AAES AWARDS 1993

Journal Article Prize

The *AJAE* best article prize for 1993 was awarded to H. Klieve and T. G. MacAulay entitled 'A Game Theory Analysis of Management Strategies for the Southern Bluefin Tuna Industry', *AJAE* 37 (1), April 1993.

Undergraduate Prize Winners

Vanessa Stewart, University of Western Australia

Kirsty Baird, Là Trobe University

Richard Llewelyn, Melbourne University

Margo Waites, Sydney University

Lisa Jones, Sydney University

Katherine Jones, Queensland University

PhD Prize Winner

The PhD prize was awarded to Yiping Huang from Australian National University for his thesis titled 'Government Intervention and Agricultural Performance in China' (supervised by Professor P. D. Drysdale and Professor P. G. Warr).

Abstract

This study reassesses agricultural performance in China during the economy's transition from a centrally planned system to one increasingly reliant on the market mechanisms.

The essence of economic reform was to reduce direct intervention by the government in the operation of the economy and to allow more decision-making autonomy to economic agents. But the process of reform is not yet complete. The Chinese economy today is neither a perfectly free market nor a stylized central planning system.

The central argument is that the agricultural sector is being increasingly integrated with the rest of the Chinese economy, and the world economy through the process of economic liberalization. Economy-wide policies and changes elsewhere are as important as sector-specific policies in affecting agricultural performance.

At the same time, restrictions on factor movements and price distortions remain and affect agriculture's response to exogenous changes. Agriculture's response to initial reforms has been seen as a 'miracle'; growth jumped to 7 per cent between 1979 and 1984. The relative contraction of agricultural production in 1985 and years after is less clearly understood.

A simple illustrative model is constructed for theoretical analysis. This framework is applied to understand agricultural growth in China and it is

found that dramatic changes in farmers' feasible choice set were dominant factors determining agricultural growth and contraction in the second half of the 1980s. This case underlines the importance of restrictions on factor mobility in the Chinese economy. Changes in factor markets may sometimes offset changes in price structure and require particular attention in analysis.

Price policies for grain in China were endogenously determined through bargaining between farmers and the state. In the early stages of economic development under a repressive and vindictive central state system, farmers tend to be weak in the state-farmer policy game. This study develops a state-farmer agricultural policy game framework. Farmers' relative bargaining power is negatively correlated with agriculture's share in the economy and the share of agricultural population, and positively correlated with income per capita and the market price of grain. Farmers in China were still relatively weak in policy game with the government. But it can be expected that farmers' bargaining power will continue to increase as the economy develops. There is a danger that with growing bargaining position demand for agricultural subsidies will grow

Farmers' production decisions are guided by a combination of policy regulations and market signals, but their behaviour can be modelled by profit maximization framework given careful data adjustment. Supply elasticities estimated through an application of the McFadden unit profit function indicate that continuation of grain self-sufficiency will be both difficult and costly.

To understand both direct and indirect effects of policy on agriculture, a computable general equilibrium model is built. A set of experiments including changes in the world market, economic reforms such as tariff reduction, variation in macroeconomic policies and a rapid expansion of rural industry are undertaken. The Chinese economy and the agricultural sector adjust to exogenous change but the adjustment is smaller than it would be in the case of perfect factor mobility. Money becomes non-neutral in the presence of price distortion in Chinese economy.

Master Thesis Prize

The winner of the Master thesis prize was Inman Sugema from The University of New England, Armidale for 'The Dynamics of Macroeconomy-Trade-Agriculture Linkages in the Australian Economy: An Application of Error Correction Models to Cointegrated Relationships' (supervised by Dr Francis In).

Abstract

This study aims to investigate both short-run and long-run relationships between agriculture, trade and the macroeconomy. The analyses are first facilitated by the establishment of a macroeconomic model, the so-called IS model (In-Sugema model). This model is a modification and advancement of the model by In (1990) which was applied to the US

economy. The IS model is based on new classical theory and derived from the optimisation of consumers and producers objective functions. The IS model suggests 15 long-run equilibrium conditions which are grouped into five model blocks; the commodity demand block, the financial assets demand block, the agricultural production block, the non-agricultural production block, and the export demand block.

For the long-run analyses, the most up-to-date time series analyses, the so-called Canonical Cointegrating Regressions (CCR) and Seemingly Unrelated Canonical Cointegrating Regressions (SUCCR) are used. For the short-run analyses, Error Correction Models (ECM), Impulse Response Analyses (IRA), and Granger Causality tests are used.

It is found, that commodity demand, agricultural production, and exports are the main source of instability of the economy. Inflation both in agriculture and non agriculture is not related to excess demand, but generated by the movement in input prices; wage rates, capital rental rates, and material prices. Trade deficits can be corrected by the depreciation of the dollar in the short run and by the increase in competitiveness of Australian products in the long run. It is also found that a demand management strategy will not be effective to generate output, employment, and new employment. This research suggests the importance of restructuring the supply side of the economy to solve current Australian economic problems.