SOME CONCEPTUAL ASPECTS AND APPROACHES TO THE ANALYSIS OF THE MALAYSIAN PALM OIL EXPORT MARKETING STRATEGY*

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Abstract

This paper seeks to examine some of the conceptual approaches to assess the impact of the deployment of an export marketing strategy for Malaysia palm oil in a large number of importing countries. The conceptual analyses of structural changes in the expanding global market (i.E, consumer demand analysis, competition in external invironment) and a regression analysis if promotional and other factors affecting import demand curve for Malaysian palm oil are among the suggested approaches highlighted in this paper. Some analytical results based the above mentioned approached from the studies of Hashim (1994, 1994a and 1995) are presented and discussed as examples. The paper concluded that conceptual and analytical approaches used in the forementioned studies could be used to assess the impact of export marketing strategy of acommodity of an exporter.

1.0 INTRODUCTION

The concept of export marketing strategy is often discussed and linked to a collection of three concepts; target markets, marketing and marketing mix. Collection of these concepts implies the assemblage of marketing activities in a plan or strategy to satisfy the perceived needs of

the consumers. In other words, the formulation of marketing strategy involves the selection of target markets on which the firm plan to concentrate and reorientating marketing activities (designing, implementing and managing the plan of activities or selling efforts) at satisfying the target markets (see Wansley, 1992)

In practice, the marketing of raw agricultural commodities (e.g. palm oil) is seldom restricted within a national boundary but is extended over the global scale. The term export marketing is used when marketing activities are directed at global consumers. In this orientation, the concept of exporting goes beyond than just that of export sales or trade (Poliwoda, 1993). Instead, the concept moves away from sales of a firm's existing products towards the analysis of the market, i.e. assessing the ability of firm to export products to meet potential demand. Apart from traditional "4Ps" additional efforts such as activities to attract the support of parties such as goverment, labour union, and other groups through lobbying and negotiation are deployed by the exporting firm. These additional efforts can be seen as concentrating on pilitical power and public opinion formation (2Ps) by export marketing firm (Poliwoda, 1993; Kolter, 1984; Cannon, 1992). This must be done on a global scale and thus the expanded marketing mix (i.e 6Ps) may be a different combination of activities and product characteristics for target markets across the world than a purely national market.

Nordin (1988) identified the basic activities of export marketing strategy as increasing buyers' market and technical knowledge, and increasing accessibility to product by dissemination of information and inducing the trial usage (trade, samples) amongst the buyers. In addition, lobbying, promotion, publicity and activities directed at lifting import and consumption barriers are included (political power and public formation opinion). Cannon (1992), until recently, indicated that exhibitions and trade fairs have probably more important roles in export marketing than domestic markets. Both researchers seem to emphasize the importance of promotional and public opinion formation activites directed at concumers in importing countries. Other writers identified new product uses and applications, market reorientation, and technoeconomic benefit of the product uses (see Basiron, 1992 and 1989, Yee, 1988; Berger and Basiron, 1982, Shivpuri, 1982; Abdullah and Nordin, 1982) as additional export marketing activities.

1.1 Malaysia Palm Oil Export Marketing Strategy

Since 1980 various producers' associations and government agencies in Malaysia have developed several export marketing strategies. The broad approach of these marketing strategies is : (1) undertaking marketing activites that could expand export markets for those involved in the oil industry; (2) developing traditional outlets, as well as identifying and penetrating new markets for Malaysia palm oil exports in anticipation of the projected expansion in future years.

Between 1980 and 1990, marketing activites implemented by public bodies such as the Palm Oil Research Institute of Malaysia (PORIM) and Palm Oil Registration and Licensing Authority (PORLA) in conjunction with other producers' associations had more than doubled. For example, the number of annual joint trade visits and technical service mission overseas, and the number of countries visited by them, increased by more than tenfold. The number of participating countries which took part in Palm Oil Fimiliarisation Programmes conducted on an annual basis by PORIM was only 7 in 1982; by 1990 at least 50 countries had participated in this programme. The number of staff employed directly in related marketing activities by PORIM and PORLA increased from 25 to 50 and from 5 to 15 respectively (PORIM and PORLA Annual Reports; Hashim, 1994)

1.2 Approaches to the Analysis of Malaysian Palm Oil Export Marketing Strategy

The objective of this paper is to highlight some of the approaches used with the central purpose of understanding the market environment of the global oils and fats trade over the period 1980-90, in particular the export marketing strategy for Malaysian palm oil in the international market. Two complementary approaches were recognised: firstly, the analysis of structural changes in expanding the global market (i.e. consumer demand analysis, competition in external environment and export performance); and secondly, a regression analysis of promotional and other factors affecting the import demand curve for Malaysia palm oil. Some brief analytical approaches were used and the results are presentaed as examples.

