

EFFECTS OF PRIVATISATION POLICY ON AGRICULTURAL PRODUCTION AND PRICES IN MALAYSIA: A THEORITICAL PREDICTION

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Sinopsis

Penswastaan telah diistiharkan sebagai dasar kerajaan. Ia adalah bersabit dengan proses pindah milik berbagai perusahaan dan perkhidmatan awam. Dasar ini adalah berasaskan persoalan kecekapan dan merupakan daya bergerak bagi mempercepatkan pertumbuhan ekonomi. Selain daripada perusahaan dan perkhidmatan awam, pertanian dari segi pembangunan tanah secara besar-besaran, sejak kebelakangan ini, juga telah dicadangkan untuk penswastaan. Cadangan ini adalah berdasarkan kepada pendapat bahawa penswastaan pertanian melalui kendalian pembangunan tanah berskil besar oleh pihak swasta akan mempercepatkan pertumbuhan dalam pengeluaran dan pembangunan pertanian.

Satu model pengeluaran optimum barangan telah digunakan untuk meninjau kesan dasar penswastaan bagi pertanian. Adalah diperhatikan bahawa penswastaan dapat meninggikan pengeluaran pertanian dan juga menurunkan harga keluaran pertanian. Tetapi, keuntungan melalui kecekapan didapati diikuti oleh kos sosial yang tinggi kerana persoalan kos sosial biasanya tidak diambilberat oleh pihak swasta. Sebaliknya pula, melalui dasar penswastaan output pertanian mungkin rendah sedangkan harganya meningkat, khususnya apabila terdapatnya cukai yang tinggi oleh pihak kerajaan dan apabila adanya pemusataan pasaran antara pihak swasta. Sehubungan dengan itu, penswastaan juga menimbulkan implikasi lain dimana ia bercanggah dengan semangat Dasar Ekonomi Baru, terutama dalam persoalan pembasmian kemiskinan.

Synopsis

Privatisation has been proclaimed as a government policy. It is associated with the process of ownership transfer of selected public enterprises and services to the private sector. This policy is based largely on efficiency argument and that it serves as an impetus to accelerate the growth of the economy. Other than public enterprises and services, agriculture in terms of large-scale land development has also, of late, been suggested for privatisation. It has been argued that agricultural privatisation through large-scale land development by the private sector could accelerate the growth in agricultural production and development.

A simple economic model of optimum commodity production is developed to examine the effects of privatisation policy in agriculture. Based upon this model,

it is observed that privatisation could increase agricultural production and lower agricultural prices. These indicate improved efficiency in agriculture. However, this gain in efficiency could be offset by increasing social costs which are often ignored by the private sector. On the other hand, with privatisation policy agricultural output may decline while prices increase, especially when the government imposes heavy taxes and when there is a high degree of market concentration among private agricultural firms. There is also other implications, that is privatisation policy conflicts with the spirit of the New Economic Policy, largely, in relation to poverty eradication.

Introduction

The concept of privatisation, since recently proclaimed as a government policy, has generated considerable public interest. In its broadest meaning, privatisation has been defined and associated with the process of ownership transfer of selected government enterprises and services provides to the private sector (Mahathir, 1983). Privatisation can also be interpreted as a government's move towards less interference on economic and business decisions in the economy through deregulation of market system. In such a situation, business and investment decisions of firm shall rest on forces dictated by the market system rather than specific constraints imposed by the public sector.

The case for privatisation of government enterprises and services hinges largely of efficiency argument. Using profit as a measure of efficiency, the government has argued that the private sector has performed relatively more efficient than the public sector. Past experiences have shown that the government is relatively less successful or even incurred losses in managing some of the government enterprises. To some extent, this situation has overburden public expenditure, particularly in the current recession period. Some hold the view that privatisation is not merely to increase efficiency, but more importantly, it serves as an impetus to accelerate the growth of Malaysian economy through recognising dynamism and innovativeness characteristics of the private sector which probably have been overlooked by the government in the past.

A broad area of government enterprises and services has been suggested as possible avenues for the privatisation policy to a take effect. To name a few, this includes postal and telecommunication, railways, radio and television, hospitals and clinics, ports and educational institutions. Recently, there has been a suggestion for privatisation policy to include allocating land in a big way to the private sector for the purpose of agricultural development. It was argued that in the past the private sector has been deprived from opening new lands for

agricultural development. Instead, only government agencies such as Felda, Risda and Felcra have been given priority for agricultural land development. It was also argued that the policy of agricultural privatisation through alienating land to private sector could accelerate the growth of Malaysian agricultural production, particularly in the area of food production (Swan, 1983).

