THE DYNAMICS OF BEEF INDUSTRY IN MALAYSIA: A CASE STUDY OF NUSANTARA MEAT BERHAD

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ASIA e UNIVERSITY 2023

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A Thesis Submitted to Asia e University in Fulfilment of the Requirements for the Doctor of Business Administration

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ABSTRACT

This study examines the factors and challenges of the beef industry in Malaysia. This qualitative study uses an in-depth interview methodology. Thirteen stakeholder informants were selected, involving beef producers, competitors, customers, and government officials. Based on the literature review, the beef industry faces various challenges and obstacles, such as production, land availability, animal feed costs, labour costs, cattle recruitment, and livestock innovation. In addition to the supply and marketing issues, prices, promotions, competition, government regulations, logistics processing units, finance and exchange rates are also being identified. This study has also discovered obstacles relating to the beef industry's growth. Unstructured and semistructured questions were asked of the informants who participated in these in-depth interviews. Information collected from interviews and in-depth observations was analysed through mnemonic writing. The results are organised according to basic, organisational, and global themes. In conclusion, this study summarised a qualitative phenomenon about the beef industry and its contribution to the country's economic growth. It also suggests future research, implications, and theoretical and practical issues for stakeholders in dealing with the beef industry issues in Malaysia.

Keywords: Beef industry, basic themes, organisational themes, global themes, economic growth.

APPROVAL

This is to certify that this thesis conforms to acceptable standards of scholarly presentation and is fully adequate, in quality and scope, for the fulfilment of the requirements for the degree of Doctor of Business Administration.

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Dr. Khairul Nizam Mahmud Asia e University Chairman, Examination Committee 23 August 2023

DECLARATION

I hereby declare that the thesis submitted in fulfilment of the DBA degree is my own work and that all contributions from any other persons or sources are properly and duly cited. I further declare that the material has not been submitted, either in whole or in part, for a degree at this or any other university. In making this declaration, I understand and acknowledge that any breaches in this declaration constitute academic misconduct, which may result in my expulsion from the programme and exclusion from the award of the degree.

Name: Mohd Hasbi Bin Jaafar

Signature of Candidate:

Date: 23 August 2023

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The pursuit of obtaining a DBA has been a daunting task. This is especially so considering my position as the Group Chief Operation Officer, where I must divide my time productively to cater to my job responsibilities and academic work.

I decided to undertake this challenge as I strongly believe in lifelong learning, where one needs to learn, unlearn and relearn the whole process of education and experience to reach greater human achievement.

As we know, the field of knowledge and practice is dynamic, and one needs to be well-equipped with the latest challenging trends and adapt to any environmental change to be at the vanguard of competition.

Alhamdulillah, I have accomplished this engaging task toward completing this thesis. This process could not have been possible without my family, friends, supervisor, and the academic team from AeU, who untiringly gave me moral support and encouragement.

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LIST OF ABBREVIATION

NMB	Nusantara Meat Berhad
USD	United States Dollar
US	United States of America
MP	Malaysian Plan
B40	B Fourty
M40	M Fourty
T20	T Twenty

CHAPTER 1

INTRODUCTION

1.0 Background of the Study

Protein from beef is of the highest grades and can make for extremely pleasurable culinary experiences. High levels of productivity and efficiency on the farm and effective value chains that recognise and reward adherence to target-market specifications are necessary for the beef industry's sustainability. The world's consumption of beef has been rising steadily. Globally, there are about 1.5 billion cattle (FAOSTAT, 2020). In 2019, 70 million tonnes of beef were consumed worldwide; by 2023, that number is expected to rise to 74 million tonnes. A high-quality protein source that offers incredibly gratifying eating experiences is beef. After chicken (125 tonnes) and pork (118 million tonnes), it was the third most popular meat in 2019. A record 18% of beef produced in 2019 was traded internationally. The USA produces 17% of the world's beef, followed by Europe (15%), Brazil (13%), China (9%), Argentina (4%), India (4%), and Australia (4%).

Brazil accounted for 20% of global beef exports from 2018 until 2019, followed by Australia (16%), India (15%), the United States (13%), New Zealand (6%), Argentina (6%), and Canada (5%), with the rest of the world providing about 18% of beef exports (Rolando, Kelly, Vinicius, Bratcher, 2023; Greenwood, 2021). Small herds of locally bred cattle, some of which may have poor reproduction rates, are used to produce most of the beef in South-East Asian nations, along with some crossbreeding with imported and better breeds.