1.2.1 Consumer demand analysis

This approach involves the analysis of demand for palm oil in the global market and each market segment. The economic theory of demand is applied to an imported commodity as incomes and prices vary (Lancaster, 1966). Apart from these variables, the external environment of the consumer in each market segment is investigated (see Doyle, 1992). Tabular and trend analyses evaluate the relationship between per capita consumption of the commodity with respect to substitutes and complements. In addition, trend analysis of per capita consumption examines growing or declining prospects for commodity exports. regression analysis is applied to explain the degree of association between per capita consumption as dependent variable, and income, price and other exogenous variables.

1.2.2 Competition in the external environment

Global competition is analysed in order to examine exporters strength and performance (see Porter, 1980; Doyle, 1992) in numerous palm oil importing countries, measured in terms of volume of production and percentage share of global production, and exports and imports of similar commodities. In addition, the relative strengths and weaknesses of palm oil as against its competitors is analysed through tabular analysis in which consumers are grouped into different segments with different economic systems and regional attributes.

1.2.3 Export performance

Export performance (for price and non-price export marketing strategies) on the global palm oil market is investigated through market share analysis (see Ahmadi-Esfhani and Jensen, 1994; Jepma, 1986; Riguax, 1971; Richardson, 1971; Cannon, 1992). The change in market share of an exporter is compared with those of other sources or to other commodities between one point of time and another. This analysis seeks to investigate whether the relative performance of palm oil in different markets or regions was due to : (1) the general expansion of demand (measured through the market size effect or general expansion of demand for oils and fats world-wide); (2) market reorientation (distributive effect); and (3) competitiveness of Malaysian palm oil as against palm oil from other sourcer, and other competing commodities (i.e competitiveness effect, including promotion effects).

1.2.4 Econometric analysis

An Econometric analysis approach uses an import demand model incorporating measures of export marketing strategy, in particular promotional expenditure, to assess its impact on export sales or consumers' demand (see Baumol, 1967, modified by Hawkins, 1966).

Econometric analysis of import demand incorporating a world-wide export marketing strategy is lacking in the literature. However, studies relating demand to advertising (promotion) within the national boundaries or over a few importing countries are numerous (for example, see Jamal et al, 1993; Goddard and Amuah, 1989; Goddard and Glance, 1989; Kinnucan, 1987; Pitts, 1979; Thomson and Elier, 1977)

In this study, the theory of consumer demand is used as an anchor to analysis the import demand (see Griffith and Meilke, 1979); Houck and Ryan, 1972). The impact of promotion and other variables on the import demand for Malaysian palm oil is quantitatively measured and examined through standard econometric procedures.

1.3 Source of Data and Model Specification

For this study, the economic data (production, export, import and consumption of all 17 oils and fats, income, etc) of all producing, importing and exporting countries world-wide were collected from Oil World (1987, 1989 and 1991) and other publications. The countries concerned were grouped into 8 regions namely the EC, other West Europe, Eastern Europe, West Asia, East Asia and Oceania, Africa, North America, Central and South America. In addition, countries were grouped based on the economic criteria such as the developed, developing and centrally economies. Consumption data was collected as cross-sectional data covering 90 countries in the period of 1990. The marketing data (namely cost of trade visits and fimiliarisation programmes) were estimated cost, calculated based on per country basis compiled through various Technical Advisory Country's Visits Reports (1980-90) of Palm Oil Research Institute (PORIM) and those of Trade Mission Reports published by Palm Oil Licensing and Registration Authority (PORLA). *Export performance data covers 144 countries and 17 major oils and fats imports and exports between the period of 1981 and 1990. All data were measured in terms of either kg/capita and or Malaysia Ringgit/capita. Data on trade and foreign exchange reserves were obtained from the International Monetary Fund Publications and measured in the US dollar/capita.

