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INCENTIVE POLICIES AND AGRICULTURAL DEVELOPMENT: SMALLHOLDERS IN MALAYSIA

Zulkifly H. J. Mustapha[1]

Introduction

In many countries, especially those of the Third World, agriculture and its growth and development has become a direct responsibility of the public sector (government). This can be observed through the allocation of public development expenditures, fiscal and other measures, as well as direct public sector participation in agriculture. Assistance in the form of subsidies, credit, and price supports (including those which involve international agreements) is a common feature of public policy and government intervention in agriculture. The economic, social, and political consequences of such intervention are said to be far reaching. It has enabled the agricultural sector to increase total output and improve aggregate sectoral income (and hence growth and development in agriculture), but has also created greater economic disparities within the agricultural sector. Such imbalances have implications for the relationships between growth and development and distribution and equity in the process of agricultural development.

In Malaysia, there has been active and direct participation as well as heavy commitment by the public sector in the development of agriculture. This is clearly evident from policies and strategies outlined in the country's 5-year development plans as well as budget appropriations for implementation of development programmes in agriculture and rural development. The policies and strategies ranged from programmes for assisting traditional farmers on their existing smallholdings to programmes for developing additional land for agriculture. In terms of development expenditures, agriculture and rural development have been allocated a substantial percentage of the total development budget, primarily for capital investment in physical and institutional infrastructures and for subsidizing inputs.

Bearing these features in mind, this paper will attempt to examine the nature and implications of public policies, specifically incentive policies (i.e., subsidies and credits) for agriculture in Malaysia. More specifically, this paper will assess the impacts of growth and the relationships between growth and equity as a result of the public sector's total commitment to the development of smallholder agriculture.

Agriculture and Public Policy

Agriculture occupies a dominant position in the Malaysian economy. The agricultural sector is dualistic, with a commercial, large scale, and relatively capital intensive subsector which provides the bulk of the agricultural output to satisfy export demand, and a traditional subsector. Within the former, there is a further division between the organized smallholders, such as those in land development schemes, and the estates.

Estates concentrate on a few crops like rubber, oil palm, and, on a smaller scale, coconut, cocoa, tea, and pineapple. Estate type agriculture accounts for more than 30 percent of the total cultivated area in Malaysia, and smallholdings, operated by approximately 670,000 farmers, account for about 60 percent of the agricultural land in peninsular Malaysia and a somewhat smaller percentage in Sabah and Sarawak. Smallholders also produce estate type crops and even have a greater total acreage of rubber, coconut, and pineapple than the estates, though padi (rice) is the predominant crop. In Sabah and Sarawak, smallholders also dominate the agricutlural sector, especially in the cultivation of padi,

rubber, and cocoa. Land development schemes, concentrating mainly on the production of rubber, oil palm, and, recently, cocoa, constitute about 10 percent of the agricultural acreage in peninsular Malaysia.

Broadly, agriculture employs about 40 percent or 2 million of the Malaysian labour force, and contributes 22 percent of the gross domestic product (GDP) and 40 percent of export earnings. It also contributes to total net real income via its linkages with the industrial sector through the establishment of agribusinesses. However, it has been rather unfortunate that the agricultural sector also accounts for the highest incidence of poverty--46 percent of all households in 1980 as compared to other sectors of the economy where the incidence ranged from 14 to 34 percent.

As agriculture plays an important role in the socioeconomic development of the country, development policies in Malaysia have given heavy emphasis to agriculture and to improving the socioeconomic status of the rural population. The main thrust of public policy in agriculture has been directed to the peasantry and smallholder sector. The policies are specifically aimed at increasing farm productivity and economic prosperity of the farming community through extensive irrigation schemes for rice farmers, land development programmes for landless labourers, and substantial support programmes for in situ development of agriculture.

The rationale underlying the public sector intervention in agriculture, particularly the smallholder sector, involves economic, social, and political considerations. Economically, agriculture provides livelihood for nearly half the country's working population and contributes significantly to the GDP and foreign exchange earnings. The social and political considerations arise from the fact that agriculture is primarily an indigenous sector. Moreover, the agricultural sector, or at least the peasantry and smallholder components, particularly fishing, padi, coconut, and rubber smallholders, has always been economically backward relative to the nonagricultural sectors.[2] These facts are particularly important as the indigenous population, of which the Malays are the majority, are politically dominant in the electorate, but constitute the majority of the poor in the country. It is thus a political and social necessity that the development of agriculture help the indigenous groups, at least to raise their income and improve their welfare.

