

ANALYSIS OF FUEL RETAILERS' PERSPECTIVE ON THE USE OF MEASURING MACHINES AND THE ACCURACY OF THE DOSE ACCORDING TO THE CONCEPT OF MABI'

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Abstract

In buying and selling transactions, *Mabi'* is the core object involved between the seller and the buyer. *Mabi'* can be goods offered by the seller and paid for by the buyer with money or a certain value. Sellers must also establish clear procedures, such as proper measurements or scales, to ensure the product has resale value and is attractive to buyers. The focus of this research is the use of electric measuring devices in retail fuel sales at gas stations, especially in filling Pertalite and Pertamax. This research employs an empirical juridical approach, where interviews are a primary method for gathering relevant data. The research results show that accurate measuring tools, such as a 3.5-meter-long hose, are crucial for ensuring accurate measurements in retail fuel dispensing. Traders need to know the accuracy of the measuring equipment used so that retail fuel filling is conducted within the provisions of the measuring machine. In this case, *Mabi'* not only involves sellers and buyers, but also includes the role of supervisor or regulator to ensure transactions are carried out fairly and according to standards. Honesty, integrity, and accountability are crucial for maintaining the quality and accuracy of retail fuel buying and selling transactions, which ensures buyer satisfaction and seller profits.

Keywords: Banda Aceh, Fuel Retailers, Gas Station, Islamic Economic Law, *Mabi'* Concept

Abstrak

Dalam transaksi jual beli, *Mabi'* adalah objek inti yang terlibat antara penjual dan pembeli. *Mabi'* dapat berupa barang yang ditawarkan oleh penjual dan dibayar oleh pembeli dengan uang atau nilai tertentu. Penjual juga harus menetapkan prosedur yang jelas, seperti ukuran atau timbangan yang tepat, untuk memastikan produk tersebut memiliki nilai jual kembali dan menarik bagi pembeli. Fokus penelitian ini adalah penggunaan alat ukur elektrik pada penjualan bahan bakar eceran di SPBU, khususnya pada pengisian Paltalite dan Pertamina. Penelitian ini menggunakan pendekatan yuridis empiris, dimana wawancara merupakan metode utama untuk mengumpulkan data yang relevan. Hasil penelitian menunjukkan bahwa alat ukur yang akurat, seperti selang sepanjang 3,5 meter, sangat penting untuk memastikan pengukuran yang akurat dalam pengeluaran bahan bakar eceran. Pedagang perlu mengetahui keakuratan alat ukur yang digunakan agar pengisian bahan bakar eceran dilakukan sesuai dengan ketentuan mesin pengukur. Dalam hal ini, *Mabi'* tidak hanya melibatkan penjual dan pembeli, tetapi juga mencakup peran pengawas atau regulator untuk memastikan transaksi dilakukan secara adil dan sesuai standar. Kejujuran, integritas, dan akuntabilitas menjadi hal yang krusial untuk menjaga kualitas dan akurasi transaksi jual beli BBM eceran, yang menjamin kepuasan pembeli dan keuntungan penjual.

Kata kunci: Banda Aceh, Pengecer Bahan Bakar Minyak, SPBU, Hukum Ekonomi Islam, Konsep *Mabi'*

INTRODUCTION

In a sale and purchase transaction, the buyer needs the object of the transaction to fulfil the needs that are the substance of the transaction. For this reason, the seller must be able to meet consumer needs as an absolute requirement to ensure that the products they sell will have buyers, thereby benefiting from the sale and purchase transactions they carry out. To meet the needs of consumers, the seller must also establish a standard for the products they sell, both in terms of product quality and sales procedures, through the use of standard sizes, such as doses, scales, or other units, that enable accurate representation of product quantities in purchases.¹

Some transaction products that are *mabi'* in buying and selling have two (2) forms, namely goods from the seller and money or a specific value from the buyer. In this sale and purchase transaction, the product being traded is *mabi'* as a pillar in the sale and purchase transaction. The general rule about *mabi'* is that everything that is made. *Mabi'* from the seller is the goods needed by the

¹ Department of National Education, *Big Indonesian Dictionary* (Jakarta: PT Gramedia Pustaka Utama, 2011) pp. 58.

buyer and is transacted at a certain price. At the same time, *mabi'* from the buyer is the price that must be paid to the seller for a particular value.²

The concept of *mabi'* can be seen in terms of the provisions made or practised by the sellers and buyers based on existing provisions. In buying and selling, the object (*mabi'*) of the transaction becomes the property of the buyer. The money (*tsaman*) becomes the property of the seller, the buyer becomes the owner of the object (*mabi'*) with a valid sale and purchase contract, and the seller has the right to control the money, which is the price of the buyer's payment.

