

FOOD CONSUMPTION TREND: TRANSFORMING ISSUES INTO OPPORTUNITIES

Mad Nasir Shamsudin*
Jinap Selamat
Alias Radam
Abdul Ghariff Ramin
Tey Yeong-Sheng
Ahmad Hanis Izani Abdul Hadi

ABSTRACT

Economic development has driven the Malaysian food consumption trend to move from basic staple to non-traditional staples – wheat-based, meat, fruit and vegetable items. More affluent Malaysians are also prompted to dine away from home. This paper attempts to acknowledge and grasp the changes in the Malaysian food consumption trend with deliberation for turning relevant issues into opportunities. Income, own price, relative prices, and demographic factors are the driving forces behind the changes in the Malaysian food consumption trend. Of the widening role of income growth, food demand has shifted toward high quality-differentiated characteristics – freshness, safety, texture, and appearance, and consumers are willing to pay for these quality characteristics. The essence of transforming these issues into opportunities is by responding to consumer expectations. An aligned market-led supply chain is proclaimed to offer differentiated and complex food products, which explicitly specifies the value creating activities via information sharing. The Malaysian agri-food supply chain players must also adopt value creation and delivery approach to produce food products that have sufficient value for customers who are willing to pay.

Keywords: Food consumption, supply chain, value creation

INTRODUCTION

Changes in food consumption trend in tandem with economic development are a global pandemic. Economists generally describe that there is an initial increase in traditional staple food when an economy develops from a low level. In further development, it becomes even more obvious that there is diversification in food intake. This is the glimpse narrative that typical developing economies experience with, hence Malaysia too. Firstly,

* Faculty of Agriculture, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia.
Email: nasir@agri.upm.edu.my

there is a decrease in Malaysian per capita rice consumption, recording at 74.3kg in 2005 down from 118.8kg in 1970 (FAOSTAT, 2008). The diversification grows wider that Malaysians demand more non-traditional staples such as wheat-based products, meat, fruits and vegetables as well as higher value, processed and higher proteins.

The diversification narrative also glows in consumption habit where Malaysian nutrition status has improved. More affluent Malaysians are prompted to diversify their consumption habit that is dining away from home. As per capita income level increases, proportions spent on aggregate food and food at home to total expenditures declined from 35.6 percent and 33.6 percent in 1993/94 to 33.6 percent and 20.1 percent in 2004/05, respectively. More affluent Malaysians have been prompted to diversify their consumption habit – spending more on food away from home (13.5 percent in 2004/05 compared with 11.8 percent in 1993/94), which is differentiated by an increasing range of options for dining time, location, preparation, taste, and affordability. Now with the widespread of both diversifications, which are widely recognised but not greatly capitalised, this paper ostensibly acknowledges and grasps the changes in the Malaysian food consumption trend with deliberation for turning relevant issues into opportunities.

DRIVING FORCES BEHIND THE CHANGES IN FOOD CONSUMPTION TREND

A demand model for food as a function of income, own price, relative price(s), and demographic factors, such as region (urban or rural), gender, employment, race, and age, is empirically handy in identifying and understanding the driving forces that have drastically altered the Malaysian food consumption trend.

As a dominant force, the impacts of income growth that are attributed greatly to economic development are noticeable. According to the Economic Planning Unit (2010), the Malaysian per capita Gross Domestic Product (GDP) has grown fruitfully to US\$7,738 in 2008 from US\$4,766 in 1996. Amongst the impacts, there is a burgeoning pool of middle class consumers. The middle class consumers are empowered by stronger purchasing power, which pledges a growing demand for food. This demographic group also tends to switch food consumption from traditional staples to higher-value foods.

The income impact on food (quantity) demand can be empirically measured by income elasticity. Income elasticities estimated by Tey (2008) indicate signs of convergence towards Western diet, particularly the preference for wheat-based and meat products over rice-based products. More specifically, demand for red meat products is postulated to increase at a faster rate than white meat products. The income elasticities also reveal that demand for fish, fruit and vegetable items is high in line with income growth.

Another main driving force which is own price elasticity explains the responsiveness of demand for a food item to a change in price of that food item. Own-price elasticity for various food items was also estimated by Tey (2008). The Malaysian consumers are

generally found to be more price sensitive to changes in the prices of wheat-based, meat, fish, and fruit items than rice-based and vegetable items. It is noteworthy that staple foods are price inelastic compared to non-staple foods.