Public sector intervention comes from the federal government and the respective state governments. Participation by the federal public sector comes under four main ministries--Agriculture, Primary Industries, Land and Regional Development, and National and Rural Development--which, apart from the government agencies under them, also control statutory bodies entrusted with the responsibilities of providing basic infrastructure, research and development, inputs, and a wide range of other agricultural services. State public sector participation in agriculture mainly takes the form of land development and settlement through State Economic Development Corporations, State Land Development Boards, and State Agricultural Development Corporations. Certain other agricultural services like irrigation and drainage are also provided by the state agencies.

The major areas of policy in smallholder agriculture include intensification (enhancing the productivity of existing landholdings through the application of new technology), improved planting materials, fertilizers, better irrigation, pest and disease control, extensification (extending the area of land in production by bringing new land under cultivation), and diversification (increasing the range of products produced through the introduction of wider cultivation of new crops, or increasing the value added to processing before export, thus increasing opportunities for rural employment).

System of Agricultural Incentives

The system of agricultural incentives in Malaysia exists at two levels. At one level, there are the trade and other taxes, officially regulated prices, credit policies, general extension services, and public infrastructure, which are the result of decisions implemented by the central government. At the second level, specialized public institutions operating in the agricultural sector frequently intervene between the central government and the farmer to influence output and input prices, grant credit on favourable terms, and provide subsidies in the form of cash or goods and services which affect the environment within which the farmer operates.

The most important instruments of public policy affecting the incentive structure of agriculture are subsidies and credit programmes. The provision of input subsidies has been significant. It covers technical advice, contract services, replanting grants, and supply of special inputs such as fertilizers, pesticides, planting materials, chemicals, irrigation, and drainage. The inputs are either directly subsidized or supplied on more favourable terms than would have been possible without public sector intervention. Related to subsidies on inputs is the provision of efficient credit facilities at low interest rates which range from production credit to credit for agribusiness. The former includes purchase and supply of inputs and agricultural equipment, whereas the latter concerns credit to industries dependent on the agricultural sector as the primary markets for their products, and those dependent on agriculture as the source of raw materials. These facilities have greatly helped to relieve the financial burden and constraints on the farmers resulting from rising production costs of modern farm inputs and application of new technology in their efforts to modernize and promote diversification in agriculture, and they have encouraged agribusinesses.

Another incentive takes the form of output subsidies. They are provided through price supports whereby farmers receive a guaranteed price for their output regardless of the prevailing market price. These are applied primarily to rice--for which they have long been used to encourage Malaysian production of its staple food--and to some extent to rubber through government intervention in the market as a buyer when prices are particularly low.

The above incentive policies have been complemented by considerable development of physical infrastructure and other socioeconomic amenities. These have, in general, provided the peasantry and smallholders with effective protection and incentives to continue their production of a wide range of crops in their efforts to follow policies of diversification, modernization, and growth in agriculture.

Growth and Equity in the Malaysian Smallholder Sector

An important development accompanying subsidies and credit programmes has been the substantial increase in farm productivity and total output. Over the last decade, smallholder agriculture has made significant progress both in total output and in output per unit of land or labour, especially in rubber, coconut, and padi. The government's assistance through credits on favourable terms and input subsidies, together with programmes of replanting, rehabilitation, large scale irrigation, and land development, has enhanced productive efficiency. However, the degree of success varies from region to region and between and within activities due to soil and climate conditions, varying levels of government assistance, and the rate of adoption of technology. For example, it has been observed that rice yield per acre in peninsular Malaysia is markedly higher on the west coast and in irrigated areas than on the east coast and in unirrigated areas. In the case of rubber and oil palm, output from land development areas, especially the Federal Land Development Authority (FELDA) areas, has been

higher than for unorganized smallholder type production, although there are variations in the former. This has been due to slow rate of adoption of new technology; to soil, climate and locational problems; and to discriminatory allocation of public support, technology, and access to capital and management inputs.