The typical producers are smallholder farmers who feed cattle with crop leftovers, agro-industrial by-products, and other unconventional feeds. Compared to

major beef-producing nations, the supply systems are less developed. There is a rising demand for beef in these nations; most of the domestic supply is eaten locally (Greenwood, 2021). Imports, such as Carabeef from India, may be used to satisfy additional demand. Recently, reviews of the beef industry in Laos and Thailand (Napasirth & Napasirth, 2018) were published.

With the exception of Brunei (and Singapore, as data is lacking), Southeast Asian (SEA) nations have been consuming less beef than the global average. Despite Malaysia's intake of bovine meat having increased thrice since 1963, it was only roughly half as much as the global average in 2013 (6.52 kg/capita/year compared to 12.15 kg/capita/year). Nevertheless, Malaysians continue to consume some of the most beef per person in Southeast Asia.

According to the United Nations (2009), agriculture will be crucial to reaching the World Bank's Millennium Development Goals by 2015. In many nations, including Malaysia, it is abundantly evident how much rural residents rely on agriculture for their livelihoods. In order to improve the economy and well-being of those who live in rural regions, numerous agriculture-for-development agendas are being planned and put into action (The World Bank, 2008). Examples of this development method include the several economic development corridors planned for Malaysia's northern and eastern coasts and the economic growth areas of Sarawak and Sabah. Since the middle of the 1990s, Malaysia has achieved self-sufficiency levels in pork, poultry meat, and eggs; until recently, there have been shortages of these items. The effective assembly of the two main inputs—grow-out animals and feed, both readily available locally and priced competitively—enables the poultry and pig industries to meet more than the domestic demand for chicken and pig products. Sadly, the ruminant industries lack these crucial breeding stock and feed inputs in enough quantity and at a fair price to effectively produce beef, mutton, and milk.

One of Malaysia's significant agricultural sectors is the production of beef. This significance is demonstrated by the upward trend in the industry's overall economic worth, which is partially mirrored in the value of beef consumption. In the post-independence era, when the country enjoyed continuous economic prosperity thanks to the expansion of the industrial and oil palm plantation sectors, beef consumption rose.

In comparison to the time before independence, a larger percentage of the beefeating population currently spends on beef in their domestic expenses. Although increased consumer income does not directly affect beef demand, some income groups expect a strong and favourable response (Hudson and Vertin, 1985). According to a meta-analysis, beef would take up a larger portion of the budget as family income rose (Gallet, 2010). Meat from cows and buffaloes makes up most of the beef consumed in this nation. However, the demand for processed beef products and fresh meat has outpaced the domestic beef supply from cattle and buffalo. Numerous plans have been put up to increase beef production, but so far, these efforts at expansion have made little difference in the domestic beef supply. From RM697 million in 2008 to RM2.51 billion in 2013, the beef industry's gross economic value—including local output and imported animals and meat has increased. Given the low level of beef self-sufficiency, which fluctuated between 24% in 1990 and 25.67% in 2013, there is a significant opportunity to increase the beef cattle business further. A 1% improvement in selfsufficiency level at the current beef demand would necessitate the annual killing of an additional 14,000 head of cattle. The government intends to increase beef selfsufficiency to 32.7% by 2020 (Ministry of Agriculture (MoA), 2015), resulting in the annual slaughter of more than 450,000 head of cattle.

1.0.1 Livestock in Malaysia

The livestock industry in Malaysia is a significant and essential part of the agricultural sector. It generates valuable jobs and supplies the populace with a nutritious animal protein diet. According to the Government of Malaysia (2006), the cattle industry alone provided 9.6% of the value added to agriculture and 0.8% of the GDP in 2005. In reality, with an output value of RM6,992 million in 2006, the cattle business is Malaysia's largest food industry in terms of output value. However, the health of the ruminant business portrays a bleak picture. The meat production from ruminants has not increased significantly, and the sector is not well established.

