Food Policy in Malaysia

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Introduction

Malaysia has achieved a relatively impressive growth since its independence in 1957. Its achievement is shown in the following indices: ranked 36th/217 in GDP (World Bank, GDP Ranking, 2015), 18th/190 in ease of doing business (World Bank, Doing Business Report, 2016), and 59th/188 in Human Development Index (HDI) (United Nations, HDI, 2016). Despite these achievements, its food sector remains underdeveloped as reflected by its food trade deficit amounting to RM18 billion in 2015 for almost all items with the exception of fisheries products and poultry and pork meat (www.epu.my). It relies on imported inputs such as feedstuff, fertilizers, agricultural machineries, and labor and general productivity level remains low.

The food sector performance can be depicted graphically to indicate trends, magnitude, and changes. However, its journey and how and why it has arrived to the current state are driven largely by its policy stance, then and now. This note examines briefly the evolution of the Malaysia food policy since 1960s until to date and how it has shaped the country’s food sector development. The following sections discuss the performance of the food sector in the context of the Malaysian agriculture, a brief evolution of the food policy, and lastly the conclusion.

Food Sector Performance

The country’s economic development was spearheaded by the agriculture sector since the 1950s but since then its role has declined to make way for industrialization. The contribution of agriculture to GDP has reduced from about one-third of GDP before independence to 8.3% in 2015, employment (2/3%–12.1%), and exports (2/3%–14.1%) (Ministry of Agriculture and Agrobased Industry, 2015). The food sector accounted for 24.8% and 3.5% of agricultural and total exports in 2015, respectively. However, it accounted for about more than half, i.e., 51.6% and 5.7% of the agricultural and total imports in 2015, respectively. The food export/import ratio decreased from 0.75 in 1990 to 0.65 in 2015 indicating the country is a net importer of food. Despite the decline in the percentage contribution of the agricultural and food sector, its absolute value has increased but at a lower rate relative to other sectors. When the country opted for industrialization in the late 1980s, it induced the outflow of resources (land, labor, and capital) to the manufacturing, construction, and service sectors leaving the agriculture sector beset with labor problem and eroding competitiveness, particularly the food sector. The following paragraphs examine the performance of the sector in terms of land usage, value added, trade, production, and sufficiency.

Land Use

Fig. 1 indicates the land usage in Malaysia, 1960–2015. The area under agriculture has increased by 176% from 2.6 mn ha to 7.3 mn ha between 1960 and 2015 suggesting an annual rate of change of 10%. In the 1960s, the share of food crops stood at 31.5% but reduced to 10.5% in 2015, while the share of oil palm in industrial crop category increased from 3% in 1960 to 37.4% in 1990 to 83% in 2015. Note that the decline in the food crop area is not compensated by a large increase in the productivity.
Despite the predominance of industrial crops in terms of area (89.5%), their contribution to the value added is lower. For instance, in 2015, industrial crops contributed to about 60.5% to value added in 2015 compared to 38.8% by food crops, which accounted for only 10.5% of the area. These figures suggest that the returns per hectare of food crop area are higher than industrial crop (Fig. 2).