The increase in total output and productivity has also resulted in improvement in farmers' incomes. Again, the gain varies from region to region and between and within activities. The most remarkable improvement in farmers' incomes has been for settlers in large scale land development areas, especially the very extensive FELDA areas. They received substantially higher income--well above average rural households--compared to their counterparts in other such land development areas operated by other federal and state agencies. That achievement has been the result of favourable prices and economies of scale in both cultivation and processing in land development areas. In the case of padi, it has been estimated that farmers in the Muda irrigation areas over a period of a decade enjoyed an increase in income. Average farm incomes in the late 1970s were 2.4 times those of the late 1960s in real terms, due not only to increased farm production but also to improved padi prices via the guaranteed minimum price (GMP) (which is in effect a subsidy, the costs of which are borne by the entire urban as well as rice purchasing rural population). Increases in incomes for farmers outside the Muda areas, however, have been far from impressive though still high compared to other padi areas.

The increases in total output and incomes have, to a large extent, stimulated and substained growth and economic development in the agricultural sector. Also significant within the framework of the overall national policy is the increased share of national income received by the agricultural sector where the incidence of poverty is highest. However, that increase has not been achieved without adverse consequences.

The extension of new technology and improved materials through public sector intervention, particularly in smallholder rubber, oil palm, and irrigated rice, has accelerated the development of market oriented and specialized agricultural production, with farmers gradually being drawn into the commerical linkages incorporating their local economies into the national and international economic systems. Furthermore, the increasingly modernized agricultural production has also expanded opportunities for capital investment and for new investment possibilities in agricultural production itself, as well as in the production of items required for modernization. This, more often than not, has benefited the suppliers of the required inputs (fertilizers, pesticides, agricultural machinery, etc.) who have become an integral part of the whole process of modernization of agriculture. Also, as farming activities become increasingly integrated into the national and international markets because of their growing needs for technologically improved inputs and other complementary farming technologies, they are becoming more subjected to forces outside their (and public sector) control. This will result in farmers being more dependent on public support. A trend of long term dependency of the farming population on continued greater public support will cause a strain on the country's available resources.

In the case of land development, although public support has created on the new lands a class of relatively wealthy peasant farmers with larger farms and higher productivity and income than the average agricultural households, the percentage of households so benefited was still small in relation to the more than half million agricultural households below the poverty line. As for padi, the modernization of agriculture through seed and fertilizer technology and farm mechanization has created problems of labour displacement. The displaced labour in most cases is not readily absorbed into other employment and sectors. Furthermore, with the ownership and operation of padi land unevenly distributed

and the majority of padi farmers only owning and operating small sized holdings, the benefits accrued have been more to the advantage of large land owning farmers.

This trend has created economic disparity within the smallholder subsector. Apart from regional differences, it has also worsened and widened the gap in income inequality within the same activity. With the incidence of poverty still high, the increasing inequality has become a serious problem. The prevailing uneven allocation of public support to different and similar agricultural activities (whereby, for example, padi farmers in irrigation schemes generally receive more public support than their counterparts in unirrigated areas, and smallholder settlers under FELDA schemes are more favoured than those other land development schemes under federal and state agencies) further accentuates the dilemma. This trend, if it persists, will impede growth and development in some parts of the agricultural sector.

Conclusions

Active public sector intervention in agriculture through incentive policies has contributed significantly to overall growth and economic development in smallholder agriculture, but has also created a new dimension in the agricultural sector by dividing smallholders into middle class and poor farmers. This has resulted in greater inequality within the smallholder sector, in addition to the already existing economic disparity between the estate and smallholder segments.

It is often argued that such development is neither an efficient nor an equitable policy. However, in the light of the economic, social, and political importance of agriculture, and given that the ultimate aim of agricultural development is to increase farm productivity and improve the welfare of farming communities, public sector participation and commitments will continue to be essential to guarantee considerable growth and development in agriculture. And, other things being equal, efforts toward economic development in agriculture will always demand public sector support on a substantial scale.

Notes

[1]Faculty of Economics, Universiti Kebangsaan Malaysia, Kuala Lumpur.

[2]The peasantry and smallholder agricultural sector of the economy suffers, by comparison to other sectors, from both a lower income per capita and an income which is more variable over time. The low and varying incomes of many smallholders are due primarily to their poor productivity arising from many interrelated factors, including uneconomic size of farm units, price fluctuations of exports and major crops, traditional and inefficient farm practices, lack of new knowledge and skills, and inadequate access to modern inputs such as credit, fertilizers, pesticides, improved planting materials, marketing, and processing.

