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Smallholder Farmers in Malaysia's Oil Palm Industry: Issues and Challenges

Petani Pekebun Kecil dalam Industri Kelapa Sawit Malaysia: Isu dan Cabaran

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ABSTRACT

The oil palm sector is vital to the national economy. Smallholder farmers are an essential element of the supply chain for sustainable oil palm production, a large industry with several upstream and downstream players. The supply chain includes smallholders, fruit dealers, millers, refineries, and manufacturers of oil palm-based products. The livelihoods of smallholders are compromised due to a lack of industry knowledge and an inability to comprehend the authority's appropriate code of practices (COP). The study focuses on the concerns and obstacles that smallholders encounter in the supply chain upstream in the oil palm sector when generating sustainable oil palm fresh fruit bunches (FFB). To satisfy the Malaysian Sustainable Palm Oil (MSPO) certification standards, it must adhere to the authority's good agricultural practices (GAP) rules. The literature is drawn from current issues in journals and the media, utilising various databases accordingly. The study

provides a better understanding of smallholders' challenges in complying with the authority's requirements for implementing the sustainability of the oil palm industry. It describes a systematic strategy to building a model for future endeavours using methodical methods that begin with comprehending the problem statement and includes the dimensions of Islamic business ethics (IBE) and competitiveness in the study. Expanding expertise in the oil palm business while effectively incorporating smallholders benefits the government, the MPOB (Malaysian Palm Oil Board), and academia.

Kata Kunci:
Kod amalan (COP); Buah tandan segar (BTS); Amalan pertanian baik (GAP); Minyak Sawit Mampan Malaysia (MSPO); Daya saing; Etika Perniagaan Islam (IBE)

ABSTRAK

Sektor kelapa sawit adalah penting kepada ekonomi negara. Petani pekebun kecil adalah elemen penting dalam rantaian bekalan untuk pengeluaran kelapa sawit yang mampan, sebuah industri besar dengan beberapa pemain huluan dan hiliran. Rantaian bekalan termasuk pekebun kecil, peniaga buah-buahan, pengilang, kilang penapisan dan pengeluar produk berasaskan kelapa sawit. Mata pencarian pekebun kecil terjejas kerana kekurangan pengetahuan industri dan ketidakupayaan untuk memahami kod amalan (COP) yang sesuai oleh pihak berkuasa. Kajian itu memberi tumpuan kepada kebimbangan dan halangan yang dihadapi pekebun kecil dalam rantaian bekalan huluan dalam sektor kelapa sawit apabila menjana buah tandan segar (BTS) kelapa sawit mampan. Untuk memenuhi piawaian pensijilan Minyak Sawit Lestari Malaysia (MSPO), ia mesti mematuhi peraturan amalan pertanian baik (GAP) pihak berkuasa. Literatur diambil daripada isu semasa dalam jurnal dan media, menggunakan pelbagai pangkalan data dengan sewajarnya. Kajian itu memberikan pemahaman yang lebih baik tentang cabaran pekebun kecil dalam mematuhi keperluan pihak berkuasa untuk melaksanakan kemampanan industri kelapa sawit. Ia menerangkan strategi sistematik untuk membina model untuk usaha masa depan menggunakan kaedah yang bermula dengan memahami penyataan masalah dan merangkumi dimensi etika perniagaan Islam (IBE) dan daya saing dalam kajian. Memperluas kepakaran dalam perniagaan kelapa sawit sambil menggabungkan pekebun kecil dengan berkesan memberi manfaat kepada kerajaan, MPOB (Lembaga Minyak Sawit Malaysia), dan ahli akademik.

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INTRODUCTION

Smallholder farmers face obstacles in growing sustainable oil palm due to the overall situation in the global and domestic commodities marketing arena and a lack of understanding of good agriculture practices (GAP). Smallholders in the upstream sector face external and internal obstacles that stifle the high-yield production of fresh fruit bunches (FFB), jeopardising their livelihoods. The European Union's (EU) threat to phase out biodiesel use in the transportation industry and the US and other countries' targets on oil palm use are among the worldwide factors. Essentially, the issues of the ecosystem and environmental damage, displacement of

endangered species and local communities, forced labour, and finally, health difficulties are all factors considered in the sustainability concerns (Che Omar, Ishak, Awang, & Hussain, 2018; Porter, 1980; Syahza, 2019; Vergura, Zerbini, & Luceri, 2019). It has resulted in a shift in customer behaviour regarding food consumption (Distanont & Khongmalai, 2018).

