

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Summary and Analysis of the Primary Activities in the Value Chain

Using Porter's value chain approach, each firm was investigated on their primary and supporting roles and methods deployed by them at each categories of the value chain. Discussion and findings are as follows.

4.1.1 Incoming Logistic Approach

The first step in the primary activity is the inbound logistics. All the firms have a system to receive inputs as tabulated in Table 2. The type of inputs varies from one firm to another such as natural and seasonal farm inputs that requires special precautions, while others i.e. flavours and packaging materials are available throughout the year and don't need any special precautions.

Table 2: Summary of respondent firms when dealing with incoming logistics activities

Firm	Nestle	Philip Morris	Ajinomoto	F & N
Quality Control for inputs	√	√	√	√
Buffer stock	√	√	√	√
JIT	Partial	X	X	Partial
Special storage	Refrigerated/ humidity controlled	Humidity controlled	Basic warehousing	Basic warehousing.

All firms reflect their desire of producing consistently and efficiently through quality inspections. These inspections are to prevent substandard inputs into the

manufacturing system thus ensuring defects are low, a cost leadership approach and quality guaranteed, a differentiation approach. Because the nature of inputs they are utilizing, JIT cannot be practiced by any of them except by F & N whom had a control over its inputs. According to Evans and Lindsey (1999, pg 45), JIT reduces inventory holding cost but requires inventories to be reduced to the barest minimum. Thus to maintain production, the quality of materials must be consistent since no buffer inventories exist to take up defects. Seasonal and natural inputs as subscribed by Nestle, Philip Morris and Ajinomoto do not allow them to practice JIT, either the cost of these inputs will escalate or production schedule may be interrupted. There is high cost of maintaining key perishable raw materials for Nestle and Philip Morris but these firms are not willing to sacrifice their premium inputs quality with cost. Only F & N is pursuing towards reducing the cost of packaging inventory which currently standing at three weeks. In summary, these firms are not willing to dent their image if the process cannot be controlled however if opportunity arises they will take the cost reduction approach as F & N is currently doing.

4.1.2 Operation Approach

Operation link is the next set of activities in the primary value chain functions. According to Porter (1985), firms with global market share should stress world products rather than country-tailored ones to gain economies of scale (Porter, 1985 pp 72). All these firms manufacture standardised global products, however Nestle and Ajinomoto have products lines that are modified to cater local needs. However market share of these types of products is insignificant, contributes only 5% of total sale for Ajinomoto (figures are not available for Nestle).

Table 3: Summary of respondent firms when dealing with operation activities

Firm	Nestle	Phillip Morris	Ajinomoto	F & N
Standardised products	√	√	√	√
24 hours operations	√	√	√	√
Capacity	Not Available	≈ 14 billions cigarettes/year	54 tonnes of MSG/ day	Not Available
Automated production facilities	√	√	Partial (90%)	√
Human involvement	Minimum	Minimum	Substantial	Minimum
Quality Control	√	√	√	√
SPC	√	√	√	√
Innovative manufacturing to reduce cost	√	√	X	√
Continual Improvement Project to reduce cost	Aggressive	Not aggressive	Aggressive	Not aggressive
Lead time for manufacturing	Continuous process	Continuous process	Continuous process	Continuous process

All these firms have a 24 hour operation that has a positive impact on the average fixed cost through the lowering of cost in producing one unit of product (Hall & Leiberman, 2001, pg 168). Standardised products and continuous

operations allow these firms to achieve economies of scale. In addition, these firms are also running on a complete automated production line with only minimum human supervision with the exception of Ajinomoto. This too reduces the average total cost of producing one unit of product. F & N is currently moving towards complete integrated manufacturing line to improve on efficiency and flexibility, an integrated strategy approach (Hitt et al., 2001).

According to the respondent for Nestle, its production cost is very competitive and the competitors' benchmark against them. This is definitely qualities of a cost leadership firm (Porter, 1985). Nestle manages to increase their efficiency and product consistency through major manufacturing innovations. Innovation is their answer to increasing facilities capabilities when production of a cash cow product is limited by facilities design, as in the case of Nestlé's Milo plant in Chembong. There is also a concentrated effort by the firm to reduce cost through continual improvement projects, however it should not be done at the expense of quality. Marques et al., (2000) recognized innovation in manufacturing processes are important for firms that pursued cost leadership strategy.