OPENER'S REMARKS—John S. Quilkey

The identification of equity as a prime political goal has increasingly tempted economists to propose tinkering with the price mechanism. Unfortunately, without counting the costs they have been ready to adopt the advice of Oscar Wilde that "the easiest way to beat temptation is to give in to it."

In developed economies, the major instruments directed toward improved equity within the agricultural sector have centred around the provision of suitable packages of information, credit, and other direct or covert assistance. In extreme cases, they have included substantial variations in property rights. The various assistance measures adopted as a means of securing or improving intersectoral equity betwen the farm and nonfarm sectors generally favoured larger farms, while small farms bore the brunt of the adjustment following attenuation or abandonment of these support programmes.

Despite these shortcomings, some economists from developed economies have not hesitated to exhort proposals for improving equity for small farms, the very same proposals which have already proved to be disasterous when implemented in the countries of origin. It is also surprising to observe the alacrity with which schemes of such doubtful pedigree have been adopted by economists in developing countries.

The issues faced in developing country agriculture are not totally divorced from those in more developed economies. Both mourn the degradation of social values such as egalitarianism and hard work as a consequence of an urbanized rural community. The small farm, too, is imperilled by the trend to fewer, larger, and more capital intensive farms. This development is viewed by many as a natural consequence of the improved technology necessary for greater economic efficiency, but it has brought support from some sources for discriminatory policies in favour of small farmers.

In developing countries, as Mustapha points out, the gains from increasing agricultural output and productivity are often regionally asymmetric, and are supported by transfers from the urban sector. Capital intensive agriculture benefits large farmers and suppliers of inputs to agriculture, and leads to concentration of holdings and displacement of labour which cannot be readily absorbed elsewhere in the economy. Distribution of income is biased towards larger producers and irrigated sectors, and the adoption of new technology tends to be patchy.

In all three papers, some emphasis is given to the role of credit. They all recognize the pressures, emergent in the 1970s, from international donors and internal politics to direct a larger proportion of their development expenditure to small farmers. They have also recognized, at least in principle, that a single policy instrument, including any one among those on which they have focussed, should be combined with a whole galaxy of development tools including provision of information about new alternative activities and the associated distribution of returns from them.

Not enough attention has been given to exploitation of the joint consideration of credit policy and policies to reduce income variance and improved perception of the distribution of returns to new technology. I am somewhat surprised by the result in Ferreira and McPherson's paper that reductions in credit availability of 50 percent had no influence on farm plans. This leads me to some consideration of credit relevant to the themes of all three papers. It is all too easy to overlook the likelihood that subsidized interest rates are nearly always regressive. The wealthy obtain more of whatever rationed credit is available and the less creditworthy poor are driven to higher priced sources of funds. A reinforcement of existing property rights occurs as the concessions are capitalized into land values.

It would seem appropriate to have greater emphasis on estimates of liquidity requirements for various farm activities as perceived by decisionmakers. Certainly, in both developed and developing economies, liquidity responses are dominant in risk behaviour. Such arguments are particularly cogent when we consider small farms in developing countries. The smaller the farm, in a particular environment, the higher the ratio of liquid assets to total assets. Smaller farmers have little alternative to management of risk through liquidity, particularly where the financial environment is deficient or defective as it can be in developing countries.

Uncommitted labour and product inventories can supply some degree of liquidity, but credit is particularly attractive. Financial risk is increased by borrowing, but the decisionmaker, according to the risk balancing hypothesis tends to lower risks in production and marketing activities. Costs are incurred with credit reserves but, by substitution of credit for cash and other forms of liquidity, risk management costs may be reduced.

Agricultural credit programmes are not without political hazards. Because governments usually control the supply of agricultural credit, they may exert control over its distribution and may allow income transfers through interest rate concessions (coupled with inflation). Temporary or permanent delinquency will constitute attractive income transfers, and the incentives may well be sufficient to link governments and borrowers in a patronage-support relationship.

There is a rapidly emerging literature, much of it relating to the adoption process, which draws on contributions from a wide range of disciplines in the social sciences other than economics. What has been lacking to date has been the development of economic models which explicitly incorporate the theories and concepts of sociology, cultural anthropology, and social geography.