In this paper, we intend to explore the possible economic impacts of privatisation policy if it is applied to agriculture, particularly with respect to land. By agricultural privatisation policy, we simply mean the policy of allocating and disposing land to the private sector for the purpose of agricultural development. Such a policy is similar, for example, to the policy of alienating land through Felda. At the same time we also assume that agricultural privatisation policy encourages market competition. In this paper, we assume that land is a scarce factor. As such the government has to make a decision either to pursue privatisation policy or otherwise.

Using the above assumption and a simple economic model which to be developed in the next section of the paper, an attempt is made to highlight the short-run and long-run effects of both policies i.e. agricultural privatisation or non-privatisation policies on quantity and price of agricultural production and social cost. Within the framework of the model, the expected path of socially optimum and competitively determined agricultural production and prices will also be determined. In the last section of the paper, we highlight some policy implications as a consequence of agricultural privatisation policy.

An Economic Model of Optimum Commodity Production

In this section of the paper, a simple economic model of optimum commodity production is developed. Essentially, this model is based on the work of Howe (1979) which attempted to explain the optimum production of stock resources. For the purpose of this paper, the model is generalised to encompass general cases of commodity production.

Following Howe, the model to be presented here is a normative one. The aim of the model is to derive a basic condition for an optimum commodity production, the model can be used to predict the optimum points and paths of agricultural production and prices which are likely to prevail with the privatisation and non-privatisation policies.

In order to derive the basic optimum commodity production, we require three relationships namely: a production function, a demand function and a definition of social benefit. Following conventional economic theory, production function defines a relationship between

physical output and physical inputs. As far as agricultural production is concerned, it is assumed that for any given level of technology quantity of output that can be produced will depend upon a combination of specific sets of inputs such as land, machinery, and labour. For our purpose, land and machinery are to be grouped as one single factor i.e. capital. In its broadest form, the production function for the i th commodity can be described by the equation:

$$(1) \quad Q_t^i = f(L_t^i, T^i)$$

where Q_t^i = rate of production of the i th commodity at time t ,

L_t^i = capital-labour ratio of the i th commodity production at time t , and

T^i = level of technology

In contrast to the production function, demand function relates the amount of a particular commodity that a consumer will purchase to the price of the commodity, the prices of complementary and substitution commodities, the consumer's income, and taste. In its most general form, the demand function for the i th commodity can be stated by the equation.

$$(2) \quad P_t^i = D(Q_t^i, Y^i)$$

where P_t^i = price of the i th commodity at time t , and

Q_t^i = quantity of the i th commodity consumed at time t , and

Y^i = variable representing demand shifters such as the prices of complementary and substitution commodities, consumer's income, and taste.

The final relation is definition of social benefit. Conventionally, total social benefit is always defined and represented by an appropriate area under a demand curve. However, such a definition of social benefit is rather misrepresented in that it ignores externality effects of a consumption and/or production of a certain commodity in a society. In the world today, externality does exist and in fact it becomes an important determinant of quality of life in a society. With a positive externality, social welfare (benefit) can be enhanced and vice versa. Therefore, based on the above rationale, the definition of social benefit has been modified in order to take into consideration of both positive and negative externality. In general, thus, total social benefit derives from a consumption of the i th commodity can be defined as follows:

$$(3) \quad SB_t^i = \int_0^{Q_t^i} D(N_t, Y^i) dN + A_t^i$$

where SB_t^i = total social benefit derives from the consumption of the i th commodity at time t ,

$\int_0^{Q_t^i} D(N_t, Y^i) dN$ = total area under the demand curve for the i th commodity at time t , and

A_t^i = total externality effect from the consumption or production of the i th commodity at time t . (Note that A_t^i will be positive if there is a positive externality and Vice Versa).

It should be noted that the development of the model is not completed without taking into consideration the cost associated with a production of agricultural commodity. Generally, there are two different categories of cost associated with any production system. One of which is known as direct cost which includes inputs costs. In economic terms, this cost is essentially equal to the opportunity cost of producing the commodity in question. One other cost is known as indirect cost. It does not only include external cost such as pollution and amenity costs, but it also encompasses user cost. User cost will be positive if the present utilization or consumption of a commodity or resource sacrifices future uses.