Small farm owners still control over 90.0% of Malaysia's ruminant population. In contrast to bigger commercial and government farms with established pastures and sufficient infrastructure, this group of farmers does not customarily grow pastures for animals. However, they only produce 5.0% of Malaysia's total ruminant population. The full-term NAP3's aims for the livestock industry include increasing the production of all animal products, improving population nutrition, and creating rural jobs (Government of Malaysia, 2006).

As previously indicated, the cattle industry is anticipated to add roughly 9.0% to the value of agriculture, or a total production value of more than RM2,483 million in 2010, to the GDP. Over the years 2005 to 2010, the sector's value increased consistently at a rate of, on average, 4.0 to 6.0% annually. The value of cattle as food commodities increased at a rate of 6.6% annually in the 8MP, and it contributed 8.14% to the agricultural GDP. The cattle sector is expected to continue contributing roughly 9.0% of the agricultural GDP in 9MP. Beef, mutton, pork, and poultry production peaked in 1960 at 11,570, 1,280, 38,450, and 21,273 metric tonnes, respectively, but it climbed to 26,513, 1,556, 168,356, and 944,840 metric tonnes in 2006. Production of beef (2.3%) in 2006 was slightly higher than that of mutton (0.1%) but was still behind that of poultry (82.9%) and pork (14.8%). Although there are variations in the beef production trend from 1960 to 1996, the trend generally shows an increase from 1990 to 2006.

While beef supply increased, it could only meet around 20% of domestic demand. Over time, there has been an increase in the consumption of all types of meat. Peninsular Malaysia consumed 14,030, 3,380, 30,170, and 23,636 MT of beef, mutton, pork, and poultry in 1960; by 2006, that number had increased to 136,056, 17,150, 155,884, and 721,230 MT, respectively. From 1990 to 2006, there was a steady rise in the consumption of beef, which is higher than mutton but lower than chicken and pork. Beef consumption increased by 13.2% in 2006, higher than mutton's 1.7% growth and lower than poultry's (70.0%) and pork's (15.1%) growth rates. More beef was consumed, from 14,030 MT in 1960 to 136,056 MT in 2006. Mutton (9.07%) and beef (22.11%) had lower self-sufficiency levels (SSL) in 2006 compared to pork (108%) and poultry (131%).

Even though the self-sufficiency rate in beef declined from 82% in 1960 to 22% in 2006, despite being given priority in the livestock development plans over the years, it was insufficient to meet the local demand.

Beef output increased gradually between 1960 and 2006, but its self-sufficiency rate decreased. The quick decline in self-sufficiency might be related to the beef and mutton subsectors' ineffective performance.

Thus, a programme to increase sufficient beef output must be developed to reduce Malaysia's dependence on imported meat and animals. In addition to helping the cattle industry fulfil local demand, applying this rule may also address concerns about food security.

Beef cow rearing is an expensive industry to run domestically due to the poor performance of the beef animals, intense competition from other agricultural businesses, particularly palm oil, and lower pricing of imported meat. In addition, the cost of beef's rivals, including fish, poultry, mutton, and pork, affects how much is consumed. As beef is regarded as having a high degree of flexibility, fish and chicken are near replacements (NAP,3).

In order to define policy implications for local fresh beef production and the future trend of beef self-sufficiency level in Malaysia, the major goal of this work is to construct a model for beef policy analysis using biological and mathematical simulation. By 2010, the Malaysian beef sub-sector was anticipated to achieve 30% self-sufficiency under NAP3.

For the domestic market, more fresh meat, mutton, and milk are anticipated to be produced. Modern methods and large-scale farming were actively supported for private sector-led commercial output. Potentially profitable small-scale livestock enterprises would still be expanded into larger commercial operations to increase efficiency.

The slow growth rate of the local beef supply in comparison to the demand growth rate is the key issue facing the local beef sector. The government has tried to support the business through several Malaysian initiatives, but the beef supply is still growing steadily. The level of assistance now provided to the ruminant industry is still insufficient to have any discernible effect. The consumption of beef is anticipated to rise soon. The demand for beef is expected to rise due to the Malay population—the main consumer of beef—growing at a pace of 3.1% annually, significantly higher than the 2.5% national average.