Ajinomoto had reached the optimum output of their machineries; any increase requires new investment of which the firm has no intention of doing so. Hence, continual improvement projects are initiated within the firm and managed to save RM 3 million which equates to a reduction of 9% of total cost of producing a product unit and increased profit before taxation by 100% for Financial Year 2001/2002. Reduction in cost positively contributed to above average returns and allows the firm to remain competitive in post AFTA era. In the case of Philip Morris and F & N (Coca Cola), any major improvements are carried out by their parent company. Helms et al., (1997) identified some of the major innovations initiated by Philip Morris, which contributed towards the reduction of average total cost. This technology was then disseminated throughout their subsidiaries.

These firms emphasis on consistent manufacturing, as a result quality control inspection and statistical process control are an integral part of their production line. Firms like F & N is also subjected to Coca Cola internal audits, which are very stringent control measures. According to Swink and Hegarty (1998), in their study linking product differentiation with core manufacturing capabilities, control is the ability to direct and regulate operating processes. A necessary requirement for control is feedback, a property that permits comparisons of actual output values to desired output values. In a larger sense, control refers to management's ability to understand and reduce sources of unwanted variation in a process. Miller (1998) on the other hand emphasised the importance of SPC and other broad range quality-control analysing techniques aimed at manufacturing, for firms that pursue differentiation strategy.

4.1.3 Outbound Logistic Approach

Outbound logistic is the next link within the value chain. Lead-time, inventory level, warehousing and transportation are some of the activities applied within this link. Findings summary are as tabulated in Table 4.

Table 4: Summary of respondent firms when dealing with deliveries activities.

Firm	Nestle	Phillip Morris	Ajinomoto	F & N
FIFO	√	√	Partial	√
JIT	X	X	X	Partial
Buffer stock	√	√	√	√
Delivery timing	Within 48 hours	Within 48 hours	Within 48 hours	Within 48 hours
Transportation (Special precaution)	Controlled	Controlled	Standard	Standard
Application of information technology	MRP sales module	Hand Held POP	ERP	Hand Held POP

Technology already made an impact in outbound logistics. F & N and Philip Morris used the hand held point of purchase (POP) gadget to take orders from customers. This reduced many steps in order processing. All firms depend heavily on the management information system for order generation, establishing First In First Out (FIFO) policy, and monitoring of the inventory system. Almost all products produced by the food industry carries the expiry date, thus FIFO need to be practiced strictly or the firm will incur opportunity cost if it places near expiring products on the shelf, in addition to the product losing its freshness. Hence, according to the respondents, management information system within these firms i.e. ERP and MRP plays an important role in making sure the interface between the customer and firm is smooth, customer oriented and cost effective.

Nestle had implemented a state of art warehousing facilities called automatic shelf and replenishment system to monitor and deliver its products. This reduces the warehousing operating cost and increase efficiency in delivering. Through innovation Nestle manage to achieve both strategies. The practice by Philip Morris and Nestle to pay visits to their customer ensured constant availability of their products on the shelf.

Once orders are received from customers, these firms will ensure ordered products are delivered within 24 to 48 hours. F & N is trying to improve on the delivering lead-time to ensure constant availability of their products in the market. Ability to deliver accurately within the stipulated time frame is recognized as a differentiation characteristic by Jacome et al., (2002), an indication of good service. F & N is also trying to reduce the holding inventory currently standing at two weeks, an example of cost reduction. Buffer inventories for others, ranges from one to two months depending on the product variant.

When the products are transported, depending on the level of protection required for the product, firms i.e. Nestle and Philip Morris will take appropriate measures

such as refrigerated trucks, or bonded trucks to deliver these products. For these firms, according to the respondents, quality of a product should not be jeopardize at any part of the value chain link even if it means incurring additional cost.

4.1.4 Marketing and Sales Approach

Firms generally recognized sales and marketing activities as an important part of the value chain link. From the marketing perspective, firms approach towards advertising and promotion, pricing strategy, product positioning and distribution will determine the profit margins. Evaluation of these factors summarized and tabulated in Table 5.