When purchasing this object, the seller must be able to specify the unit of measurement used for the object being traded, such as litres, kilograms, or cubic units, as the unit of measurement in the sale and purchase transaction will affect the value or price that the buyer must pay. For this reason, the value of an item's size must be clear at the time of sale and purchase, such as when purchasing liquid goods in the form of fuel oil, cooking oil, water, and others. The unit of measure in fuel sales is usually litres, which directly affects the unit of measure purchased by consumers, such as when buying Pertalite at gas stations, where the unit price of a litre is IDR 10,000. In contrast, at retail outlets, the unit price of a liter ranges from IDR 12,000 to IDR 14,000.³

In the sale of oil at gas stations, Pertamina, as a state-owned company, has utilized structured standards and mechanisms to measure the accuracy of oil measuring instruments, ensuring that gas stations do not make deviations that can affect the amount of fuel purchased by consumers. To ensure the process of buying and selling transactions at this gas station is protected, the consumer is safeguarded against fraud committed by the gas station's owner or management. Meanwhile, in the reality of people's lives today, fuel is not only traded at gas stations but also sold in various places such as kiosks, workshops, and others.⁴ The sale of oil in unofficial places also uses a standard unit of fuel purchase, so that consumers will pay the price according to the number of orders they buy.⁵

² Hendi Suhendi, *Fiqh Muamalah*, (PT: Raja Grafindo Persada Jakarta: Rajawali press, 2014) p.68.

³ Neni Sri Imaniyati, *Economic Law and Islamic Economics in Development*, (Bandung: Mandar Maju, 2002), p. 169. 169.

⁴ Abi 'Abdillah Muhammad bin Ismail Ibn Mughirah Ibn Bardazabah Al Bukhari Al Jazayi, *Shahih Bukhari Juz 2*, (Egypt: Dar Al Fikr, 1994), p. 168. 168.

⁵ M. Abdul Mujieb Maburri Tholhah Syafi'iyah, *Dictionary of Fiqh Terms*, (Jakarta: PT. PustakaFirdaus, 1994), p. 310

In this case, the seller must still comply with the provisions and standards regarding measuring instruments or doses in the sale transaction of particular objects, such as fuel by fulfilling all the provisions of the measure, even though the tools used are different, such as mini-poms carried out by fuel traders in Syiah Kuala sub-district. The Government of Indonesia has established provisions regarding the accuracy of measuring and measuring scales as an effort to protect consumers from fraud committed by sellers.⁶

For this reason, the government has established the Metrology Agency as an institution that conducts re-measurement or recalibration of these scales and measures. Conceptually in muamalah fiqh, the scholars have discussed the terms of sale and purchase, especially in the aspect of the conditions of the object of sale and purchase transactions that the seller must fulfill to fulfill the provisions of this condition and avoid *fasid*.

Terms of the pillars of buying and selling in Islam, according to scholarly opinion. The law of Muamalah (buying and selling) is permissible (allowed) as has been agreed upon by the majority of fiqh scholars in their books by establishing a fiqhiyah rule which reads "*Al-Ashlu Fil Asy-ya-i Wal A'yani Al-Ibahatu*". This rule is based on several shar'i arguments, including the words of Allah:

هُوَ الَّذِي خَلَقَ لَكُمْ مَا فِي الْأَرْضِ جَمِيعًا ثُمَّ اسْتَوَىٰ إِلَى السَّمَاءِ فَسَوَّاهُنَّ سَبْعَ سَمَاوَاتٍ وَهُوَ بِكُلِّ شَيْءٍ عَلِيمٌ
Meaning: "It is He (Allah) who created for you all that is on earth, then He went on to create the heavens, then He completed them into seven heavens. He knows all things" (QS. Al-Baqarah: 29).

