AGRICULTURAL POLICY ISSUES

A FRAMEWORK FOR ANALYSIS

South Australia
Department of Agriculture and Fisheries
Vol. 9, No. 1, March 1979
Agricultural Marketing and Policy
Paper to be published in
that any model reflects these possibilities.

(b) A regional (State) dimension has been added to the industry structure model so that, under various experiments, differing performances between States can be analysed. The importance of agricultural production and exports varies quite markedly between States and thus the effects of a mining boom or tariff change on agriculture would be expected to have different repercussions for each State.

Conclusion

Because it takes account of the linkages between the agricultural sector, the other non-agricultural industries and international trade, the IMPACT project is a valuable tool for the analysis of many agricultural policy issues. Its ability to disaggregate the projected effects of Government economic policies and world trade developments makes IMPACT particularly relevant for studying the way in which decisions taken elsewhere in the economy affect different agricultural industries.
Policy actions cannot be appropriately analyzed, further the failure to assess the possible interrelated effects of any industrial sector's actions, the possible interdependencies of any industrial sectors of the economy, the possible interrelating effects of any industrial sector's actions, and hence on the productivity of the economy.

Policy actions affect the productivity of the economy. The productivity of the economy, however, affects the productivity of the consumer. The consumer's productivity, in turn, affects the productivity of the economy. This circular process, known as the multiplier effect, is crucial to understanding the dynamics of the economy.

For example, a change in the tax rate on a consumer's income will affect the consumer's spending, which in turn affects the productivity of the economy. This process is repeated, leading to a multiplier effect that amplifies the initial change.

For example, a change in the tax rate on a consumer's income will affect the consumer's spending, which in turn affects the productivity of the economy. This process is repeated, leading to a multiplier effect that amplifies the initial change.

The introduction of new technologies and innovations can increase the productivity of the economy. The introduction of new technologies and innovations can increase the productivity of the economy. The introduction of new technologies and innovations can increase the productivity of the economy.

Introduction

Policy Issues

A framework for analyzing agricultural

IMPACT: A framework for analyzing agricultural

IMPACT: A framework for analyzing agricultural

IMPACT: A framework for analyzing agricultural

Becomes development

Experiences undertaken have been documented in a number of IMPACT publications.

More detailed results of these and other IMPACT
take account of all the effects of policy options increases the possibility of inconsistent government economic policies. The IMPACT study, Australia's first major inter-agency economic research project, has been designed to provide such a framework for policy analysis.

What is IMPACT?

The IMPACT project aims to yield a coherent view of the economic relationships that exist between industry composition, international trade, the labour market and population trends. The participating agencies reflect these areas of concern. They are the Industries Assistance Commission, the Department of Employment and Industrial Relations, the Department of Environment, Housing and Community Development, the Department of Industry and Commerce (now represented by the Bureau of Industry Economics) and the Australian Bureau of Statistics. There are also two associate members of the project - the Department of Immigration and Ethnic Affairs, and the Department of Overseas Trade.

IMPACT has as its basis four economic models\(^1\) with which to analyse the effects of interaction between policy induced and naturally occurring economic and social change. These are:

(a) a small macro-economic model which is concerned with national levels of consumption expenditure, investment expenditure, government spending and the general price level;

1. An economic model attempts to represent aspects of the economy in a system of mathematical statements (equations) of economic relationships. It is normally solved by a computer. The behaviour of the system and its applicability to "real-world" situations can be analysed by performing various experiments with the model. Other economic models in Australia have been developed (for different purposes) by the Reserve Bank and the Treasury.

increased by an amount equivalent to 15 per cent of the value of total exports. For the reasons discussed previously, those rural industries with high shares of exports in their total sales would be expected to suffer output reductions and income contractions. This in fact was the projected result. The industry groups "sheep", "cereal grains" and "meat cattle" experienced the most severe reductions in real farm income (ranging from 10 to 15 per cent) and output (ranging from three to five per cent). Despite the fact that overall employment in the economy was projected to rise by about one per cent, employment in the predominantly export oriented rural industries fell by up to eight per cent.

Those rural industries that sell a large proportion of their output for domestic consumption however (for example poultry) tended to be cushioned from these adverse effects. This was so because in the simulation real consumption was allowed to expand as a result of the increased income earned from the additional export receipts.

A general tariff increase and the agricultural sector

Another experiment was to simulate a 20 per cent across the board increase in tariffs. The results indicated that while the import competing industries were projected to increase their real output, the output of rural industries was adversely affected. The aggregate employment effects were small but employment in the group "rural workers" was projected to decline. As was the case with the mining boom simulation, the export oriented rural industries suffered greater reductions in profitability than did those supplying predominantly to the Australian market.
The current level of a particular industry's exports plays a role in the exchange rate. The exchange rate affects the overall economy, which in turn affects the total export volume. To work out the short-run economy, the implications of a short-term boom, an export boom was unanticipated which assumed that export income increased.

A mistake was the expectation that the export market would remain constant. In fact, the export market changed. In the long run (1920-1929), the world market was concerned with the demand for US goods, with the exception of communist countries. The US had to increase the competitiveness of its goods to stay in the market. A strong focus on the concern of the US economy, the US government, determined the competitiveness of the country. A strong emphasis on the export market, and the concern of the US government, determined the competitiveness of the country. A strong emphasis on the export market, and the concern of the US government, determined the competitiveness of the country.

Export expectations and the domestic sector

The export market is important to the domestic sector. Higher export possibilities, increased competitiveness of goods, and lower exchange rates, and other domestic factors also change. The export market is important to the domestic sector. Higher export possibilities, increased competitiveness of goods, and lower exchange rates, and other domestic factors also change. The export market is important to the domestic sector.
the level of national consumption expenditure
the level of national investment expenditure
production levels of each industry
imports and exports of each industry
relative prices of goods and services
employment of each occupation
balance of trade
profitability of each industry."

As well IMPACT can be used to analyse longer-term policy issues such as:

the effects on industry structure and employment of changes in the pattern of world trade
the effects of changing demographic patterns (for example a declining birth rate) on the demand for the products of particular Australian industries.

What IMPACT can’t do

Of course no economic model can capture all of the operations of a system as complex as the Australian economy. Neither is it claimed that IMPACT is applicable to all aspects of policy evaluation nor that it will solve all the problems involved in formulating policy advice in these areas. However, with proper regard for the assumptions and limitations inherent in the models, the IMPACT analyses can provide valuable insights into the likely effects of different policy decisions in the fields of industry development, trade and manpower.

It should also be noted that IMPACT does not provide forecasts (that is, predictions of what will actually happen at some future time). To do so would require judgments of what future Government policy changes would be forthcoming in response to movements in the economy.
Rather, IMPACT provides projections which indicate the consequences that would result from a particular economic or social change in the light of any given policy stance by the Government.

Agriculture in an economy-wide framework

The agricultural sector has important linkages with other Australian industries. It is affected by developments in international trade and by the Government’s tariff and exchange rate policies.

For example, another mining boom (such as future uranium development) could have an adverse effect on the rural sector through the resulting cost-price squeeze on exporting industries. A rapid expansion in mining activities would result in Australia earning very large amounts of foreign currency. This means that our foreign reserves would increase and our balance of trade would go into surplus. This situation could not persist indefinitely. Balance would be restored either by inflation in Australia continuing at a higher rate than in the countries with which we trade or by an upward revaluation of the exchange rate. In either case the consequent cost-price squeeze on the rural sector would reduce the profitability of its exports.

In the case of tariff changes, the effects on the agricultural sector can only be systematically analysed in a framework which takes account