Food Trade
While the exports of industrial crop-based products (for instance crude palm oil, natural rubber, and cocoa products) provide trade surplus, it is not the case for food, feed or livestock, and almost all of the agricultural inputs (such as seeds, breeds, agricultural machines, and labor). As shown in Fig. 3, the food trade deficit increased from about RM1.1 billion in 1990 to RM18 billion in 2015 and reduced to RM15 billion in 2017. Figures 3 and 4 summarize a few pertinent observations. First, both the export and import of food show an increasing trend between 1990 and 2016 with import growing at average 9.6% compared with 9% per year for export. Food export increased from RM3.4 billion to RM30 billion, while import grew from RM4.5 billion to RM46.7 billion in the said period. These data explain the ever-growing food trade deficit from RM1.1 billion in 1990 to RM18 billion in 2015, which reduced somewhat at RM16.5 billion in 2016. Second, with the exception of live animals (mainly poultry), food manufactures, and edible products and preparations, all food items showed a growing deficit in volume and value.
These include cereals and preparations (including rice, wheat, and corn), feedstuffs for livestock, fruits and vegetables, sugar, and preparations and lately fish, crustaceans, and mollusks. As for fishery products, after years of surpluses, Malaysia began to experience deficit since 2011 reaching RM1 billion in 2015. This is partly due to the overexploitation of fisheries resources in the Straits of Malacca in the face of growing consumption. Third, the major food export items were coffee, tea, cocoa, spices, and manufactures accounted for 27.4% in 2016 valued at RM8.2 billion, followed by miscellaneous edible products and preparations (24.2%) valued at RM7.2 billion. Both items registered trade surplus but not enough to offset the overall deficits. Fourth, the largest food imports were vegetables and fruits accounting for 18.6% of food import valued at RM8.7 billion. This is followed by cereals and preparations (15.8%) valued at RM19.5 billion. The other important import items include coffee, tea, cocoa, spices, and manufactures (14.6%) and miscellaneous edible products and preparations (11.9%). Fifth, the largest deficit is recorded by fruits and vegetables, which accounted for about one-third of food deficits valued at RM6 billion followed by cereals and preparations (19.5%) at RM3.9 billion. However, the value of food deficit is larger than stated if one takes into account of the agricultural inputs, which are mostly imported such as fertilizer, pesticides, agricultural machineries, and foreign labors.

Food Production
Besides importing rice, beef, mutton, and dairy products, Malaysia is a net importer of fruits and vegetables despite being one of the world’s richest countries in biodiversity. As shown in Fig. 5, areas planted with fruits have increased from 188,334 ha in 1992 to a peak of 306,911 ha in 2000, but since then it has declined to reach 199,709 ha in 2015. The composition of fruits planted has not changed very much with the share of durian hovered around 32%–35% between 1992 and 2015, bananas (10%–15%), and pineapple (5%–8%). Most of the fruits experienced decline in area planted as shown in Fig. 6. These include starfruit, sapodilla, sweet lime, pulasan, limau besar, papaya, mango, rambutan, jackfruit, salak, duku/duku langsat, banana, and guava. Fruits that saw an increase in areas include nangka, dokong, pineapple, langsat, mangosteen, durian, and watermelon. The factors that lead to the slow growth of this industry include cheaper imports, lack of institutional supports particularly R&D, and high cost of production.

The vegetables industry exhibits an opposite trend but is still inadequate to turn Malaysia as an exporter. As shown in Fig. 7, the areas planted with vegetables have increased by 138% between 1992 and 2015 from 28,980 ha to 68,927 ha. The major vegetables include mustards (accounted for 23.1% in 2015), cabbage (15%), long beans (8.2%), and cucumber (8%). Unlike the fruits sector, vegetables that experienced area decline were minimal (Fig. 8). This sector enjoys growth due to increase in consumption and health awareness and relatively better return compared with the fruits sector. The productivity level remains low compared with those in the ASEAN countries largely due to inadequate institutional supports particularly R&D, extension, and high input cost particularly labor.
Figure 4  Balance of selected food trade (RM mn), 1990–2016. (A) Cereals and preparations; (B) feedstuff for livestock; (C) fruits and vegetables; (D) sugar and preparations.
(E) Fish, Crustaceans and Molluscs

(F) Food Manufactures

Note: BoT (Balance of Trade)


Figure 5 Total area planted with fruits (ha) and share of each fruit (%) for selected years. Source: Data before 2010 were sourced from Ministry of Agriculture and Agro-Based Industry (various publications). Data 2011–15 were sourced from Department of Agriculture, 2016. Booklet Statistik Tanaman (Sub-Sektor Tanaman Makanan) 2015. Putrajaya: Department of Agriculture, Ministry of Agriculture and Agro-Based Industry.
As for rice, Malaysia is a perpetual net importer since the 1940s despite the large investment and subsidies that poured in. As shown in Fig. 9, the amount of subsidies was on the rising trend between 1979 and 2006 but it began to shoot up after the world food crisis in 2008. By 2016, the total subsidies allocated reached RM2.2 billion. Malaysia is unable to achieve high degree of self-sufficiency as local production failed to meet the consumption due to increase in population and income (Fig. 10). Unlike other commodities, this sector is highly protected from the world market vagaries through market instruments such as floor and ceiling prices for paddy and rice, respectively; import monopoly by BERNAS, a government-linked company; and provision of numerous input and output subsidies. A number of studies have shown that the distortion effort comes with high prices such as inefficient allocation of resources, slow production and processing growth, market sluggishness, and numerous market irregularities and inconsistencies (Amin et al., 2010; MIER, 2010; Fatimah, 1994; Jenkins and Lai, 1991). Despite the observed downsides, the protectionist stance continues.