Table 5: Summary of respondent firms when dealing with sales and marketing activities

Firm	Nestle	Philip Morris	Ajinomoto	F & N
Market share for main products	Milo: captured 85% of cocoa drink market while Nescafe: 88 – 90% of coffee market.	Marlboro brand captured 18% of market share. Number 2 brand in Malaysia after Dunhill.	MSG comprise 80% of the company's turnover. Captured 90% of the market share.	Coca Cola: 70% of cola market 100 Plus commands > 90% of market share.
Direct distribution network; ex. Van sales	√	√	√	√
Indirect distribution network; indirect sales ex. Modern trade and trading house	√	√	√	√
Distributors firm relationship i.e. credit facility, discounts, free gifts	√	√	√	√
Product mix	Many	Few	Few	Few
Product line	Extensive	Few	Extensive	Extensive
Product positioning	Premium	Premium	Premium	Premium
Product pricing	Slightly above competitors	Standardised pricing.	Slightly above competitors	Competitive pricing.
Customer database	√	√	√	√
Advertisement i.e. electronic & print media.	Aggressive	Aggressive	Aggressive	Aggressive
Display at POP	√	√	X	√
Discounted packs	√	X	√	√
Free trial and sample	√	X	√	√
Consumer service	√	X	√	X
Brand loyalty	Strong	Strong	Strong	Strong

Table 5 shows all the investigated firms commands a respectable market share in the Malaysian market. They are either the market leader or hold the number

two position. They are capable of generating the volume required to achieve economies of scale. Although their products are portrayed as premium and the pricing is higher than competitors, they still able to capture the market share. Premium quality products will incur higher cost but are differentiated positively hence increases the market share, which will have a positive impact on the cumulative volume of production and decrease the average total cost of producing one unit, a combination of economies of scale and differentiated (Helms et al., 1997).

According to the respondents, the aggressive advertisement and promotional activities launched by each firm is to increase brand awareness that leads to brand loyalty. Nescafe, Milo and Ajinomoto are household brand names that are fast associated with product category. This reflects the success of these brands, which can be clearly differentiated by consumers. Along with Marlboro and Coca Cola, these brands are household names in Malaysia reflecting the success of brand retention in the long-term memory of a person (Mowen & Minor, 1998, pp104), an indication of successful advertisement and promotion campaigns.

These firms have invested heavily in aggressive advertisement and promotional campaigns and successfully differentiated their products from their competitors. Ajinomoto and Nestle spent approximately 6% and 7% respectively of their total turnover for advertisement and promotional activities. Jacob et al., (2002), Porter (1985, pp 145), Marques et al., (2000), and Miller (1998, pp 18) had classified advertising and promotion as a mean to differentiate products.

Educating costumers how to use the firm's products is part of the consumer services provided by Ajinomoto and Nestle, especially for seasonings. Cooking demonstration conducted by home economists and recipe compilations given out to customers or potential customers are two common methods of customer education deployed by these firms. These firms will also host series of cooking shows in TV or in their premises to educate and promote their products. Chase

and Gravin had identified these as service roles in improving the information and image characteristics of product differentiation (Swink & Hegarty, 1998).

Every investigated firm values their relationship with their distributors. These firms realize without their distributors the products will never reach the end users since more than 60% of their sales are through them. These firms keep some control over their distributors and retailers to ensure their products quality are not jeopardize when placed in the market. F & N has a closed distribution network whereby their distributors are not allowed to carry competitors' products. Hence, a close working relationship is paramount between the distributors and this firm.

Philip Morris barred by regulations to advertise directly, uses distributors or retailers to display firm's advertisement at point of purchase. The firm will provide all kind of incentives to retailers to promote their products. Since indirect sales constitutes large portion of the total turnover for Ajinomoto (80%) and F & N (figures not available), these firms provides special discounts and gifts to their distributors to solicit their loyalty. Smooth relationship will also ensure efficiency in delivering products to the end user. Control of distribution channels is neither classified as low cost leadership nor differentiation because it is considered a mutual factor (Jacome et al., 2002).

4.2 Summary and Findings of Secondary Activities in the Value Chain

4.2.1 Firm Infrastructure Approach

All the firms have an information system network within their organisation. According to Laudon and Laudon (2000 p 50), an information system could have a strategic impact if it helped the firm provide products or services at a lower cost than competitors or if it provided products and services at the same cost as competitors but with greater value.

Table 6: Summary of respondent firms when dealing with firm infrastructure activities

Firm	Nestle	Phillip Morris	Ajinomoto	F & N
Management Structure	Functional	Functional	Functional	Functional
Management Information System	MRP	MRP	ERP	ERP and Coca Cola IS
Total Quality Management (TQM)	X	X	X	√
ISO Quality Management System	X	X	√	√
In house Quality Management System	√	√	√	√

Information system within these firms allowed them to make speedy decisions. They noted in present business environment, decisions need to be made very quickly or the firm will lose its competitiveness. Ajinomoto and Nestle through the feedback of their executives acknowledge these systems had improved the overall industry performance of these firms in terms of improved efficiency. F & N are currently looking into integrated information system to increase efficiency in generating information for the management. They are currently operating on the integrated JD Edwards ERP with Coca Cola Information System. Integrated information system is identified by Porter (1985) as one of

the drivers to achieve cost leadership. Hitt et al., (2001, p 174) noted firms with ERP systems are capable to achieve the integrated cost leadership - differentiation strategy because they promote operational flexibility.