The makeup of the income and price elasticities has largely underlined culturally determined dietary norms (Senauer, 2001). Though such dietary norms are slow to change, the elasticities are ultimately crucial in capturing the demand for food items which are broadly shared within a culture. The demand model, however, may not be sufficiently robust without demographic factors which economists have commonly identified as non-economic driving forces in shaping food consumption trend.

The non-economic driving forces in region (urban or rural), gender, employment, race, and age were found to be significant in determining the Malaysian food consumption (Tey, 2008). While there are mixed results among these forces, urban consumers in particular are positively related to demand for wheat-based and majority meat products, but are negatively associated with demand for rice-based products. The effect of urbanisation is strikingly obvious that it offsets the positive impact of income growth in rice consumption trend, suggesting a declining rate in future. Per capita consumption of other food items, on the other hand, is expected to increase, albeit at waning rates.

WIDENING IMPACT OF INCOME GROWTH

Of the role of income growth in food demand, one has to look at its multi-dimensional impacts. To be more idealistic, Antle (1999), in his Presidential Address at the American Agricultural Economics Association remarked that food demand has shifted toward high quality-differentiated food products that have provided desired attributes in tandem with income growth.

As income levels have grown, the Malaysian consumers evidently demand for higher quality food products and are willing to pay for the quality (Tey *et al.*, 2008 and 2009). Factor in the new dimension of food demand, Ahmad Hanis (2010) was devoted to study consumers' desired attributes and willingness to pay for them. It turned out that food demand has empirically crossed another threshold that is just as crucial. Consumers desire and are willing to pay for safety and taste of the staple food, that is, rice. Freshness and safety are ranked above other quality attributes in desire and willingness to pay for vegetables and fruits. Texture, freshness, and packaging in red meat whereas safety, packaging, and texture in white meat are the attributes in such desired sequence by consumers.

In much of the findings among heterogeneous food items, it is the consumers' liberation for food demand. Not only there are substantially higher demand for quality-differentiated characteristics – freshness, safety, texture, and appearance, but also willingness to pay for these quality characteristics.

Income growth has inevitably shaped the food consumption trend and attributes in this increasingly consumer-led market. These emerging issues are opportunities, and vice-versa for all supply chain participants. We take cognisance of Ambler-Edwards *et al.*'s (2009) contention that future agri-food system must be resilient¹, sustainable², competitive³, and able to manage consumer expectations⁴. The Malaysian agri-food system, thus, has to respond to such changes in consumer demand and be prepared for the future food supply system.

STRATEGIES TO REALISE THE OPPORTUNITIES: THE WAY FORWARD

The essence of transforming these issues into opportunities is by responding to consumer expectations. Consumers have grown to expect a plethora of choice, which is offered by the agri-food supply chain players. The extent to the complexity of consumer behaviours and expectations are the key points of concern. Food products are no longer generic but heterogeneous, frequently differentiated via quality attributes, branding, pricing, packaging, and labeling. A step-up observation by Senauer (2001) has advocated that food purchases and consumption are increasingly motivated by information, attitudes, perceptions and other complex psychological factors, on top of prices and income factors. Consumer diets have become far more varied across individuals and societies.

Despite the undisputed importance of information of future food consumption trend, the agri-food system still revolves around the input, production, post-harvest, processing, market and sales which are the Supply Chain Management (SCM) mechanisms and organised activities. Given the close knit of these activities, the information flow along the supply chain can reduce asymmetry of information at interfaces with each subsequent level, thereby reducing transaction costs as well as increasing feedback and improving response rate to changes in consumer preferences and tastes (Wong, 2007). The supply chain players thus, are able to capture premiums.

The above is something that the Malaysian agri-food supply chain players did not enjoy in the past. Due to limited market information in the past, the open market coordination offered low specificity of consumer demand, undifferentiated food products, and simple production as well as frequently encountered blunder, exposing agri-food supply chain players to unpleasant risks.