This paper discusses the issues and challenges faced by the smallholder farmers in the upstream oil palm supply chain. It concerns producing oil palm fruit bunches (FFB) using raw material factors, market players, the code of practices (COP), the functional divisions of a business entity, and income generation. The literature is sourced from contemporary issues in journals and the media accordingly. The study contributes to understanding the problems plaguing the smallholders to adhere to the authority's requirements in implementing the sustainability requirement in the oil palm industry. It provides the methodological approach in employing methodical techniques to build a model commencing from this understanding of the problem statement. It benefits the governing authority, the MPOB (Malaysian Palm Oil Board) and the academics and adds to the knowledge in the oil palm industry, involving the smallholders adequately.

LITERATURE REVIEW

Indonesia and Malaysia retaliated to the threat of the EU's intended exit in the biodiesel sector (Kushairi et al., 2019b) while searching for alternative markets for RSPO (Roundtable Sustainable Palm Oil) certified palm oil elsewhere. It relates to the US and other nations' no-palm-oil campaign under the guise of blaming producer countries for non-compliance with sustainability regulations, the slaughter of the orang-utan, the highly contentious subject of the ecosystem, as well as social infringement, forced labour, and health concerns (Khatun et al., 2017). The smallholders' competitiveness is of utmost importance to consider. It concerns the low yield of FFB, deteriorated FFB, lack of awareness of GAP, which is a feeder to the submission to the requirement in MSPO (Malaysian Sustainable Palm Oil) certification. Other points in the review are unethical practices towards the environment, lack of awareness of MPOB'S Code of practices (COPs), and lack of understanding of (MSPO) regulation. MSPO touches on the unethical practices towards the environment, society, and the ecosystem. The Islamic business ethics (IBE) concept explains on the understanding of the Islamic school of thought, and ethical criteria, the practice of cheating on weight, turning away from Western values, dishonesty, and loss of integrity of the participants of cluster members (Al-Aidaros, Shamsudin, & Idris, 2013; Al-Qaradhawi, 2009; Alam Choudhury, 2011; Khatun, Reza, Moniruzzaman, & Yaakob, 2017). The review also highlights the competency of TUNAS extension personnel in authority (Ibrahim, Awang, & Manaf, 2018; Maletič, Maletič, Al-Najjar, & Gomišček, 2014). TUNAS stands for *Tunjuk Ajar dan Nasihat* (Guidance and Advisory Services). It is an extension arm the MPOB in transferring knowledge and technology to the smallholder farmers of the oil palm industry in Malaysia

The worldwide response to RSPO-related challenges indirectly impacts smallholder livelihoods (Bronkhorst et al., 2017). RSPO is an abbreviation for Roundtable Sustainable Palm Oil). About 70,000 foreign workers have been displaced from oil palm smallholdings and estates because of the recent Covid 19 outbreak (Sarkar, 2020). Smallholders struggle to harvest their FFB in time before it is delivered to dealers or mills. Due to a decline in palm oil stock on the open market, CPO prices have risen sharply, exceeding RM4300/mt (April 2021) FOB price. The FFB price is around RM860/mt when calculated at 20% (the method used to determine the FFB pricing). The external and internal elements that affect smallholders are explained within.

Good Agriculture Practices (GAP) Compliance Issues in Oil Palm Production

It discusses the current condition and the challenges that smallholder farmers in the oil palm industry encounter in producing the FFB. This section discusses Malaysia Palm Oil Board's (MPOB) extension work and the concerns and challenges faced by smallholders. Even though environmental concerns have been increasing for some years, few are being addressed by combining quality sustainability, competitiveness, and Islamic business ethics (IBE) into a holistic perspective. The biggest challenge for smallholders is a lack of knowledge and competitiveness in producing high-quality oil palm fresh fruit bunches (FFB) through good agricultural practices (GAP). As a result, smallholders have a hard time meeting the FFB's consistency standards and cannot compete in the market (Bronkhorst et al., 2017; Che Omar, Ishak, Awang, & Hussain, 2018; Che Omar & Saripuddin, 2015). Smallholders' competitiveness means they aren't producing the industry's projected yield, and the quality is not quite as good as it should be for those who adopt sound agricultural methods (GAP). Individual smallholders, cooperatives, mills, estates, and fruit merchants are part of the SPOC cluster. One of the determinants of competitiveness is the production of high-quality FFB. Other challenges include farm management, innovation, production costs, raw material availability, supply chain management, ethical behaviour, buyer and seller bargaining power, and labour costs (Guadalupe et al., 2019; Prasad & Warrier, 2016; Tambade, Singh, & Modgil, 2019). Competitive clusters generate high margins and can afford high-quality agricultural input, resulting in higher yields (Kushairi et al., 2019a).