**Food Sufficiency**

Food security is an important agenda for Malaysia. The self-sufficiency level (SSL) is a gross proxy to indicate the level of “availability” of a particular food in the country. The level of food sufficiency of major food items between 1990 and 2015...
Figure 8  Change in areas planted with vegetables (%) for selected years (1992–2015).

Figure 9  Self-sufficiency rate of rice (%) and the total allocation of subsidies (RM mn), 1979–2015. SSL, self-sufficiency level. Source: Data before 2001 were sourced from BERNAS (personal communication) and data after 2001 was sourced from Paddy and Rice Section, Ministry of Agriculture and Agro-Based Industries.

is depicted in Fig. 11. With the exception of poultry and pork meat, fishery product, and eggs, the rest of the food items are below the country’s requirement such as rice (71.6% in 2014), fruits (81.3%), vegetables (56%), beef (28.6%), mutton (18.3%), and dairy (4.9%). Note that little progress is achieved in the SSL of basic food items such as rice, fruits, vegetables, beef, mutton and, dairy products.

**Evolution of Food Policy**

The above graphs and paragraphs are largely the composite end results of the food policy adopted in Malaysia in the last five decades or so. The evolution of the food policy is best understood by examining the policy documents that provide the statement and strategies intended. The country has undergone a structural transformation from a primary producing economy to an industrialized nation focusing on services and manufactures. Along the way, the food sector emphasis changed in accordance to the domestic sociopolitical and economic landscapes and international market scenes. Based on these considerations, the history of the food policy can be demarcated into a number of eras or phases such as agriculture-led development, export-driven economy, industrialized economy, and sustainable and high-income economy. The following paragraphs briefly review the food policy in the said developmental phases.

**Agriculture-Led Development**

This era refers to the colonial times (1950s) until late 1970s when agriculture was the mainstay of the economy. Prior to independence (1957), Malaya’s agricultural policy was designed primarily to serve the needs of British colonial rule with a purposive neglect of the rural sector, which was predominantly agricultural. While British companies ventured into plantation agriculture, largely rubber and other commercial crops cultivation, the rural sector that produced food such as rice, fruits, vegetables, livestock, and fisheries products remained largely in subsistence and smallholder agriculture. This policy was responsible for the bimodal development of Malaysian agriculture to date, i.e., the plantation and food/smallholders sectors grew side by side unevenly in growth, efficiency, and productivity.

Early development focuses and strategies were encapsulated in two development plans: First Malaya Plan (1 MP) (1957–60) and Second Malaya Plan (2 MP) (1961–65) (Malaya, 1957, 1961). The thrusts of the plans continued the industrial crops development established by the colonials earlier except the participation of the smallholders was further increased through land development program by reallocating farmers from overcrowded uneconomical farms to new land schemes to plant rubber and oil palm. In 1956, the Federal Land Development Authority (FELDA) was established to fulfill this function. There was no specific mention on food sector development in the two policy documents.

Overall development of the country is the major theme of the First Malaysia Plan (1966–1970). The overall objective is “social and economic development, capacity building of human resources, population control, infrastructures, transport, communication, social welfare, health, housing.” Land development continued to be instrumental in poverty addressal. By the end of 1970,
a total of 593,800 ha of new land was cleared up for rubber and oil palm plantation. The word and concept of food were not mentioned, but they were efforts to increase human capital capacity and R&D in agriculture at large including fisheries and livestock products. During this the expenditure in drainage and irrigation for paddy accounted about 33% of agricultural development expenditure indicating the beginning of the concern of the major staple of the country, which is rice. During this period, rubber accounted for about 61% of agricultural GDP.