In the econometric analysis, marketing and economic data of 70 Malaysia palm oil importing countries between 1980 and 1990 were examined. The import demand model incorporating promotional variable was modelled as partial adjustment using simlpe linear formulation (following Jamal et al, 1993) and estimated using Least Squares (LS) pooled data regression estimation. Other statistical procedures were adhered to test the inherent multicollinearity and structural problems (Chow test) of the formulated import demand equation oil. The most appropriate and significant variables included in the import demand equation were selected using backward selection procedures. The final equntion used in the estimation is as follows :

for regional groupings

$$MPOit = aO + \underline{a t^{*}Dt} + \underline{b^{*}Eit} + \underline{c^{*}PRit} + \underline{d^{*}DGit} + \underline{e^{*}DGit^{*}PRit} + uit \quad \text{..... (Eq 1)}$$

For economic groupings

$$MPOit = aO + \underline{a t^{*}Dt} + \underline{b^{*}Eit} + \underline{c^{*}Prit} + \underline{d^{*}EGit} + \underline{e^{*}EGit^{*}PRit} + uit \quad \text{..... (Eq 2)}$$

where MPOit is the quantity of Malaysian palm oil imported by country **i**. Variables **a**, **b**, **c**, and **d** are the coefficient vectors of intercept (time

dummies: (**D**), economic (**E**), promotion (**PR**), and country and country groups variable (**DG for regions and EG for economic groupings**) vectors, **e** are coefficients of product terms of interaction variables; and uit is error term.

1.4 Some Results

The following are some brief results of the analysis discussed based on approached used in 1.2.1 to 1.2.4.

1.4.1 International Consumption of Oils and Fats

Based on the analysis of 1.2.1, between 1982 and 1990, the average per consumption of oils and fats of the world increased from 13.4 to 15.1 kg/hd respectively. Averaged over 1982-90, vegetable oils contributed 72 per cent of total oils and fats consumed, while animal oils accounted for the remaining 28 per cent. In the vegetable group, soybean, palm, sunflower and rapeseed oils accounted for 2.93, 1.52, 1.34 and 1.30 kg/hd of the average per capita consumption. Amongst animal fats, tallow and grease recorded the highest average per capita consumption. The per capita annual rate of growth of vegetable oils was slightly annual rate of growth of vegetable oils was slightly faster than that of animal fats, with palm oil registering the highest rate of annual growth in the vegetable oils categoru (see Hashim, 1994).

The EC registered the highest per capita consumption of total oils and fats (37.2 kg/hd), followed by North America, other West Europe and Eastern Europe, with 35.2, 26.5 and 24.9 kg/hd respectively. Countries in West Asia consumed the least amount of oils and fats compared with those in Africa, the Far East, South America and Oceania. In 1982-90, average per capita consumption of oils and fats by developed, centrally planned and developing countries was 22.6, 20.1 and 15.1 kg/hd respectively (see Hashim, 1994).

Amongst the six major oils and fats, soybean oil registered the highest per capita consumption in 1982-90, followed by palm, rapeseed and coconut oils, tallow and butter. However, per capita consumption of soybean oil declined in the EC, other West Europe, the USSR and Africa. The rapid expansion of rapeseed production in the EC not only reduced their imports of soybean from the US, but led to exports of surplus rapeseed oil to Africa. Similarly, the consumption trend for coconut oil was negative, but trends were positive in 1982-90 (see Hashim, 1994).Regression results using 1990 cross-section consumption data involving 92 developed, centrally

planned and developing countries indicate a significant positive income response in per capita consumption of total oils and fats in all regions and economic groupings. However, the income elasticity of demand was inelastic (0.5). In separate analyses, income elasticity of demand for animal fats (0.43) was found to be greater than that of vegetable oil (excluding palm oil and animal fats, implying that palm oil is a substitute for animal fats (tallow, grease, butter and lard). On the other hand, the relationship between consumption to be supplementary in nature, both increasing with rising incomes of developed, centrally planned and developing countries (Hashim, 1994).

In alternative formulations, per capita consumption of vegetable oils (excluding palm oil), animal fats and palm oil, all were regressed with price (measured by the ISTA price index for years 1982-90) and time trend using LS estimates. Per capita consumption of total oils and fats amongst countries grouped as developed and developing is negatively related to price index, but positively correlated with time trend. Amongst types, only per capita consumption of palm oil in significantly influenced by price. The time trend coefficients for vegetable oils and palm oil are positive, implying that the consumption of both palm and vegetable oil grew year by year at average rates of 250 and 106 grams per annum respectively (see Hashim, 1994).