a) The Present Situation in the industry

According to the literature, the MPOB helps smallholders through TUNAS. This extension division provides on-site educational services such as technical discussions, demonstration methods, counselling, and guidance to ensure high-quality safety and sustainability of oil palm reviews (Shahida, Hafizuddin-Syah, & Fuad, 2018). It requires keeping up with oil palm-related knowledge and technology and channelling government support programmes to the smallholders (Ibrahim et al., 2018). Smallholder farmers react to extension initiatives in several ways, with differing attitudes and outcomes. It refers to the parties' knowledge, attitudes, and skill (KAS) in achieving favourable results. The MPOB strives to improve smallholders' livelihoods by instilling information (KT) and technology (TT) in them. In this context, a farmer must attain a yield of at least 20 t/ha/yr and an average oil extraction rate (OER) of 19% to establish long-term sustainability in FFB production. On the other hand, smallholders receive less than 10 and 17 for yield and OER, respectively (Ahmad, Nordin, & Kamil, 1996; Ishak, 2017). The authority's national goal is 25:35, or 25% OER and 35 t/ha/yr yield, which is still considerably below industry standards.

The authority's effort for smallholders to join the MSPO has allowed it to be recognised as a sustainable palm oil provider (Shahida et al., 2018). On the other hand, many people are uninformed of the advantages of following good agricultural practices and cannot link to competitiveness situations where they will notice a difference in revenue. Furthermore, smallholders have no idea how to connect to the present global RSPO and MSPO certification requirements required for consumer approval. Many independent smallholders are unaware that their lack of knowledge of GAP standards compromises the member clusters of higher-margin, preventing them from purchasing cost-effective and high fertiliser for their palm (Che Omar et al., 2018). Farmers compete for recognition from consumers and the best price for their crops to stay afloat in the market (Jamian, Ab Rahman, Md Derus, Mohamed, & Nik Ismail, 2014; Kushairi et al., 2019a). The fruit dealers cheat, and the smallholders deliberately mislead on the weight of FFB, though, too (Che Omar et al., 2018). Several times, the use of

weighing bridges to steal goods from sellers has been discovered. There is a lack of understanding of the Islamic aspect of ethical business behaviour (Wilson, 2012), which is an area that must be considered alongside competitiveness to achieve oil palm production sustainability. In contrast to traditional business procedures, the lack of application of Islamic business ethics in operations is being examined as a distinctive element. In the long run, sellers, and in this case, smallholders, suffer financially.

b) The Issues Plaguing The Smallholders

The competitiveness of the cluster's independent smallholders and the ineffectiveness of the MPOB's TUNAS agency are the first two issues affecting the smallholders. A cluster or group comprises smallholders, millers, refineries, and fruit dealers and is headed by a manager chosen among the group itself. This sub-topic tells about the problems that smallholders' issues, both those beyond their control and those under their disposal. It can be divided into two categories: external and internal issues. External factors affecting smallholders include price volatility and the impact of meteorological conditions on FFB output, and it is also referred to as fundamental and technical factors.

MPOB has a long-standing plan of knowledge transfer (KT) and technology transfer (TT) through extension programmes administered by TUNAS agents (Ismail, Hamzah, & Bebenroth, 2018; Oduniyi & Tekana, 2019). To meet the sustainable palm oil requirement, the agents give training and counselling on new planting technology, the code of practice, and creative programmes (Mohd Zulkifli, Hashim, Raj, & Huddin, 2018). A national version of the RSPO is MSPO. It allows independent smallholders to sign up for the authority's now-mandatory recommendations (Bronkhorst et al., 2017). Even if every attempt has been made to realise the noble goal, there have been obstacles. Overall, MSPO can revolutionise independent oil palm growers regarding environmental, sociological, and economic implications (Oosterveer, 2015). However, many features of the schemes are unknown to the smallholder farmers in many circumstances. Some people are unsure how to express their dissatisfaction with the programme, while others do not believe it promotes good agricultural practices. It means that smallholders must be informed about the training topic and TUNAS officers (Ibrahim et al., 2018)

The Challenges to Compliance to Good Agriculture Practices (GAP)