Export-Driven Economy

Malaysia saw the opportunity of exploiting the growing demand for agricultural and industrial raw materials particularly natural rubber and tin, respectively. The growing automobile industry in the West provided the strong impetus to produce these commodities. Hence, a policy that directed toward export-led growth was adopted during the early 1970s till the late 1980s. Export opportunities ruled the policy design and emphasis. This means crops such as natural rubber and oil palm were perceived as the highest potential export earners and hence were given bigger supports. A crop diversification program was implemented to minimize the risk of heavy dependence on a few commodities. Under the Second Malaysia Plan (1971–1975), Third Malaysia Plan (1976–1980), and Fourth Malaysia Plan (1981–1985), oil palm was given a bigger boost through more land development and institutional supports. By 1980, rubber area had reduced to 45% of the agricultural land while oil palm had increased to 23% and cocoa area 2.8%. By 1980, land development reached its peak of 866,058 ha under the FELDA, FELCRA,\(^1\) and RISDA\(^2\) schemes.

As for the food sector, paddy also received extensive support with the completion of the MADA, KEMUBU, and Besut irrigation programs. The National Padi and Rice Authority (NPRA) was established to formulate policies and coordinate activities relating to the production, processing, and marketing of paddy and rice. Coconut rehabilitation schemes and replantation of pineapples were introduced. New high-yielding paddy varieties were introduced in MADA area. In 1970, MADA harvested its first off-season paddy over 83,000 ha. A number of programs were introduced to develop the livestock sector, pepper, tapioca, sugar cane, cocoa, and maize. In 1970, West Malaysia was self-sufficient in poultry and pork meat. Supports were provided for coconut and pineapple replanting and rehabilitating, and cocoa was added as an intercropping crop.

By 1980, Malaysia achieved 92% rice self-sufficiency largely due to the irrigation facilities, introduction of HYVs as well as the Guaranteed Minimum Price Scheme. Rubber and oil palm accounted for 42.1% of total agricultural production, paddy (20.8%), forestry (14.4%), and livestock and fishing (18.9%).

Muda Irrigation Scheme was completed in 1974, and Kemubu Irrigation Scheme was completed in 1975. Other schemes include Krian and Trans-Perak. Institutional supports were intensified. This era saw the setting up of MAJUIKAN, MAJUTERNAK, RISDA, NTB, FOA, FAMA, IADPs, and BPM\(^3\) to help the development of the related agricultural industries. Universiti Putra Malaysia commenced degree courses in forestry, veterinary science, and agriculture in 1972 as well as agribusiness and fisheries.

Industrialization Economy

The industrialization of the Malaysian economy started in the 1980s with import-substitution programs launched by the country, in particular heavy industry development as marked by the production of the first national car—Proton—in 1982. The share of manufactured products from exports reached almost 60% in 1990 (Sixth Malaysia Plan, 1991–1995) from a humble 20% in the 1980s. However, the world saw a serious commodity crisis in 1987 as prices dipped to an all-time low. The rubber industry was losing its shine as prices were barely enough to support costs of production and hence income for the smallholders. The stark contrast in growth rates of the two sectors—agriculture and industry—prompted the government to review the agricultural policy after it was overshadowed by the industrialization takeoff in the 1980s.

In 1984, the National Agricultural Policy I (NAP I) was launched to provide a much more “all encompassing” policy approach to agricultural development (Malaysia, 1984). The NAP I was designed to ensure a balanced and sustained rate of growth in the agricultural sector vis-à-vis other sectors in the economy. The policy objectives of the NAP were aimed specifically at “maximising income from agriculture through effective and efficient utilisation of the country’s resources and the revitalisation of the sector’s contribution to the national economy” (Malaysia, 1984). An important rationale behind the formulation of the NAP was concerned with the slower rate of growth of the agricultural sector relative to other sectors in the economy and the prevailing poor state of welfare of agriculture. The agricultural policy set in the NAP I has been the guideline for the sector for the Fifth Malaysia Plan (1986–2000). Food sector was embedded indirectly under the broad category of agriculture.