It is important to note that within the framework of this model, we assume that the objective of the society is only to maximize net social benefit. Even though this assumption is not too practical, it is however, accepted because of the simplicity it afforded. Therefore, within the context of the model, the objective of maximizing net social benefit can be attained by choosing the optimum function of L_t which maximizes the following:

$$(4) H = \int_0^{Q_t^i} D(N_t^i, Y^i) dN + A_t^i - w_t L_t - q_t Q_t$$

From (4) we observed that the first and second terms on the right hand side of the equation are already defined earlier. W_t is price of the inputs such as capital and labour and q_t is user cost or value of future sacrifices due to the present consumption or utilization of a commodity or resources.

In order to derive the first order necessary condition such that H in (4) is maximised a partial derivative of H with respect to L_t is taken. This yields

$$(5) \frac{\partial H}{\partial L_t} = D(Q_t^i, Y^i) \frac{\partial Q_t^i}{\partial L_t} + \frac{\partial A_t^i}{\partial Q_t^i} \frac{\partial Q_t^i}{\partial L_t} - w_t - q_t \frac{\partial Q_t^i}{\partial L_t}$$

By substitution of (2) into (5), and setting (5) equals zero, and then rearrangement terms, we obtain the following basic condition for optimum production.

$$(6) P_t^i = \frac{w_t}{\partial Q_t^i / \partial L_t} + \frac{\partial A_t^i}{\partial Q_t^i} \frac{\partial Q_t^i}{\partial L_t} + q_t$$

Equation (6) is the basic condition for socially optimum commodity production. Economically, this condition suggests that the production of the i th commodity is optimum and the net social benefit is maximise if the price of that commodity is set equal to sum of its

marginal cost $\left(\frac{w_t}{\partial Q_t^i / \partial L_t} \right)$ external cost $\left(\frac{\partial A_t^i}{\partial Q_t^i} \frac{\partial Q_t^i}{\partial L_t} \right)$ and user cost (q_t) . If this condition is violated, the production is not at an optimum point, and consequently the net social benefit is also not at a maximum point.

The Pattern of Commodity Production and Prices with Privatisation and Non-Privatisation Policies

Our task now is to characterize and trace the pattern of agricultural production and their prices with the implementation of privatisation and non-privatisation policies. This can be done by investigating variables which the private and public firms based their decisions in determining output and price levels with basic condition (6) serving as reference point. At one extreme, if all firms in the economy fulfill basic condition (6) in determining their output and price levels, then it is true that the output they produced and the price they set are essentially consistent with those of maximizing social benefit. At the other extreme, if all firms violated this condition, in that they neglect external effects from a production system, the output they produced and the price they set will not be at optimum points, and consequently the level of social welfare in the economy will not be maximized.

Now let us consider the output and price decisions of the 'public agricultural firms' such as Felda and Felcra. In this paper we argue that public agricultural firms fulfill basic condition (6) in setting their output and price levels. Therefore, their output and prices levels are not deviated from those of maximizing social benefit. Such an argument hinges around the fact that the prime objective of 'public agricultural firms' or agencies is to serve public and increase social

welfare rather than profit *per se*. With this objective, 'public agricultural firms' adapt a different method of calculating benefit or total gains from a project. 'Public agricultural firms' will not only take into account tangible benefits, such as the value of output produced, but they will also take into account indirect gains from the project such as improvement in income distribution and generation of employment opportunities to the society concerned. Even though this indirect gains are difficult to estimate quantitatively, in some circumstances, it may well exceed the direct gains. Therefore, their significance needs to be stressed by the public firms. Similarly, in calculating total cost, 'public agricultural firms' will not only take into account the direct cost of a project but the indirect cost as well. Supposedly, if there is environmental cost arising from a certain project, 'public agricultural firms' will take this into account in their output and price decisions. The same is also true as far as the user cost is concerned. If the present utilization or consumption of any commodity involve future sacrifices, then the government tends to discourage current consumption by increasing or inflating current prices to reflect user cost. As shown by the past experiences, the weight given to the consideration of the indirect cost partly depends upon political and social pressures. The stronger the pressures are, the heavier is the weight attached to the consideration of the indirect cost. Based on these arguments, it is very likely that the 'public agricultural firms' will set their output price according to basic condition (6). In other words, the price of a commodity set by these firms will be equalled to the sum of its marginal cost, and user cost, if any.