Smallholders who operate independently suffer trade barriers. Some obstacles are beyond the smallholders' control, while others are within their means. Weather and open market price changes are two examples of uncontrollable variables (Murphy, 1996). It is, firstly, the challenges faced by the smallholders. These are fundamental and technical factors that affect market sentiment (Lescaroux, 2009) and movement. External factors are beyond the control of smallholders and the authority alike. At the same time, internal factors are within the power of smallholders and the officer in charge's actions. Weather is one variable that affects agricultural product production worldwide, mainly when the seasons include the El Nino and La Nina occurrences (Kotler, 2000; Kushairi et al., 2019a; Oduniyi & Tekana, 2019). Flooding causes a halt in the supply of harvested FFBs to millers during the monsoon season (Kushairi et al., 2019a). Uncollected FFB and loose fruits are also a result of this circumstance. The quality of FFB deteriorates if the fruits are sent to millers more than 24 hours after harvesting (Jamian et al., 2014). Generally, millers are compelled to purchase at a discounted price. It is to compensate for the provided FFB's high FFA reading, which negatively influences company earnings. Smallholders will be slapped on a back-to-back basis if the FFB transaction is done through fruit dealers (FDs), absorbing the losses (Che Omar et al., 2018; Jamian et al., 2014). The smallholders are constantly on the receiving end of things.

Then there is market volatility. Commodity prices move in unison with crude fossil fuel oil (Regnier, 2007; Zhang, Fan, Tsai, & Wei, 2008). It is determined if the position is bearish or bullish depending on the current market sentiment. Market participants engage in contracted positions on the commodities exchange employing a hedging method to protect themselves from currency losses (Salami & Haron, 2018). Among the activities are physical and futures contracts with speculators. Market makers, often known as speculators, are important actors in the market. Trading a large number of lots is frequently required to enter the market. Based on stock availability, economic and political variables, market reading assists market players in selecting whether to take long or short positions (Guan & Wooi, 2017). Even smallholders in this industry are affected by the practice of selling FFB on the open market. Smallholders are the ones who face the brunt of market volatility, with processing, transportation, and market discounts often being incurred (Devaux, Torero, Donovan, & Horton, 2018). The surplus is rarely passed on to FFB sellers, unlike in the premium market. It adds to the weather elements that affect smallholders, as mentioned in the prior paragraph.

Secondly, there is a lack of awareness of the MPOB's code of practices (COPs), good agricultural practices (GAPs), and the need of adhering to the Malaysian Sustainable Palm Oil (MSPO) accreditation. For the most part, the independent smallholders are unaware of the TUNAS programme, which covers market movement and technological innovation information. Regardless of the training provided by MPOB's TUNAS official, the approach to awareness is critical to the independent smallholders' competitiveness in the industry. It includes the way the target group, smallholder farmers, is being implemented. The participants are unaware of the quality that should be generated; they are unaware of the nutrients in fertilisers, the best clones to use, and communication issues - many rely on informal news and information and the harvesting manual. The absence of awareness of these elements contributes to a lack of competitiveness. In this case, the smallholders in the group called Smallholders Palm Oil Cluster (SPOC) are organised by the authority in the extension programme. Smallholders must be educated about MPOB's procedures through the official TUNAS medium effectively.

Other related points are concerns regarding issues that arise in the operating settings of market participants. The cost of planting inputs, particularly fertilisers, and the selling of FFB by smallholders are two internal aspects to consider (Aznie, Lyndon, Azlan, Besar, & Rohizaq, 2018). Another challenge for independent smallholders in the oil palm supply chain is an awareness of fundamental factors to progress forward. Smallholders struggle to meet the MSPO regulations due to a lack of understanding of modern technologies and agricultural techniques. As previously said, it impacts their competitiveness and, as a result, their livelihood.

Thirdly, several millers may refuse to accept the purchase of FFB during the peak season due to overcapacity (Che Omar et al., 2018). Smallholders will have difficulty finding buyers for their harvested FFBs once the millers' bulk storage tanks (BST) are filled due to overcapacity. On a back-to-back basis, buyers' bargaining power against fruit dealers (FD) and smallholders assures that the concerned FDs pass miller discounts on smallholders (Porter, 2008; Vermeulen & Goad, 2006). Similarly, millers look for the inbound stock of FFB during the low crop season to meet physical contract shipping commitments. FDs are critical in purchasing smallholders from various sources and selling to millers on a long-term or immediate basis. In the supply chain, smallholders can sell FFB in two ways. One alternative is to sell directly to millers, while fruit dealers (FDs) work with smallholders the most. The FDs' OER (oil extraction rate) offered

to smallholders, on the other hand, is frequently lower than the millers'. In this circumstance, FDs have tremendous negotiating power as a seller to a miller, necessitating a premium on the rates offered. It is not easy to assess a situation like the one experienced by smallholders during discounted periods. Keeping track of reimbursements from millers to smallholders is even more difficult during the premium market (Devaux et al., 2018). The adherence to Islamic business ethics (IBE) will prevail.