The agrarian reform of new land and in situ development was continued, indeed on a larger scale. Rice self-sufficiency was set at a reasonable target of 65%. The new element introduced in the NAP I was the enhancement of the agro-based sector to increase value added for export purposes.

However, it has been shown that NAP I failed in addressing the big divide between agriculture and industrial sector; Malaysia was unable to sustain its leading position in rubber while simultaneously facing major supply constraints in developing other crops and commodities. The food sector failed to show progress particularly in meat production, fisheries, fruits, and vegetables (Abdul Aziz, 1994).

The new National Agricultural Policy II (1992–2010) (NAP II) was introduced in 1992 to address the significant shortcomings of the previous NAP I (Malaysia, 1992). The overriding objective of the new NAP II was “the maximisation of income through optimal utilisation of resources.” Its specific objectives include the achievement of balanced development between the agriculture and fisheries.
manufacturing sectors, enhancement of the integration of the sector with the rest of the economy and in particular the manufacturing sector, and the achievement of a higher level and greater depth of food industry development. Agricultural development efforts were to be implemented on the basis of sustainability (Malaysia, 1992). The strategies identified by the NAP II include (1) optimizing resource use, (2) accelerated agro-based industries, (3) enhancement of R&D and technological diffusion, (4) greater role of private sector, (5) reformed marketing strategy, (6) expanded food production, (7) human resource development, (8) development of viable, and (9) self-reliant farmers/fishermen’s institutions. The NAP II ran in parallel to the Sixth Malaysia Plan (1991–1995).

Clearly, unlike the previous policy plans, NAP II provided a comprehensive food policy plan. NAP II has specifically emphasized the need for security where issues such as food availability, accessibility, and utility were taken into account. To ensure availability and accessibility, NAP II has identified selected food commodities to focus its developmental support. NAP II has set SSL targets for these selected food commodities by 2010, which include rice (65%), vegetables (125%), eggs (125%), fish (170%), beef (14%), mutton (21%), poultry (139%), pork (2%), fruits (120%), and milk (10%). However, actual data indicated that except for rice, all the targets were overly estimated. In the case of pork meat, the target was overly underestimated. To improve the nutrition security, efforts and resources were directed toward the expansion of a more protein and high-fiber food. The NAP II has outlined comprehensive and specific policies and programs for each of the food commodity. Despite the two NAPs, the food sector showed a slow growth as reflected by the growing deficits of food trade (Figs. 3 and 4) and the prominence of industrial crops grew stronger as shown in Fig. 12.

Sustainable and High-Income Economy

The late 1990s marked a new beginning in the country’s outlook and strategies. This was prompted by the serious financial crisis in 1997, which was triggered by a combination of factors such as weak fundamentals, the free flow of capitalization across borders, and the highly integrated economies of the ASEAN countries. The immediate impact of the financial crisis on the Malaysian economy was currency depreciation, reversals of net capital flows, and strains on the financial sector. These contracted the economy temporarily where economic growth became negative in 1998. The rate of growth of agriculture, forestry, and fishing was –4.0 in 1998, which was lower compared with the manufacturing sector that contracted –10.2 during the same year. The depreciation of the ringgit put pressure on prices; food prices registered the largest price increase as well as food imports (Malaysia, 2001). The value of the import bill increased from RM7.8 billion in 1995 to RM12 billion in 1998 (Fig. 3).

The third National Agricultural Policy (1998–2010) or NAP III was formulated again to revive agriculture under a new economic order of the world where globalization rules and trade liberalization intensifies (Malaysia, 1999). The NAP III focuses on new approaches to increase productivity and competitiveness, deepen linkages with other sectors, venture into new frontier areas, as well as conserve and utilize natural resources on a sustainable basis. The policy aims to set in place the enabling and supportive measures as well as a conducive environment to promote productivity and growth in the agricultural sector. The major policy thrusts of the policy include meeting national food requirement, enhancing competitiveness and profitability in agriculture and forestry, strengthening requisite economic foundation, and adopting sustainable development. The NAP III has been the referential document for agricultural and food development strategies for Seventh, Eighth, and Ninth Malaysia Plans.