Now let us turn to the output and price decisions of "private agricultural firms" in a competitive market. In contrast to our earlier contention, we argue that "private agricultural firms" partially fulfill basic condition (6) in determining their prices and output levels. Consequently, if the environmental and user cost persist, we argue that the output and prices determined by private firms are not socially optimum. Our arguments are based on the fact that the prime objective of private agricultural firms is different from that of the public firms. Usually, it is believed that private firms are maximizing profit as opposed to maximizing social welfare in the case of the public firms. As a result, agricultural firms in the private sector calculate benefit and cost differently from those of the public firms. For instance, when the private firms calculate total revenue, only total sales which is valued at market price will be considered. Gains to the society which are intangible will not be considered by the firms. Similarly, in valuing total

production cost, only direct or tangible costs such as cost of input purchases and opportunity costs are considered. In almost all cases, indirect or intangible costs such as amenity and environmental costs which are not borne by the firms will not be taken into consideration unless they are reflected by certain taxes.

In addition to the environmental cost, private firms also tend to neglect user cost. In reality, user cost could well be positive because the present utilization of land for agriculture may to some extent deprive future generations from a certain natural value which exists prior to the agricultural development. Unfortunately, due to the market failure, the value of user cost is hardly observable. The fact that private firms are only concerned with maximizing current profits within a finite planning horizon, the question related to intergenerational problem, and consequently user cost, is of minor interest to the firms.

Therefore, based on the above arguments, the terms reflecting environmental and user costs are dropped from basic (6). Thus, for the private firms, basic condition (6) is change to

$$(7) P_t^i = w_t / \partial Q_t^i / \partial L_t$$

where P_t^i = price of the i th commodity set by the private firms,
and

$w_t / \partial Q_t^i / \partial L_t$ = marginal cost of the i th commodity.

Equation (7) is a familiar condition for optimum production and price of private firms in a competitive market. Economically, this condition states that the production of the i th commodity is privately optimum when the price of that commodity is equal to its marginal cost.

The change in basic condition (6) to (7) produces different output and pricing patterns between the public and the private agricultural firms. By comparison of these basic condition, i.e (6) and (7), we see that at any time t , the price of the i th commodity produced by the private firms is lower than that of the public firms. A lower price implies that a higher and rapid rate of production by the private firms than that of the public firms. If this is true at all time, then the patterns of agricultural production and prices determined by the public and private agricultural firms for a certain period of time are expected to be as (shown in Figure 1).

If the above results are true, in that higher production rate and lower price of agriculture commodity are offered by the private firms than those of the public firms, then the government will attain its efficiency objective of privatising agriculture in which market competition is promoted. Given the fact that consumers are paying lower prices

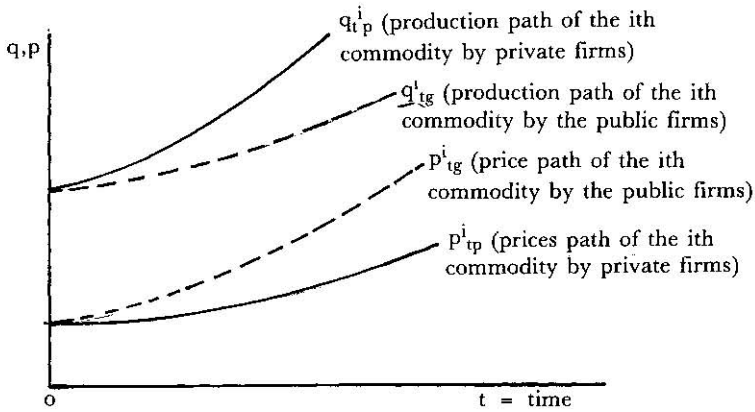


Figure 1

Expected paths of socially optimum and competitively determined agricultural production and prices.

for the agricultural commodity produced by the private sector, the level of consumer welfare will increase and this can be measured and approximated by the change in consumer surplus. However, it is important to note that the change in consumer welfare as a result of the privatisation policy may be offset by the increase in indirect cost, particularly environmental cost, due to the increase usage of insecticides. As a matter of fact, the case for environmental cost in developed countries due to rapid agricultural expansion is discussed by Barry Commoner (1977). Indeed, the environmental cost could well be significant in this country too if the agriculture expansion neglects environmental consideration. If the amount of indirect cost exceeds the change in the social welfare, then the efficiency objective of the privatisation policy is defeated. If the privatisation policy continues, there is a great possibility that agricultural development in the country will take place with a high social cost.