Additionally, the fourth point, there are numerous flaws in the supply chain transaction of FFB in the sector. Smallholders usually play with weight by putting sand and water on the FFB at a seller's collection centre (Che Omar et al., 2018). Similarly, dealers defraud sellers by tampering with the weighing equipment known as a weighing bridge at the collecting site to compensate for this. It is a systematic, calculated attempt to defraud the sellers, in this case, smallholders. It is a determinant from the inside out. This approach, on the other hand, is found across a wide range of sectors. The industry is aware of this purchasing system behaviour, but it is rarely confirmed, and business continues as usual. However, the authorities have just detected fraud. The Ministry of Plantation Industries and Commodities (KPPK) has taken enforcement action against 56 Malaysian Palm Oil Board (MPOB) licensees for manipulating oil palm weighing scales under the MPOB (Licensing) Regulations 2005, according to Bernama, the government's news agency. If the FOB price of crude palm oil (CPO) is RM4,300/mt, 20% of the price should be RM860/mt, according to the National Association of Smallholders (NASH). However, the weighing bridge manipulation would result in a considerable loss to smallholders.

Moreover, Smallholder farmers frequently lack the financial means to participate in good agricultural practises projects (Omar et al., 2018). Fertiliser cost is very high in the field, together with field upkeeping works. The lack of farming inputs renders the yield-optimisation programme ineffective, diminishing TUNAS' impact on MPOB extension effort. Furthermore, with low returns from smallholdings controlled by SPOC's independent smallholder clusters, purchasing high-quality plants on the market is challenging.

As previously stated, there is a lack of awareness among independent smallholders of the need for the guidance provided by the MPOB's TUNAS extension staff (Che Omar et al., 2018). The flow of communication between smallholders and the authority in implementing GAP processes is one example. Business owners frequently use ineffective and casual social media, negating the objective. In addition, despite understanding the fertiliser ingredients, Peng et al. (2019) suggest that independent smallholders have insufficient knowledge of the symptoms of nutrient insufficiency in fertiliser. It indicates that smallholders must be aware of appropriate fertiliser application methods to maximise production and realise this goal. Smallholders must plant only high-yielding clones (Kushairi et al., 2019a).

The MSPO auditor's findings show that independent smallholder farmers cannot complain about the programmes held even with documented handbooks in implementing the MSPO process. Moreover, some growers have still not yet understood GAP concepts and lack concern about species and habitats. It includes the need for conservation, such as protected species and information on high biodiversity habitats. It falls under the principles to uphold in the MSPO certification. In addition, some SPOC members of smallholders do not keep records of the operation required by the MSPO Compliance Certification Regulation for record-keeping and traceability objectives. It is about the recognition criteria in the certification process of MSPO. The seven principles in MSPO encompass Management commitment and responsibility, Transparency, Compliance to a legal requirement, Social responsibility, health, safety and

employment condition, environment, natural resource diversity and ecosystem, best practices, and development of new plantings (Senawi, Rahman, Mansor, & Kuntom, 2019).

METHODOLOGY

It is based on library research contributing a review of the literature on the field in the oil palm industry, including employment of various databases available in the industry. The dimensions include the oil palm industry content, the domains of competitiveness, Islamic business ethics (IBE) and other related fields.