European agricultural economists have long given more attention to the analysis of the consumption of quality differentiated foods and fed supply chain players with the findings. Their empirical success suggests there can be amicable and sustainable agri-food

¹ *resilience* – a system able to assure longer-term availability in the light of increasing global uncertainties;

² *sustainability* – a system that can supply safe, healthy food with positive social benefits and low environmental impacts;

³ *competitiveness* – a system capable of delivering affordable food around a potentially higher baseline of costs;

⁴ *managing consumer expectations* – a system which shapes and responds to consumer preferences in line with societal needs.

supply chain systems. In Malaysia, agri-food supply chains will and can also be speedily formatted to seize up the opportunities signaled by the future food consumption trend. Consequently, an appealing strategy is to exploit advances in supply chain formation with impending convergence with modern information communication technologies (ICT) and innovations. There will be an exponential growth and interconnectivity of supply chain at different levels to yield an aligned market-led supply chain, which may offer high specificity of consumer demand, highly differentiated food products via complex production as well as manage risk better.

In order to utilise supply chain management to capture the market opportunities in the wake of trade liberalisation, there is an urgent need to equip ourselves with core competencies to realize the opportunity in the supply chain formation along the lines of Malaysia's winning formula of advances in food production technology and distribution system, bold investment from government, and competitiveness to compete in global market as the overarching strategy. What we need most are:

- a. Increased focus on product and process development;
- b. Emphasis on market flexibility to meet changing consumer demand;
- c. Improved ability to respond and customise products to end-user needs;
- d. Continued focus on cost control and efficiency;
- e. Focus on holistic systems that integrate the entire supply chain;
- f. Increased emphasis on quality and quality assurance along the chain;
- g. Emphasis on information and information sharing;
- h. Optimisation of the logistics and distribution system;
- i. Increased skill in negotiation and joint decision-making;
- j. Development of collaborative attitudes and perspective; and
- k. Capacity to trust and to be trustworthy.

The proposed supply chain formation should benefit both private and public parties from all levels of the supply chain, especially those who have formed supply chain groupings. Players can then easily acquire, filter, adapt, analyse, generate and disseminate quality information and knowledge that adds value to their firms and offerings. This well intended formation, however, may suffer perpetual tension between different stakeholders along the supply chain which may form various barriers as follows:-

- a. Mutual trust by chain participants;
- b. Communication and information flow across chain participants;
- c. Commitment and willingness to invest in chain infrastructure;
- d. Awareness of benefits and costs of more tightly aligned supply chain;
- e. Acceptable governance system with equitable sharing of power and control;
- f. Equitable sharing of the risk and rewards in a supply chain;
- g. Capacity of the chain to be flexible and adaptable;
- h. Organisational structure that allows implementation of chain approaches; and
- i. Willingness to adopt a collaborative versus competitive business approach.

From a marketing standpoint, it needs more than just an aligned market-led supply chain system. Kotler and Keller (2008) recognise that marketing is no longer doing traditionally by just producing and selling a product. Rather, successful marketing in the modern world requires value creation and delivery. Despite seemingly common knowledge of the Malaysian current food product market development which has not taken its full fledge, value creation in food products and their delivery among local players are at best slow and at worst scattered. Meanwhile, multinational business entities (like Nestle and Campbell) have done well so far.

As can be gleaned from the big picture of value creation and delivery sequence of a food product depicted in Figure 1, the value creation in a food product starts with the customisation in value for specific consumer segment, market, and value positioning. After choosing the value, it is the stage of providing the value. The power of this stage is the value-adding potential in each element of the food product when it is viewed in a broader and more holistic business perspective, besides, special attention given to the targeted segment demand and expectations. Pro-active sales force, creative promotions, and catchy advertising then kick in to communicate the value to the targeted segment. This will offer the basis for a firm to create and deliver the value by leveraging on inherent elements and potential of penetrating consumer market.