The NAP III provides a comprehensive review and policy directions for selected commodities and clusters. The clusters were divided into nine product groups as follows: food product group, which consists of paddy, livestock, fisheries, fruits and vegetables;
forestry and wood-based products; new products and future industry; floriculture products and aquarium fish; sago, roselle, equine and exotic animals; agro-tourism; and other economic crop products. The prerequisites of development of those subsectors include a strong economic foundation, technology, financing and incentives to further increase efficiency, productivity, and competitiveness. Productivity enhancement was to be achieved through lesser use of labor input, mechanization, and automated production system and processes. Despite the NAP III, the food sector structure remained largely unchanged and the growth is still slow as shown in Fig. 11.

In 2010, Malaysia has embarked on another path of progress through Economic Transformation Program to achieve a high-income economy by 2020. The plan defines the Agriculture National Key Economic Areas (NKEAs) encompassing two major sectors: palm oil and high growth sector (PEMANDU, 2010a,b). To enhance the growth of the palm oil sector, the plan laid out a number of strategies such as enhancing upstream productivity and downstream expansion and sustainability. Some of the entry point projects include improving fresh fruit bunch yield and worker productivity, increasing the oil extraction rate, developing biogas at palm oil mills, developing oleo chemicals, commercializing second generation biofuels, and expediting growth in food- and health-based downstream segments. With regards to other agriculture subsectors, NKEA has identified high growth potential industries comprising of aquaculture, seaweed farming, swiflet nests, herbal products, fruits and vegetables, premium processed food, paddy, and livestock. To complement the agriculture agenda in NKEA, the Ministry of Agriculture and agro-based industries have announced in 2011 the Agro-Food Policy (2011–20) to replace the NAP III, which expired in 2010 (MoA, 2011). The Tenth and Eleventh Malaysia Plans (2011–2015 and 2016–2020, respectively) have embraced the new Agro-Food Policy in their development plans.

The food crisis in 2008 provided the impetus for the government to relook at the food sector of the country. Among the key thrusts of the policy are high-value agriculture development, sustainable agriculture development, private sector investment to modernize the sector, and knowledgeable and informed human capital. The policy aims at ensuring sufficient food supply, making the agro-food as a viable and sustainable industry, and increasing the income of agriculture entrepreneurs. The ministry has lined up specific strategies to achieve the policy’s objectives, covering agro-food industry development, which focuses on the paddy and rice industry, fisheries, livestock, vegetables and fruits, agro-based industry, and agro-tourism.

Conclusion and Policy Recommendations

Malaysia has chosen to strengthen its “comparative advantage” in industrial crops (rubber, oil palm, cocoa, pepper), which has somewhat marginalized the food sector and related industries particularly the agribusiness industry. The industrial crop-centric policy has left the food sector behind in all dimensions, growth, productivity, and return as resources are diverted to those crops. The realization of the strategic roles of agriculture began with NAP II and beyond. By then it was a little too late as the divide had gone bigger and wider. Clearly the unintended consequence of such a policy is the creation of a duality in the agriculture sector, which is unsustainable in the long term as resource outflow continues. Underdeveloped food sector signifies a big opportunity loss to the society in terms of food and nutrition security and other social and environmental benefits. The food sector requires major structural changes to improve its return to factors of production to encourage growth. This could be achieved through productivity enhancement by increasing R&D and innovation and effective extension for transfer of technology. To improve efficiency, the cost of input has to be reduced through the development of local input sector (fertilizer, seeds, breeds, machines, feedstuff for livestock). Most of all, a complete set of institutional supports is imperative to empower farmers through organization (associations and cooperatives), advanced technical know-how, market incentives schemes, and infrastructural and logistical facilities without which, the sector would continue to worse off.

Footnotes

1 FELCRA, Federal Land Consolidation and Rehabilitation Authority.
2 RISDA, Rubber Industry Smallholder Development Authority.
3 MAJUIKAN, Fisheries Marketing Development Board; MAJUTERNAK, National Livestock Development Authority; NTB, National Tobacco Board; FOA, Farmers Organization Authority; FAMA, Federal Agricultural Marketing Authority; IADP, Integrated Agricultural Development Project, and BPM, Agricultural Bank of Malaysia.

References