And buying and selling (trade) is included in the category of muamalah that Allah legalizes, as He says:

الَّذِينَ يَأْكُلُونَ الرِّبَا لَا يَقُومُونَ إِلَّا كَمَا يَقُومُ الَّذِي يَتَخَبَّطُهُ الشَّيْطَانُ مِنَ الْمَسِّ ذَلِكَ بِأَنَّهُمْ قَالُوا إِنَّمَا الْبَيْعُ مِثْلُ الرِّبَا وَأَحَلَّ اللَّهُ الْبَيْعَ وَحَرَّمَ الرِّبَا فَمَنْ جَاءَهُ مَوْعِظَةٌ مِنْ رَبِّهِ فَانْتَهَىٰ فَلَهُ مَا سَلَفَ وَأَمْرُهُ إِلَى اللَّهِ وَمَنْ عَادَ فَأُولَٰئِكَ أَصْحَابُ النَّارِ هُمْ فِيهَا خَالِدُونَ

Meaning: "Those who eat (deal in) usury cannot stand except as one who staggers because of a demon. This is because they say that buying and selling is the same as usury. But Allah has justified buying and selling and forbidden usury. If a warning from his Lord comes to him (concerning usury), then he stops, and what he used to earn is his, and it is up to Allah. Whoever repeats (the usury

⁶ Wahbah Az Zuhaili, *Al Fiqh al Islami wa Adillatuh Juz 4*, (Bairut: Dar Al Fikr, 1989), pp. 650

transaction), they are the inhabitants of Hell. They shall abide therein". (Q.S. Al Baqarah: 275).

Al-Hafizh Ibn Kathir, in his interpretation of the above verse, said: "What is beneficial to His servants, Allah permits, and what is harmful to them, He forbids."⁷ From this verse, scholars derive a rule that all forms of buying and selling are permissible, except those prohibited by Allah and His Messenger. That is, any sale and purchase transaction that does not meet the legal requirements or is prohibited by the elements of the sale and purchase.⁸

The Shafi'i Mazhab also revealed that a sale and purchase contract is not valid unless it is accompanied by a spoken shigat (Ijab Qabul). The requirements for Shighat according to the Shafi'i Mazhab are that the buyer and seller must meet face-to-face and/or show the Shighat of the contract to the person with whom they are transacting, namely, it must be in accordance with the intended recipient. Thus, it is not valid to say, "I sell to you". It is not permissible to say, "I sell to Ahmad", even though the buyer's name is not Ahmad.⁹

Buying and selling are proof that humans are social creatures, as the sale and purchase contract demonstrates that humans, in meeting their needs, cannot be separated from other humans. Selling and buying are an agreement to exchange objects or goods of value voluntarily between the two parties, one of which receives the objects and the other party accepts them in accordance with the agreement or conditions that Shara has justified and agreed upon.

In buying and selling activities, the parties to the sale and purchase must conduct themselves in a honest and fair manner. Evidence of honesty in buying and selling is the value of the scales, and the right size and standards must be prioritized. The balance sheet is a symbol of justice and truth, as mentioned in the Qur'an, which instructs us to measure and weigh honestly using the correct measure and balance. Thus, in buying and selling, one must apply justice, one of which is perfecting the measure and scale, not reducing the measure or scale.

By consistently applying the principles of fairness and honesty in buying and selling transactions, retailers can foster stronger relationships with consumers and contribute to a healthier market environment.

⁷ Muhammad Bakar Ismail, *Qawaid Al Fiqhiyah Baina Al Ashalah Wa at Tawjih* (Cairo: Darul Manar, 1997), p. 108

⁸ Juhana S. Praja, *Philosophy of Islamic Law* (Bandung: LPPM-UIB, 1995), pp. 113-114

⁹ idayat al-Mujtahid (Volume 2, pp. 175-180) which explores buying and selling in various madhhabs, including Shafi'i.

DATA AND METHOD

This research uses a qualitative approach with a descriptive-analytical research type. The qualitative approach was chosen because this research aims to find out about the use of measuring machines and the accuracy of the measure according to the concept of *mabi'*, especially from the perspective of Islamic law. The data sources in this study include primary data, which is data obtained directly by researchers from the original source. Primary data is often referred to as new data or original data that is up-to-date. To collect primary data, researchers extracted information directly through various methods, such as observation, interviews, and documentation. This approach ensures that the data obtained is highly relevant and accurate for the research needs. Secondary data refers to information received or collected by researchers from existing sources. This data can be accessed through various sources, including books, reports, and journals. In this study, secondary data serves as supporting literature.¹⁰

RESULTS AND DISCUSSION

A. The Concept of *MABI* in Buying and Selling

1. The use of electric measuring devices in the sale of Peralite and Pertamina by retailers.

This study aims to examine how the concept of *Mabi'* (goods traded in buying and selling transactions) is applied in setting retail fuel prices at mini-poms in Syiah Kuala sub-district and how this is relevant to the standardization and applicable regulations. Then, the measuring device used by the seller must be accurate in the measurement. To determine the quantity, the buyer must know how many measuring instruments the measuring machine uses for filling the fuel.

