labor market outcomes, evidence of their impact on agricultural production decisions remains limited. Data from 1,200 Ghanaian rice farmers suggest that noncognitive skills (polychronicity, work centrality, and optimism) significantly affect simple adoption decisions, returns from adoption, and technical efficiency in rice production, and that the size of the estimated impacts exceeds that of traditional human capital measures. Greater focus on personality traits relative to cognitive skills may help accelerate innovation diffusion in the short term, and help farmers to respond flexibly to new opportunities and risks in the longer term.

This dissertation is based on three essays with a focus on the technical efficiency of smallholder farms in Nigeria. The overall objective of the research is to contribute to the existing literature on the efficiency and productivity of Nigerian agriculture. The first essay examined the development and drivers of the average technical efficiency in Nigerian agriculture based on 64 efficiency studies covering 1999-2008. The second essay went on to further identify the trends in crop diversification while examining its impact on the technical efficiency of smallholder farms in Nigeria. Last but not least, the third essay investigated technical efficiency, inputs substitution and their complementary effects using an output distance function while focusing on cassava production in Nigeria. The second and third essays are based on unbalanced panel

data of 846 observations covering three farming season (2006/07-2008/09) from southwestern Nigeria via the application of the stochastic frontier analysis. In summary, the research found that average technical efficiency significantly increased over time across the 64 frontier studies in the country. Besides, the study observed that technical progress characterized food crop production in the country while the mean technical efficiency reported from each of the essays that make up the dissertation showed that there is still room for improvement in Nigerian food crop production as each estimate falls below the frontier level. Furthermore, the research revealed that cropping pattern increased significantly with the intensification of diversification in food crop production in the country. In addition, the study identifies education, credit, extension contacts and crop diversification among others as key drivers of technical efficiency in Nigerian food crop production. In light of this, the research concludes that the latter observation underscores the importance of education, credit and extension contacts as variables of policy concern for the institutions of public and private policies design to reposition the Nigerian food crop production industry in order to meet the Millennium Development Goals (MDGs) of food security.