DISCUSSION AND FINDINGS

When discussing the supply chain's commercial activities, the requirement for ethical behaviour to be incorporated into the business becomes evident (Rohmah, Mustaniroh, Deoranto, & Nharawasthu, 2019). It is a concern of Islamic business ethics (IBE). The *rabbaniyah, akhlakhiyah, insaniah,* and *wassatiyah* schools of thought, which convey the meaning of godly in nature ethics, humanism, and leading a balanced life, are essential for the spirituality aspects. There is a need to apply a moral filter, such as the criteria of *amanah, 'adil, ikhlas,* and *sidqun,* which stand for trustworthiness, justice, sincerity, and truthfulness in Islamic ethics (Ahmed Shaikh, Adib Ismail, Ghafar Ismail, Shahimi, & Hakimi Mohd Shafiai, 2017; Alam Choudhury, 2012; Chapra, 2009; Rice, 1999). The absence of these attributes also adds to a loss of dignity, trust, bargaining power, and competitiveness among supply chain participants (Ndlovu & Alagidede, 2018; Pakdeechoho & Sukhotu, 2018; Porter, 1980). It is linked to the concept of sustainability. When a business loses its bargaining power, it draws new customers or buyers and market players along the supply chain (Nag, Han, & Yao, 2014; Ndlovu & Alagidede, 2018; Porter, 2010).

Smallholders can ensure their long-term sustainability by complying with the code of practices (COPs), as in, good agricultural practice (GAP) (Che Omar et al., 2018; Jamian et al., 2014). The inconsistency in production process execution will most likely impact FFB supply chain flow in the industry (Oghenewiroro Odu, 2017). Smallholders in the Smallholders Palm Oil Cluster, or SPOC, are involved, with each group acting as a commercial entity. As a result, a cluster's poor performance reflects decreased competitiveness among other groups, reducing the ability to purchase field input material and resulting in low yield productivity(Awad & Amro, 2017).

In a nutshell, no such reference on sustainability, competitiveness, and Islamic business ethics in the oil palm industry has been found in previous research. Scholars are more inclined to describe a company's entire activities, but oil palm is not highlighted nearly enough. The parameters affecting TUNAS agents' efficacy and competency in extension work, yield productivity, and oil extraction rate (OER) attained are all related to the sustainability issue that is currently being debated. In this context, a model of awareness in the oil palm business that includes quality sustainability, competitiveness, and ethics is unavoidable.

The background factors of this study contribute to the palm oil industry's long-term sustainability. It is enriched by global and domestic drive, as well as empirical evidence from the sector. Figure 1.0 depicts the Oil Palm Supply Chain and Sustainability. It examines the factors that influence the competitiveness of downstream and upstream global market participants, smallholders, and other involved supply chain parties. It connects to the importance of infusing Islamic business ethics (IBE) into everyday field management to transform smallholder farmers into protracted FFB suppliers. It attaches good agricultural

practices (GAP) to competitiveness among the SPOC (Sustainable Palm Oil Cluster) cluster members. Smallholders who are self-sufficient are one type of cluster member. MPOB TUNAS' competency and effectiveness have improved by spreading knowledge and technological innovation to smallholders. It necessitates a model of awareness of the considerable efforts to link good agricultural practices with long-term sustainability in the oil palm industry's production of FFB.