One of the main findings in this study is that the sale of gasoline station/retail fuel in the Syiah Kuala sub-district is highly dependent on its quality. This reflects the application of the principle in *mabi'*, where the goods traded must be precise in quality, and the price must be proportional to the quality offered. The owner of the gas station explained that the oil he sells is of premium quality, similar to the oil sold at most gas stations. The quality of oil at petrol stations and gas stations is the leading indicator in determining the

¹⁰ Interview is a series of activities related to library data collection methods, reading, and recording and processing research materials.

selling price, and this factor is closely related to the *mabi'* principle, which prioritizes clarity in buying and selling transactions.

Pricing based on this quality is in line with Islamic economic theory, which emphasizes the importance of clarity of traded goods (*MABI'*) in transactions. As explained in *Fiqh Muamalah*, in every sale and purchase transaction, buyers must know clearly what they are buying, including the quality of the goods, so that there is no element of fraud (*gharar*) or injustice in the transaction.¹¹ In the context of *Mabi'*, which means the goods exchanged in a sale and purchase transaction, this concept ensures that the quality of the traded goods has a clear and measurable standard. In this case, the oil at the fuel station or gas station as *mabi'* (traded goods) must meet the quality requirements that are acceptable to the buyer and in accordance with the price offered. This concept encourages transparency between sellers and buyers in fuel purchase transactions.

In the context of *mabi'*, which requires the traded goods to meet the agreed quality, this also reflects the application of the principles of transparency and fairness in Islamic muamalat. Therefore, determining the price of oil at mini-retail stations and gas stations based on the quality of the goods, which is clear and measurable, without any fraud or cheating, is crucial in maintaining justice for both parties in the transaction. This is directly related to the concept of *mabi'*, which requires the quality of goods traded to have clear standards.¹² In this context, the standardization of oil quality becomes a legitimate basis for determining the selling price, as better quality entails higher production costs, which in turn affect the market price.

Overall, the results of the interviews indicate that retailers of mini pom fuel and gas stations in the Syiah Kuala sub-district are strongly influenced by the quality of the products they produce and sell. This shows the application of the concept of *mabi'* in buying and selling transactions, where the quality of the goods (BBM) being traded is the main factor in determining the selling price. The standardization of quality applied by fuel mini-retailers, in accordance with government regulations, ensures that the goods sold meet the desired quality criteria, and the price offered reflects this quality. Concerning Islamic muamalat, the application of the *mabi'* principle illustrates that the sale

¹¹ Fikri, M. F. *Price stability in traditional markets from the perspective of Law No. 8 of 1999 concerning Consumer Protection and Fiqh Muamalah: Study in Sumenep District* (Doctoral dissertation, Maulana Malik Ibrahim State Islamic University).(2024).

¹² Aruna, M. A. *The Sale and Purchase Transaction of Second Car Tires in the Perspective of Mabi'on Akad Musawamah (Sudi Case of Safaraz Tire Shop in Batoh)* (Doctoral dissertation, Ar-Raniry State Islamic University).(2023).

and purchase of fuel must be carried out in accordance with the principles of fairness and transparency, ensuring that the sale of retail fuel at mini-stations and gas stations is conducted at the set price. Thus, this study shows that the application of Mabi' in the sale and purchase of retail fuel at mini-poms and gas stations in Syiah Kuala sub-district is not only relevant to the quality standards set by the government, but also in line with the principles of Islamic economics which emphasize fairness, transparency, and sustainability in trade transactions.

2. Rules Governing Merchants to Fill Retail Fuel Using Measuring Instruments

In Indonesia, retail fuel filling using measuring devices must comply with various rules set by the authorities, including the government and related institutions. These rules aim to ensure fairness, safety, and security in fuel transactions, as well as to ensure that consumers receive the correct amount of retail fuel for the amount they pay. Here are some of the rules that govern retail fuel traders:

a. Regulation of the Minister of Trade (Permendag)

One of the essential regulations governing measuring instruments in the retail fuel trade is the Minister of Trade Regulation (Permendag). In this case, Permendag regulates the standards that must be met by measuring instruments used by retail fuel traders, such as retail gasoline pumps or other volume measuring devices.¹³

Some of the points regulated in the Permendag include:

- **Accuracy of Measuring Instruments:** Measuring instruments used to fill retail fuel must be calibrated correctly and accurately, ensuring that the volume of retail fuel received by consumers matches that recorded on the measuring instrument.
- **Inspection and Testing of Measuring Instruments:** Measuring instruments used for retail fuel filling must be tested and certified by authorized parties, such as the Metrology Office or other relevant institutions.
- **Use of Authorized Measuring Instruments:** Only calibrated and registered measuring instruments are allowed to be used for retail fuel filling transactions.