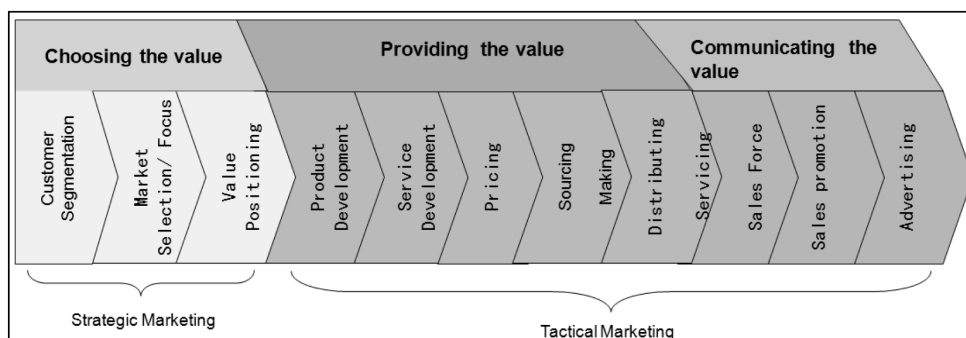


Figure 1: Food Product Value Creation and Delivery Sequence

CONCLUSION

The Malaysian future food consumption trend is going to favour wheat-based, meat, fish, vegetable, and fruit items over the staple, that is, rice; so much so that consumers are also looking for and willing to pay for quality attributes in these food items. Such trend follows that of the western diet, challenging the Malaysian agri-food system to meet consumer demand and expectations. The response, hence, cannot be narrowly drawn like in the past which was generically production centric and will necessarily involve wider development in differentiated food products.

Similarly, an aligned market-led supply chain is proclaimed to move away from traditional open market coordination. The functions of the aligned market-led supply chain are to offer differentiated and complex food products, which explicitly specify the value creating activities in the production-distribution process and provide an explicit structure for the linkages among these activities or processes. These will require mutual contribution from various supply players such as input suppliers, producers, processors, marketers, and retailers in order to share market information.

In conceiving the information of demanded food product attributes, the Malaysian agri-food supply chain players must adopt value creation and delivery approach to capture the value before it decays. The basic principle is to produce or provide a product or service that has sufficient value for customers or end-users that they are willing to pay for. However, more discerning and clear vision is needed for specifying consumer desire product attributes individually. In particular, the vision should articulate how the Malaysian agri-food players can respond appropriately to the changes in consumer demand and expectations in order to capture the best profit margins under different economic climates.

In the wake of trade liberalisation, there is a crucial need for the formation of supply chain system that may be formed by agri-food players juxtaposing relevant government ministries and agencies, universities and consultants. The agri-food players will be trained to cooperate with one another across the different levels in the supply chain. This effort promotes sharing of information on the basis of transparency and trust so as to sharpen their product value creation and delivery skills. Supporting services from the relevant government ministries and agencies, universities and consultants must also be extended in times of need.

References

- Ahmad Hanis, I.A.H. (2010). *Consumer demand for selected fresh food attributes in Malaysia* (Unpublished Master's Thesis). Universiti Putra Malaysia, Serdang, Malaysia.
- Ambler-Edwards, S., Bailey, K., Kiff, A., Lang, T., Lee, R., Marsden, T., Simons, D. & Tibbs, H. (2009). *Food Futures: Rethinking UK Strategy. A Chatham House Report, the Royal Institute of International Affairs*. London: Chatham House.
- Antle, J. (1999). The New Economics of Agriculture. *American Journal of Agricultural Economics*, 81(5), 993-1010.
- Economic Planning Unit (2010). Penerbitan Statistik Ekonomi Secara Berkala. Retrieved from <http://www.epu.gov.my/nationalaccounts>
- Food and Agriculture Organization of the United Nations (FAOSTAT) (2008). FAOSTAT. Retrieved from <http://faostat.fao.org/site/502/DesktopDefault.aspx?PageID=502>.

- Kotler, P. & Keller, K. (2008). *Marketing Management* (13th ed.). London: Prentice Hall.
- Senauer, B. (2001). *The Food Consumer in the 21st Century New Research Perspective.*, *Department of Applied Economics Working paper*. University of Minnesota, United States.
- Tey, Y.S. (2008). *Food Consumption Patterns and Trends in Malaysia* (Unpublished Master's Thesis). Universiti Putra Malaysia, Serdang, Malaysia.
- Tey, Y.S., Mad Nasir, S., Zainalabidin M., Amin Mahir A., & Alias R. (2008). Demand for Beef in Malaysia: Preference for Quantity, Quality or Lean?. *International Food Research Journal*, 15 (3), 347-354.
- Tey, Y.S., Mad Nasir, S., Zainalabidin M., Jinap, S., & Abdul Gariff, R. (2009). Demand for Quality Vegetable in Malaysia. *International Food Research Journal*, 16 (3), 315-329.
- Wong, L.C.Y. (2007). The Role of Supply Chains and International Networks in Enhancing the Agricultural Sector's Competitiveness in Cambodia, Laos, Myanmar, and Vietnam (CLMV). *Asian Journal of Agriculture and Development*, 4 (1), 1-9.