The paper by Saupe et al. reflects the spirit of this line of inquiry with its reference to the strong duality of entities on small farms and agricultural development policy. Attempts should be made to model critical features of agricultural development processes. While I largely agree with their observations about the similarities in the development processes of apparently disparate agricultures in the three countries, decisionmaking is likely to be modified by social and cultural factors of which account should be taken.

Saupe et al. properly draw attention to the significance of the information gap. In developed economies, agricultural extension delivery has been slow to change and has become less effective. Increasing demands for accountability require that extension respond efficiently to a changing clientele, the requisite appropriate programme balance of target segments, and requirements for innovations in delivery. In developing economies, increasing emphasis on equity calls for a redress of market imperfections in the information flow in both directions between extension services and their clientele. Credit innovations and the availability of new technologies will have only qualified success if risk is wrongly perceived or where the financial infrastructure is whimsical in nature, politically oriented, regressive in effect, or all three.

Extension with reference to credit should not only be directed to farmers but to lenders as well since volatility of credit reduces its value and forces farmers to use more costly sources of liquidity. Differences in lenders' responses to risk (especially where their responses are capricious) between operating and capital credit have substantial significance for farm operation. Reductions in operating credit may reduce operating inputs, alter the enterprise mix, or change the asset structure of the farm or the management of market risk. Linkages between the availability of capital credit and business performance in the recent past may be a source of inefficiency in the capital market or lead to increased use of high cost forms of credit. There is plenty of scope for theoretical and empirical research into risk measurement and the behaviour of farmers, lenders, and policymakers.

It is difficult to cover in a short discussion the wide range of issues raised in Mustapha's paper. The declining absorption of labour with improved technology and associated capital intensiveness and the unevenness in support between irrigated and nonirrigated sectors are common across most of developing country agriculture.

Whatever the chosen policy instruments, policymakers should have in mind the distortions or improvements in input and commodity markets which may result from their choice of instrument. The welfare and distributive effects of market distortions may well reduce the prospects that both income and equity goals can be met. Distortion in policy instruments may occur when the form in which they are used alters. For credit, that is likely to occur when concessional interest rates are used. Where the objective function is specified as other than economic efficiency (e.g. import substitution or food self-sufficiency), a subsidy on inputs, including agricultural credit, may be the appropriate policy instrument to achieve such goals at minimum social cost.

RAPPORTEUR'S REPORT—M. J. Ongkili

Several participants emphasized the need to acquire and employ farm level data when attempting to design small farm policy strategy or analyze policy decisions pertaining to small farms. It was argued that small farms must be understood at the micro level before macro level decisions affecting them can be instituted. In this regard, the acquisition of farm level data that relate to structural and demographic characteristics of small farms was highlighted.

Ferreira responded to the opener by elaborating that the models specified maximized farmer income subject to a risk constraint measured by means of a variance-covariance matrix.

Regarding the Saupe et al. paper, a question was raised whether in the case of Brazil, where land is a scarce factor of production, agricultural research policy should be directed to increase the productivity of land through biological research rather than labour as advocated by the authors. Saupe agreed with this remark, but pointed out that the means to achieve such objectives must also be considered vis-a-vis existing available resources in the particular country. He suggested that options in research include the development of labour intensive technologies and perhaps the use of a farm systems approach to farm level research.

The conspicious absence of papers on fisheries was noted. The fisheries sector in most developing countries is as vital in coastal village development as are agricultural commodities in rural development. Mustapha was asked to describe the Malaysian fisheries experience. He conceded that fisheries development in general has lagged behind other sectors even in Malaysia where the industry has remained largely traditional.

In most cases, in developing countries, agricultural incentives such as cheap rural credit, subsidized inputs, and marketing of farm produce seldom reach the rural port because of bureaucratic bungling and corruption. Mustapha pointed out that because of the tight bureaucratic linkages from the ministry level to grassroots personnel, possibilities for spillovers of agricultural incentives are remarkably minute.

Participants in the discussion included B. Darus, B. F. Johnston, S. N. Kulshreshtha, V. Palma-Valderrama, S. Santiago, M. L. A. de Swardt, and Robert L. Thompson (Session Chairman).