1.0.2 Beef Consumption in Malaysia

From 91 kcal/capita/day in 1963 to 266 kcal/capita/day in 2013, Malaysia's overall meat consumption—including poultry, pig, bovine, and mutton—has increased nearly thrice. Over the same period, the proportion of beef consumed in overall meat consumption increased by more than one percentage point, from 7.7% to 9.0%. Malaysians prefer poultry to other meats (Farah Adila Abdullah et al., 2021).

More than 60% of the population in Malaysia consumes beef, a significant source of animal protein. It has had consistent demand over time, with overall consumption increasing by 45% from 138,980 tonnes in 2005 to 201,556 tonnes in 2013. In contrast, mutton and chicken consumption increased by 69% and 77% during the same period. Also increasing throughout the nine years was the per capita consumption of beef, which increased from 5.32 kg in 2005 to 6.74 kg in 2013.

In contrast, per capita consumption of chicken meat increased 6.06% each year during the same period, reaching 46.49 kg per capita in 2013, or nearly 6.9 times more than beef. However, many frozen beef exporters are making up the more than 70% shortage in the domestic supply by bringing in beef from India, Australia, and New Zealand, which varies in price and quality.

Due to the availability and relative affordability of buffalo meat compared to chilled and frozen beef from Australia and New Zealand, 86% of the beef imported into Malaysia in 2013 was buffalo meat. Live cattle imported from Australia and Thailand consumed 15% of the country's meat.

Whether engaged in the restaurant industry or food processing, food manufacturers frequently buy beef depending on demand and cost. Like homemakers, who make up the majority of retail consumers, buyers of beef base their decisions mostly on cost and quality.

Malaysians' food consumption patterns are anticipated to lean towards increased animal protein intake, especially lean meat, with a rise in the general populace's purchasing power.

Lean beef should continue to be a popular meat option among customers because it contains most of the required amino acids and is a significant source of protein, B vitamins, and minerals. Entrepreneurs are pushed to fill the supply gap by investing in new beef and dairy-beef production businesses, which bodes positively for the cattle industry.

The surge in beef consumption has been attributed to several contributing causes. The middle class is becoming increasingly wealthy, the meat processing industry is growing, and the national economy is expanding. More people have seen upward economic mobility as education becomes more widely available, increasing their purchasing power for high-quality foods. Many business owners decide to expand their dining options and get involved in producing processed foods to meet the demand for higher consumption of animal protein. More employment possibilities for Malaysians will be made available since the country's economy is predicted to grow, as seen by the increase in Gross Domestic Product from RM545.42 billion in 2006 to RM1,242.357 billion in 2014 (EPU, 2015). This growth would help to strengthen the economy further as a whole.

At an average annual supply growth rate of 12.6%, the value of domestic beef supply increased marginally from RM535 million in 2005 to RM1,142 million in 2013. As a result, self-sufficiency increased from 21.15% in 2005 to 25.67% in 2013 when accounting for the local slaughter cattle produced through the temporary fattening of feeder cattle imported from Australia.

The self-sufficiency level of the domestic supply, which has been hovering below 30% since 2005, has not been able to keep up with the rising demand for beef, which reached 201,556 tonnes valued at RM2.51 billion in 2013.

Numerous large-scale, commercial beef farms have been established throughout the nation since the late 1970s, including the FIMA feedlot in Johor Bharu, the Majuternak beef and dairy farms in numerous states, and the Pahangbif, Darabif, Makmur, and First Dairy farms in Pahang. Many of these farms produced milk from dairy cows and engaged in the breeding and fattening of beef cattle. However, many of these farms experienced poor financial flow, which ultimately caused them to close. The extensive production system of integrating cattle with oil palms is used by producers in the oil palm settlements of FELDA, RISDA, FELCRA, Lembaga Kemajuan Pertanian Pahang (LKPP), Persatuan Peladang Negeri Pahang (PASPA), and private sector oil palm plantations of Chin Teck in Pahang, Sawit Kinabalu in Sabah, and JCorp in Johor.

Smallholders' beef cattle herds are characterised by low productivity, an average herd of 10 cows, and a lack of investment in high-quality breeding stock. Before Felda's oil palm division was listed on the stock exchange, Felda Farm Products operated roughly 40,000 head of Brahman crossbred and Bali cattle in Felda oil palm settlements in Pahang, Negeri Sembilan, and Johor. Unfortunately, these herds have since been dispersed. Although several joint venture investments have been made in the past few years by different organisations in the public and private sectors to advance the beef cattle business, their contribution to domestic output will not be enjoyed anytime soon. Many of these new businesses are still in the planning stages, so it will be some time before they can start raising cattle for the markets for slaughter.