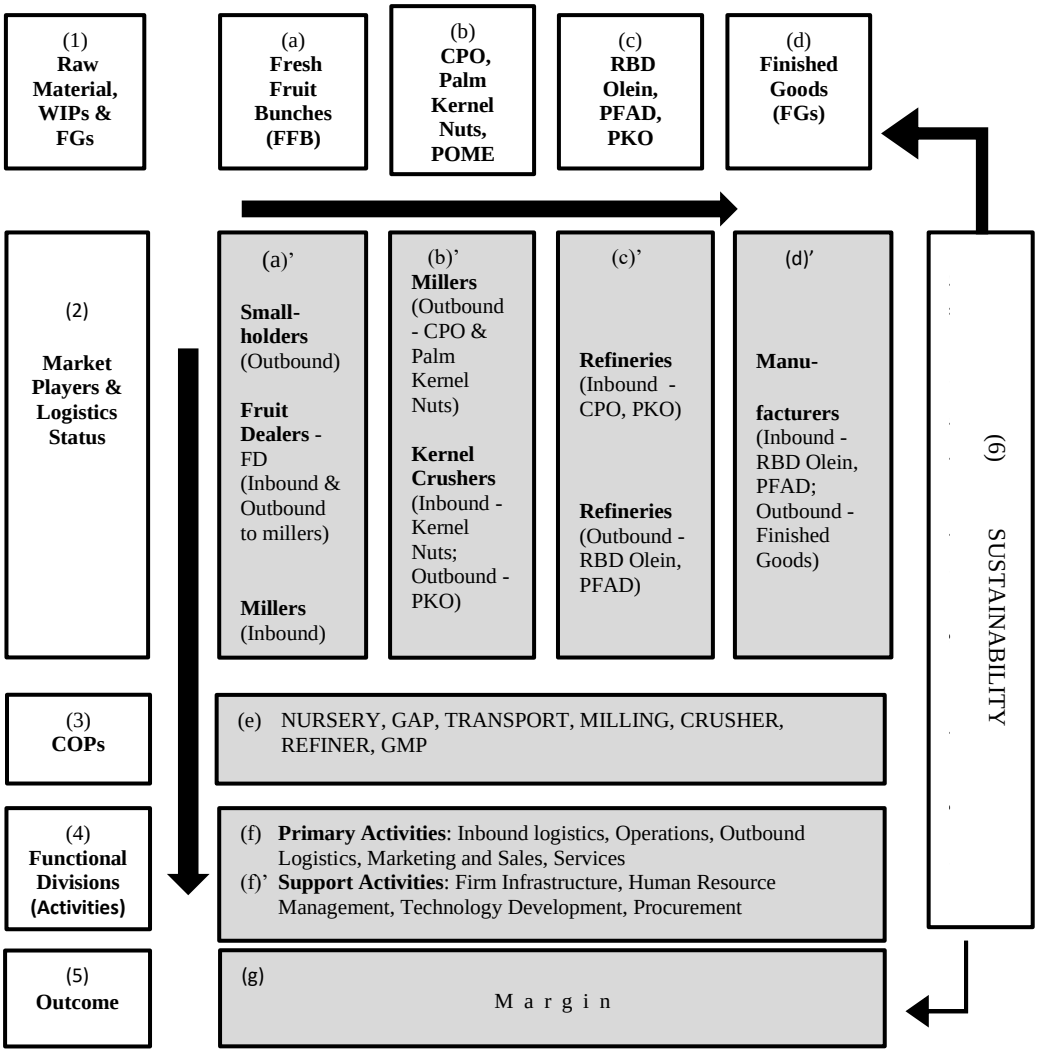
Oil palm must be produced following the Sustainable Palm Oil in Malaysia (MSPO) criteria, known as good agricultural practice (GAP). MSPO (Malaysian Sustainable Palm Oil) is an international accreditation for the Malaysian version of Roundtable Sustainable Oil Palm (RSPO). It avoids involving palm oil producers in deforestation, displacement, and natural habitat activity of endangered animals, local communities, forced labour, and health concerns. The anti-palm oil campaign is a concerted effort by customers in the EU and other world areas to "create a buying behaviour" that is less advantageous to global producers. The key targets are Indonesia and Malaysia. Indonesia is the world's largest producer of palm oil, accounting for 80 per cent of global production.

The Malaysian Palm Oil Board (MPOB) produces a code of practices (COPs) to synchronise operations in the field from upstream to downstream in the supply chain to ensure compliance with the RSPO. Each stage of the supply chain has its own set of COPs, such as planting and harvesting, governed by GAP. FFB's transportation is coded TRANSPORT, while millers' transportation is coded MILLING. It is the challenge that market participants in the supply chain encounter when dealing with sustainability. It is shown in Figure 1.0: Oil Palm Supply Chain and Sustainability. The picture depicts market players' positions, the code of practices, activities, the margin target, and the challenges in attaining sustainability.

Numerous studies on competitiveness have been conducted in various contexts and issues using diverse approaches, resulting in practical industry implications. There is also extensive coverage of Islamic business ethics (IBE) related to organisational performance in various disciplines, such as Islamic banking, undertaken by Muslims and non-Muslims alike. In addition, awareness research connects different antecedents and outcomes, working as a mediator or moderator in various industries. Likewise, the term "sustainability" is frequently employed. It is used in numerous disciplines, including social science and technical research, and it remains a popular research platform for academics. There is, however, no study that combines competitiveness, Islamic business ethics (IBE), and awareness of oil palm sustainability in a single study. Research across the board has the respective domains to be operationalised and generalised accordingly.