1.4.2 Competition in external environment

a) International Production and Trade of Oils and Fats

On the average during 1982-90, vegatable oils accounted for 72 percent of total world production of oils and fats compared with 28 percent for animal fats. Global production of vegetable oil and animal fats increased at the annual rate of 4.3 and 1.1 percent respectively. Soybean, palm, sunflower and rapeseed oils are becoming increasingly important in the global production of all oils and fats (see Hashim, 1994).

In terms of producer regions, the Far East was by far the largest, followed by the US and Canada, the EC, Central and South America, while West Asia and Africa were the smallest. By economic grouping, developed, centrally planned and developing countries accounted for 39, 21 and 32 percent respectively of the 1982-90 world average total oils and fats production. The EC was the largest producer of rapeseed; soybean oil, tallow, grease and lard were largely produced in the US; Malaysia and Indonesia were the main producers of palm oil; and coconut oil was produced principally by the Philippines.

In general, there was an increasing proportion of vegetable oil in world trade, led by palm oil, soybean, rapeseed and sunflower oil. Between 1982 and 1990, vegetable oils accounted for 77 percent of total world exports compared with 23 percent for animal fats. The shares of exports of oils and fats amongst the developed, centrally planned and developing countries were 45.3, 3.7 and 51.0 percent respectively. During 1982-90, Malaysia's share in the total world exports of oils and fats was 21 percent, establishing itself as a leading exported amongst the developing countries (see Hashim, 1994).

b) Import trends of major oils and fats

Between 1982 and 1990, the trends for imports of oils and fats amongst different regions and economic groupings were declining or near-status in North America and Europe, and rapidly growing in the developing countries, particularly in the Far East, Africa and Latin America. In total, 49 per cent of the world oils and fats imports were by the developing countries (see Hashim, 1994).

1.4.3 Export Performance of Malaysian Palm Oil

The total market share gained by palm oil analysed using constant market share (CMS) analysis indicates that, between 1981-85 and 1986-90, palm oil exports gains which were accounted by all palm oil exporters largely due to the market size, market reorientation and competitive effects. In addition, the ability of the palm oil producers throughout the world to expand and export their production, and also to match the growing demand for oils and fats with their competitively priced palm oil were cited as the major reasons (see Hashim, 1994a).

The gains in Malaysian palm oil exports were mainly derived from the world-wide expansion of demand for oils and fats, particularly in developing countries. By exporting mainly processed palm oil to developing countries and by excluding other palm oil exporters whose palm oil exports were in crude form, Malaysia took advantage of these markets with an undevelpped domestic oil processing industry. However, over-dependence on these in the EC, Japan and some other countries of Western Europe, because these countries were deprived of Malaysian crude palm oil and reverted to other sources; almost 97 percent of Malaysian palm oil exports were in processed form in the 1981-85 and 1986-90 periods (see Hashim, 1994a).

The CMS analysis revealed that market share gained by Malaysian palm oil exports was due to the market size, and to the lesser extent from market reorientation and competitiveness effects. It was summarised through the CMS analysis that promotional efforts pursued by the Malaysian palm oil industry contributed significantly to market share gains in addition to the general expansion of demand of oils and fats world-wide (see Hashim, 1994a).

1.4.4 Import Demand and Promotion for Malaysian Palm Oil

The results of the estimated regression based on equations (1) and (2) are shown in Table 1. Some important results are highlighted (for this paper). The time dummies (1980-1990) and the product terms of the interaction variables between group dummies and promotional variables between group dummies and promotional variables(OT, FC and M) are not included into the estimated equations (1) and (2). The reasons for excluding those variables are that the intercepts and group dummies (time, regional and economic) were all not statistically significant. Hashim (1994) argued that for such variables to be included and estimated in the regression all variables (time dummies, groups plus intercepts) must be statistically significant. For the purpose of this paper, only some significant variables; promotional variables; costs of overseas trips and familiarisation programmes, and a binary variable representing the ministerial visits included in the import demand model for Malaysian palm oil will be highlighted in detail. Some results of similar studies carried out by earlier researchers were also presented in Table 2 as comparison (see Hashim, 1994; Hashim, 1995).

The regression results indicate the own price, costs of promotional efforts, previous-year imports, total bilateral trade and importer income level all have significant effects on per capita levels of imports of Malaysian palm oil. No significant difference in the per capita level of imports of Malaysia palm oil was found between regions (with the exception of West Asia) and between economic groupings (see Hashim, 1995).