These investments include establishing the National Beef Feedlot Centre in Gemas, Negeri Sembilan, and the extension of the National Beef Cattle Breeding Centre in Muadzam Shah, Pahang. They also import cattle breeding stock and slaughter animals from Indonesia, Myanmar, China, Cambodia, and Australia. These initiatives are said to have many advantages, including the distribution of high-quality breeding stock from breeding centres to participating farmers, increased productivity in the production of inputs, primarily feed, feeder cattle, and breeding stock cattle, and an improved marketing network for cattle destined for the breeding, fattening, and slaughter markets. Between 2005 and 2013, domestic beef production rose 9.3% per year, from 29,396 tonnes to 51,738 tonnes.

This increase in domestic beef production resulted from the slaughter of both domestic feeder and slaughter cattle as well as local cattle and buffalo. The output increased despite the population decline of 4.06% and 13.73% for cattle and buffalo between 2005 and 2013 (Table 3). In 2013, there were 751,497 and 123,646 head of cattle and buffalo, respectively. Only 30% of these cattle and buffalo are considered reproductive cows.

The low yield from local beef producers has been attributed to several causes. One of them is the lack of sufficient grazing land to support a large herd of breeding cows, the scarcity of high-quality breeding stock and the irregular supply of nutrientdense feed, as well as the lack of an effective marketing system throughout the entire value chain, from the provision of inputs for production to the consumption of the finished product.

The beef industry should take a page from the poultry sector and ensure a steady supply of affordable cattle feed, establish an effective marketing network and facilitate the ready supply of producing stock for breeding and fattening.

1.0.3 Nusantara Meat Bhd

Nusantara Meat Bhd (NMB) is a privately held Malaysian business with five years of operational experience and livestock and meat industry knowledge. Its primary activities include importing, processing, cold storage, distribution, and retailing beef and lamb. NMB is a wholly owned subsidiary of Tamansori Holdings Sdn Bhd, with extensive experience and investment in the related livestock business. The business includes service, deboning, abattoir, cold-room, and processing in Somaliland (Africa) and Australia.

"Halal Group - Quality, Clean and Consumable" is the company's motto, and it applies to all of the unique cuts of meat, including striploin, tenderloin, shoulder, ribs, topside, rack, knuckle, and shank. NMB specialises in creating wagyu, quality beef, burgers, sausages, meatballs, minced meat, and meat-marinated dishes.

From the perspective of business management, NMB is currently operating on a zero-gearing basis with all funding provided by the parent holding company, particularly for the purchase of raw materials and capital expenditures (CAPEX), such as production machinery, IT requirements, and cold room facilities, in order to maintain timely, efficient, and smooth operation as well as quality final product output.

In terms of human resources, NMB has hired experienced personnel to manage the production line, which includes the research and development unit, deboning units, small goods processing unit, cold room storing unit, as well as other supporting departments like the financial unit, administration, sales and marketing, transport, and logistics.

In order to meet quality standards and gain a competitive edge over rivals in a related industry, it is fair to say that many businesses, particularly those in manufacturing-based industries, will face challenges in all areas while attending to a specific process, including raw materials, money, equipment, workforce, and even the method being used.

Despite ongoing debates over the supply transition (from breeding to retail products), NMB is progressing toward closing the meat product adequacy gap and pursuing its objective of Malaysian beef self-sufficiency.

This effort is consistent with the Malaysian Ministry of Agriculture and Food Industry's (MAFI) Food Security Policy Action Plan (2021–2025), which aims to ensure that the food system is always intact, especially in the event of unforeseen circumstances (Business Today, 2022).

In order to prevent any monopolising, oligopolistic, or cartel system from manipulating the meat business, particularly inside the supply chain, government security, intervention, and strict surveillance are critically needed on the political front.

The continuous strength of NMB is its relationship with domestic customers, with whom it principally supplies beef, lamb, and veal to the nation's food makers and processors. The names of these food makers and processors are ADABI, BRAHIM, Malindo Airlines, Soul Garden, and AEON BIG. In order to improve its position in