It is important to emphasise here that the production and price paths shown in figure 1 are indeed simplified and may not be true at all time. For instance, over a certain period of time, the paths may reversed where P_{tp}^i exceeds P_{tg}^i and q_{tp}^i declines overtime (see figure 2). If these occur then the welfare of the society is adversely affected.

The possibility of reversed price paths to occur depends upon several variables. One of which is government tax. Given a downward sloping demand curve for agricultural products, the imposition of tax will increase consumer prices to some extent. Should the tax rate be high and the slope of the demand curve be steep, then there is a strong tendency for P_{tp}^i to exceed P_{tg}^i .

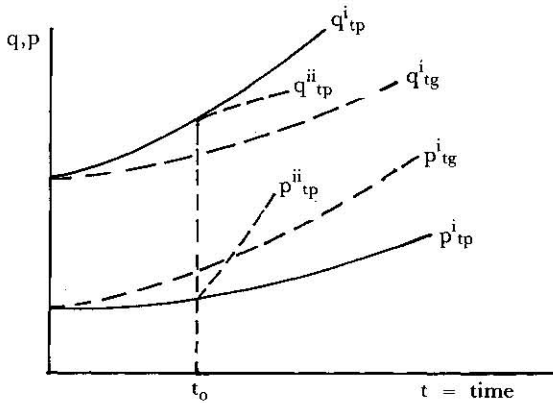


Figure 2

Expected path of socially optimum and competitively determined agricultural production and prices with government tax and high degree of market concentration.

The other important variable that could reverse the price paths is market concentration. In practice, privatisation policy does not guarantee free market solutions. With unfair trade practices, for instance, firms may drive competitors out of the market concentration. Given a high degree of market concentration, there is a high probability that monopoly and oligopoly trade practices will emerge in the industry.

Other Implications of Agricultural Privatisation Policy

Besides the deviation of output and price of agricultural commodity from social optimum paths, the privatisation of agricultural sector as proposed has other implications. For example, with agricultural land fast becoming scarce and that a significant proportion of the rural and farming communities are either landless or only owning small-scale uneconomic size of holdings, there prevails land shortage. The involvement of private sector in large-scale land development through privatisation of agricultural land further aggravates this problem. Given this, then privatisation policy is conflicting with the New Economic policy in terms of eradicating of poverty and restructuring of society. This is seen in the light that participation of private sector in large-scale land development will limit the opportunities and potential of continued land development by the public sector towards enlargement and ownership of land for the smallholder farming communities. With smallholder continuing to remain landless or owning small uneconomic size of farm holdings, poverty will continue to exist.

It is believed that privatisation of land and its development would only be beneficial and profitable if it is done through large-scale development. Such development will require heavy capital investment and financial resources. More often than not, such requirements are beyond the capacity and capability of bumiputra provided they are backed by public sector supports. The group with potentials to participate in the privatisation policy, then, are primarily the large corporate business bodies. From the point of view of these organisations, privatisation policy provides opportunities for their participation in agriculture which has previously been a domain of public sector, while to the bumiputra, particularly the poor landless households, it deprives them of the opportunity for acquiring and enlargement of holdings through public sector support. Thus, it can be seen that the privatisation policy conflicts to some extent with the spirit of New Economic Policy in the alleviation of poverty in Malaysian society.

It has been envisaged that privatisation provides an avenue for increase revenue to the government through taxes on the private sector. However, as often observed, the burden of taxation of the private sector has been generally handed down to the public because the former operates on profit motive. The transfer of this burden may be in the form of higher prices of the products. This, in the long run, would affect the well-being of the society as mentioned earlier.

Generally, however, it is suffice to say that privatisation would increase efficiency in agricultural production and assist to speed up agricultural development, but as mentioned above privatisation could contradict the New Economic Policy and further implies other problems relating to the socio-economic environment in the rural and agricultural sector.

Conclusion

The desire to increase efficiency, particularly in agriculture, is needless to say, important. Privatisation of agricultural activities such as large-scale land development through private sector investment provides an answer in view of the accepted and proven fact that private sector management has been relatively more efficient than the public sector. However, considering the socio-economics of the rural population and the general and current status of economic distribution, it is essential to examine the implications of privatisation of agriculture, particularly in the long run. The government has to weigh the efficiency gains of the privatisation policy in relations to the possible social cost and conflicting policies that may arise before a full scale of privatisation policy in agriculture should take effect.

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