Palm oil export markets from producing countries are developing globally. It affects the competitiveness of smallholders in Malaysia and Indonesia. The EU issue impacts stock diversion to a marketplace. However, smallholders do not regard it as a threat. It is essential to be aware of this as all industry players, including smallholders, are equally essential in the empirical contribution to the economy, regardless of operational performance (Indounas, 2018; Srivastava, Iyer, & Rawwas, 2017). It is linked to a lack of awareness of the competitiveness in the production of the FFB. Raw material quality, innovation, negotiating power, and farm management are only a few factors to consider, yet smallholders are largely unaware of them (Che Omar et al., 2018; Chong Tan & Oly Ndubisi, 2014; Rohmah et al., 2019). Small-scale farmers require assistance in overcoming their ignorance, which is jeopardising their livelihood. That is a training model for them to comprehend how understanding its significance in their lives can benefit them. As smallholders are also members of the SPOC's clusters,

competing for good-quality FFB at reasonable costs is easier. It is accomplished by strictly following good agricultural practices (GAP) (Ibragimov, Sidique, & Tey, 2019; Kushairi et al., 2019a)



Key:
FFB – Fresh Fruit Bunches
CPO – Crude Palm Oil
POME – Palm Oil Mill Effluent
RBD Olein – Refined, Bleached, and Deodorised Olein
PFAD – Palm Fatty Acid Distillate
WIP – Work-In-Process
PKO – Palm Kernel Oil
COP – Code of Practices
GAP – Good Agriculture Practice
GMP – Good Manufacturing Practice
FGs – Finished Goods

Source: Developed by researcher for the current study (Adapted from Michael Porter (1980) & Pacheco et al.,(2018)

Figure 1.0: The Oil Palm Supply Chain and Sustainability

Insincerity in weighing FFB and the tempering of weight on FFB by pouring water and sprinkling sand demonstrates the lack of ethics. In the industry, the practice is recognised as a typical game. It continues even though the authorities have imposed a penalty or even revoked the relevant licence. However, this aspect of the operation can be mitigated by imparting ethical practices, particularly ones found in the Islamic faith. The acronyms *amanah, akhlak, ikhlas,* and *sidqun* stand for trust, ethics, sincerity, and truthfulness, respectively, in the IBE. As a result, IBE must be aware of the smallholders driving the supply chain towards sustainability

and competitiveness.

The MPOB's programmes are similarly not well understood. It is a lack of communication and the inability to keep up with the TUNAS officials' practises (Ibrahim et al., 2018). Knowledge transfer (KT) and technology transfer (TT) are two information distribution services offered by MPOB's TUNAS branch in the sector (Dzogbenuku & Keelson, 2019; Melan, 2019). The TUNAS officials' qualifications determine the programme's effectiveness. As a result, there will be a need to raise service awareness. It ensures that the sustainability criteria are met in their entirety, allowing it to compete. MPOB requires a good understanding of competitiveness to train smallholders in the transformation of MSPO through GAP.

Smallholders' livelihoods are jeopardised by a lack of industry knowledge and an inability to adhere to the required code of practices (COP). To enhance competitiveness for the sustainable production of FFB among smallholders of oil palm farmers in Malaysia, a training model on awareness of good agricultural practices (GAP) is needed. The model focuses on the dimensions of competitiveness and Islamic business ethics (IBE) and the long-term sustainability of the oil palm industry. It is known as the SAT-Model (Smallholder Awareness Training Model).

CONCLUSION AND FUTURE AGENDAS

The topics covered aspects of the global situation as well as domestic motivations. The worldwide factors included the EU's promise to phase out biodiesel, the US and other nations' criticism of oil palm consumption, primarily focusing on the ecosystem and environmental damage, displacement of endangered species and local communities, forced labour, and finally, health concerns. Smallholders' competitiveness is another issue to consider. It is concerned with low FFB yields, degraded FFB, a lack of knowledge of GAP/RSPO/MSPO, unethical environmental activities, a lack of knowledge of MPOB's Code of Practices (COPs), and a lack of understanding of the Malaysian Sustainable Palm Oil (MSPO) law. MSPO discusses unethical activities that harm the environment, society, and ecosystem and Islamic business ethics (IBE), focuses on the comprehension of the Islamic school of thought, ethical criteria, and the prevalence of malpractices in the trade. It comes after a debate on the difficulties smallholders face in adhering to good agricultural practices (GAP) to produce sustainable oil palm fresh fruit bunches (FFB).

The concerns and constraints highlighted in this study serve as a springboard for developing a model for the authority to train smallholders effectively. Given the infrastructure and outstanding preparedness of the *Tunjuk Ajar and Nasihat* (TUNAS) programmes, an awareness training model is required, which the researcher is also pursuing. The issues and challenges discussed in this paper act as a feeder to developing a model for the authority to train the smallholders effectively. Given the infrastructure and the excellent preparedness in the *Tunjuk Ajar and Nasihat* (TUNAS) programmes, what it needs is an awareness training model. It is also in the process taken by the researcher.

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