The respondents identified their firms as traditional top down with a functional organizational structure and still retains the middle management. Hitt et al., (2001, p 447) identified functional structure with larger firms that are implementing one of the business-level strategies. From the type of organization structure and layers of managerial levels, these firms according to the respondents are trying to maintain certain level of control on the activities within the firm. All of them have financial modules of information system to control finance and asset movements. Ajinomoto has a tight budgetary control measures to disallow any unnecessary wastage of money. This is typical in firms that adopted the cost leadership strategy (Hitt et al., 2001, p 156)

F & N (Coca-Cola) is focused towards producing and marketing high quality products. This is echoed by the Fortune's most admired corporation survey when they listed Coca Cola as a corporation that ranked highest in quality (Hellriegel et al., 1999 p725). This is a reflection by the firm's emphasis in quality management systems. Among the firms interviewed, only F & N adopted the TQM principles. TQM is said to facilitate an integrated low cost leadership and differentiation strategy (Hitt et al., 2001, p175). All the other firms also have quality management systems, either ISO or in-house systems i.e. Nestle Quality Management System and Ajinomoto System for Quality Assurance. According to the respondents, quality management system allows the firms to reduce cost through efficient manufacturing system and provides quality consistency in their products.

4.2.2 Procurement Approach

Table 7: Summary of respondent firms when dealing with procurement activities.

Firm	Nestle	Phillip Morris	Ajinomoto	F & N (Coca-Cola)
Procurement policy	Premium input	Premium input	Quality but cost effective input	Quality but cost effective input
Sourcing	Domestic, regional and global.	Domestic, regional and global.	Domestic and regional.	Domestic and regional.
Centralised purchasing	√	√	√	X
Bulk purchase	√	√	√	√
Number of suppliers	Small group	2 –3	2 - 3	No fix policy
Procuring Specifications	√	√	√	√
Monitor Supplier	√	√	√	√
Supplier firm relationship	Strong	Strong	Not emphasized	Strong

Similar procurement pattern is observed among the firms. (Please refer to Table 7). They emphasized on procuring premium raw materials and achieve consistency in the materials purchased. The number of suppliers are kept minimum except for F & N that practice open policy for its packaging materials. Location of suppliers is not an important criteria for all the firms as long as consistency in inputs can be achieved. Example, F &N obtained the Coca Cola concentrates from the USA, while Philip Morris obtained the cigarette paper from exclusive global suppliers in order to maintain the quality. Premium inputs policy and bulk buying (economies of scale) also increases the bargaining power of these firms with the suppliers (Porter,1985). Philip Morris ensured the consistency of its key raw material, tobacco leaves with a backward integration and the paper quality with joint ventures. They want to ensure the final product quality is not affected with poor inputs and dent their image as a premium

product provider. Ajinomoto, while emphasising on consistent quality, cost of inputs is continuously reduced. However, cost of inputs depends on demand and supply especially for commodity like starch. When the price of starch is low in the market, Ajinomoto will take advantage of buying in advance and in bulk (Porter, 1985).

All the respondents identify specifications as an important factor in achieving consistency. If the suppliers are not able to meet the firms' requirements, they will be removed from the supplier chain. However all firms monitors and have a good working relations with their suppliers to ensure desired standards and effective cost management. Nestle is one step ahead, suppliers are treated as partners plus information and technology is provided to them to ensure efficiency and consistency in the supply chain. This approach is also taken by Toyota (Hitt et al., 2001, p 475). In summary, these firms apply a combination of both low cost and differentiation strategy when procuring inputs. Policies to purchase premium inputs, specifying requirements, good working relationship, and monitoring of suppliers are characteristics of differentiation strategy, while bulk buying, fewer suppliers and timing are characteristics of cost leadership strategy.

4.2.3 Human Resource Management Approach

From Table 8, the investigated firms take both strategies approach, cost leadership and differentiation. Marques et al., (2000) and Jacob et al., (2002) concluded that human resource development is mutual for both strategy approaches.