The significant effect of price and the promotional variables on per capita level on imports of Malaysia palm oil by the included countries appears to justify the marketing strategy of Malaysian exporters, i.e. to make the demand curve of Malaysian palm oil more elactic and/or to be shifted futher to the right. By increasing the ranges of end-uses and increasing substitutability with other oils and fats, the promotional activities managed to convince the importers to diversify theuses of Malaysian palm oil in both edible and industrial applications, particularly in the new-found markets of developing countries.

The results of the analysis of Malaysia's promotional efforts for palm oil import demand implied that; (i) over-concentrating overseas technical trips and ministerial missions plus excessive participation of personnel in familiarisation programmes from West Asia alone deprived other markets from getting similar intensity of promotional exposured; and (ii) the irregular and ad hoc nature of some overseas trips to countries in the rest of the regions were initiated or motivated mainly by requests of the importers in contrast to the designed "routine promotional visits" to other countries (see Hashim, 1995).

The significant response of Malaysian palm oil imports to lagged imports of Malaysian palm oil indicates a relatively slow adjustment of Malaysian palm oil imports by the countries included. This suggests that regular, consistent and repeated trips to such countries are required to prevent decay oil exporters to realise the importance of this decay phenomena may perhaps result in a failure to maintain teh required sustained import growth amongst countries in different regions and between economic groupings (see Hashim, 1995).

Based on the size of the regression coefficients of the three promotional variables, familiarisation programmes produced a higher response (in terms of additional Malaysian plam oil imports) per Malaysian Ringgit (MR) of expenditure, i.e. MR 73 and MR 268 additional revenue in the short and long run compared with overseas trips. It is plausible that such an outcome is obtained, because the familiarisation programmes, which involve regular mailings of bulletins to world-wide recipients, may have produce a wider response than overseas trips or specific ministerial visits which are normally carried out on an ad hoc basis (see Hashim, 1995).

The significance of the economic variable, i.e. value of bilateral trade between Malaysain and importing countries can be interpreted as a proxy for the influence of the general trade policies of Malaysia and her trading partners on palm oil exports in particular. Thus reciprocal trade arrangements, counter-purchases and partial payment in kind should be considered as a part of the marketing strategy. Nevertheless, such a strategy should be undertaken with care as it may be contrary to the spirit of free trade under GATT of which Malaysai is a member.

1.5 Final Remarks and Conclusion

The conceptual and analytical approaches presented in this paper allows one to assess the impacts of the export marketing strategy of a commodity of an exporter. As for Malaysia palm oil exports, it is shown that Malaysia palm oil have to compete with 16 other oils and fats including palm oil produced from other regions. The position of Malaysian

palm oil in terms of production and export compared with other oils and fats seem strong, with gains in exports in most of the regions, particularly in markets of developing countries.

The application of constant market share analysis (CMS) allows one to determine the significance of promotional variables as a tool of Malaysian palm oil strategy in the assessment of its export performance relative to other oils and fats. The isolation of the promotional variables which were later included in the import demand model for Malaysian palm oil enables this study to assess the impact of such promotional variables on the demand. Thus verifying the fact that promotion is in fact an effective marketing strategy to be used by Malaysian exporters to further expand their exports of palm oil to markets world-wide.

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MPO - is the amount of Malaysian Palm Oil Imports of country i in kg/capita.

APPENDIX

POP - is the average price of palm oil in US cent/kg in country i.

PSO - is the average price of soybean oil in US cent/kg in country i.

FX - is foreign exchange reserves in US $/capita of importing country i.

TT - is the value of imports plus exports between importing country (i) and Malaysia in US $ capita of importing country i.

Y - is GDP per capita expressed in local currency and converted into US $/capita.

OT - is the costs of overseas technical visits representing promotional variable, measured in RM cent/capita of country i.

FC - is the costs of overseas technical vitists representing promotional variable, measured in RM cent/capita of country i.

M - is the binary variable, I, when trips to a country in any yeas were led minister and O for otherwise, representing promotional variables.

S - is the opening inventory of oils and fats in year t. for country i.

MPOLG- is langged import of MPO

DG1, DG2, ...DG3 represent dummy variables taking value 1 for thr EC, other west Europe, Eastern Europe, North America, South America, Far East and West Asia respectively, all taking the value O or otherwise. Africa is the reference region which takes the value O for all dummies.

EG, and EG2 are dummy variables, taking one for developed and centrally planned countries. Countries grouped as developing take the values O for all dummies.