Table 8: Summary of respondent firms when dealing with human resource activities

Firm	Nestle	Phillip Morris	Ajinomoto	F & N
Executive Qualifications (Hiring Policy)	Graduates	Graduates	Graduates	Graduates
Executive Credentials	Good	Good	Average	Good
Wages *	Above average.	Above average	Average	Average
Benefits*	Above average	Above average	Above Average	Above Average
Appraisal evaluation	Merit	Merit	Merit	Merit
Encourage creativity	√	X	√	√
Extensive training	√	√	√	√
Downsizing	√	X	√	X

* Based on Malaysian Standard

According to the respondents of Nestle and Ajinomoto, they recognized the need of qualified people in manufacturing, research and development, marketing and sales. As such following measures are taken by the firms to address these requirements. The respondent from F & N observed, most executives and managers in that firm are capable to engage in a constructive discussion, a reflection of an intelligent workforce. Nestle on the other hand, has a management trainee programme that attracts young, intelligent and aggressive

graduates to be groomed as their executives. All firms carry out an extensive in-house and external training with Ajinomoto and Nestle having a regional training centre. However, creativity is not encouraged in Philip Morris, while others are working towards creating a creative workforce especially in Nestle and F & N to allow them to improve operations. All these firms are also good paymasters to attract and retain good, dynamic and intelligent employees. Moreover, those employees, who had successfully contribute to the well being of the firm with the exception of Philip Morris, will be rewarded with incentives to encourage such practices within the firm. These firms trust employees will play a major role in improving the firm's efficiency and brand image and willing to pay for quality workforce.

Almost 10% of Philip Morris employees are in the managerial level but it is only 5% for Ajinomoto. In the last four years, Ajinomoto had reduced almost 15% of employees at executive and managerial levels. This reduced the overall growth in labour cost. Nestle with a 5 tier managerial system is also working towards a leaner organization. The respondent for F & N also identified heavy management ratio but unable to provide any supporting data. With the exception of F & N and Philip Morris, the others are working towards reducing labour cost as to remain competitive in the post AFTA era. As a conclusion, cost incurred to hire expensive workforce is offset with a leaner organization because these firms are investing in quality not quantity.

4.2.4 Technology Development Approach

Table 9: Summary of respondent firms when dealing with technology development activities

Firm	Nestle	Phillip Morris	Ajinomoto	F & N
Manufacturing innovations	√	√	√	√
Product Research and Development in Malaysia	√	X	Partial	X

In summary, product development is recognized as an important method in achieving differentiation (Marques et al., 2000; Jacome et al., 2002; Hitt et al., 2001, p 164; Miller, 1998, p 18). With the exception of Nestle and Ajinomoto, the other two firms do not conduct any research and development in Malaysia. In Malaysia, Nestle is the only firm that aggressively adopts the innovation and research and development methods to improve their manufacturing facilities and develop new product mix or line which is adaptable to the local culture, example recently it launched omega enriched milk and *Nestomalt* in the market. Ajinomoto continuously improves its biotechnology capability, which is part of the operation line to increase yield and reduce cost/unit. F &N is currently studying ways to implement integrated manufacturing system that will allow flexibility and improved overall productivity. This is to contribute towards the overall plant efficiency. As quoted by Helms et al., (1997), Phillip Morris too had successfully embarked on many product and manufacturing innovations. The machine capacity is upgraded to produce 8000 cigarettes/ minute. However all these development and innovations are confined in the United States.

4.3 Summary of Research Results

The findings reveal each firm will adopt accordingly to the appropriate methods in the generic categories that interchange between cost leadership and differentiation or combination both strategy throughout the value chain.

Table 10: Summary of each category of the value chain and the likely strategy adopted by each firm.

Firm	Nestle	Philip Morris	Ajinomoto	F & N
Inbound logistics approach	D	D	C	C
Operation approach	I	I	C	I
Outbound approach	D	D	C	I
Marketing and sales approach	D	D	D	D
Service approach	D	NA	D	NA
Procurement approach	I	D	C	C
Technology development approach	I	I	C	C
Human resource approach	I	I	I	I
Firm infrastructure approach	I	I	C	C

I= Integrated cost leadership - differentiation strategy; **C**= Cost leadership
D= Differentiation strategy

The summary in Table 9 reveals although Ajinomoto is inclined towards the cost leadership strategy, the sales and marketing is strongly differentiated. Nestle is inclined towards the integrated cost leadership - differentiation strategy with handling of raw material, warehousing facilities and sales and marketing are strongly differentiated. F & N is having a combination of all three approaches in the value chain activities; nevertheless it is inclined towards the cost leadership with production and innovation technology focused towards efficiency. Examining the Philip Morris value chain activities, it is a combination of integrated and differentiated strategies although the overall approach of the firm tilts towards the later emphasizing in sales and marketing.