¹³ Regulation of the Minister of Trade Number 2/M-DAG/PER/1/2014

b. Indonesian National Standard (SNI)

There are standards governing the specifications and quality of measuring instruments used in retail fuel filling, which refer to the Indonesian National Standard (SNI). The SNI for measuring instruments includes gas pumps or volumetric meters used by traders. These measuring instruments must meet technical requirements, such as:

- Accuracy of fuel volume measurement.¹⁴
- Allowable error tolerance in measurement.
- Safety and protection against leakage or damage that could harm consumers or the environment.

c. Legal Metrology Regulation

The Legal Metrology Regulations govern the use of measuring instruments in trade transactions. In Indonesia, the Directorate General of Metrology of the Ministry of Trade is responsible for ensuring that measuring instruments used for transactions such as retail fuel filling comply with applicable regulations and are calibrated to the proper standards.¹⁵

Matters regulated under this regulation include:

- Periodic inspection and testing of measuring instruments by authorized agencies.
- Certification of measuring instruments used in transactions.
- Routine maintenance and recalibration of measuring instruments.

d. Misuse of Measuring Instruments

Retail fuel traders who deliberately use inappropriate or improperly calibrated measuring instruments may be subject to administrative and criminal sanctions, depending on the level of error or fraud committed. This is to protect consumers from losses due to fuel filling that does not match the volume stated on the measuring instrument.¹⁶

e. Supervision and Control

The government, through relevant agencies such as the Trade Office, the Ministry of Trade, and metrology agencies, will conduct routine supervision and inspection of traders selling retail fuel. Retail pump owners must ensure

¹⁴ SNI that regulates the specifications and quality of measuring instruments in trade, including fuel, ensuring that the measuring instruments used meet the accuracy criteria in accordance with applicable regulations and standards.

¹⁵ Law No. 2 Year 1981 on Legal Metrology

¹⁶ Presidential Decree No. 16 Year 2012 This Presidential Decree regulates policies on the supply, distribution and supervision of fuel in Indonesia, which includes supervision of fuel filling transactions, including the use of legal and properly calibrated measuring instruments.

that the measuring instruments used are always in good condition and calibrated according to applicable standards.¹⁷

f. Sanctions for Violations

Suppose a trader is proven to use a measuring instrument that is not calibrated or not in accordance with existing regulations. In that case, the trader may be subject to various sanctions, such as:¹⁸

- Administrative fines.
- Temporary closure or revocation of business license.
- Criminal prosecution if proven to have committed fraud or systematically harmed consumers.

g. Provision of Certificates and Test Marks for Measuring Instruments

Each measuring instrument used in retail fuel filling must be equipped with a certificate stating that the instrument has been tested and meets applicable standards. This certificate is issued by an authorized agency, such as the Directorate of Metrology or an institution with the authority to measure and test measuring instruments.¹⁹

3. Accuracy of Electric Measuring Device on Fuel to Avoid Farid Sale and Purchase Transaction

In this interview, the seller stated that measurement accuracy in the process of selling fuel oil (BBM) must be based on the accuracy of the measurement or quantity, adhering to predetermined accuracy standards. This accuracy is crucial to ensure that the amount of fuel received by the buyer matches the amount paid. The seller explained that to achieve the accuracy of the measurement, the measuring machine used must have a high level of accuracy and be certified to the applicable regulations.²⁰

In addition, the buyer is also expected to understand how the measuring machine works, including its level of accuracy, to ensure that the fuel filling is carried out correctly and transparently. Thus, communication between the seller and buyer regarding the accuracy of this measurement is essential. Buyers have the right to know the level of accuracy of the measuring

¹⁷ As the business entity responsible for fuel distribution in Indonesia, Pertamina has regulations related to fuel distribution and retail filling that relate to measuring instruments used by agents or retailers.

¹⁸ This decree further regulates the technical provisions and certification of measuring instruments used in trade transactions, including for retail fuel filling.

¹⁹ Minister of Trade Regulation No. 2/M-DAG/PER/1/2014

²⁰ Interview with Nurdin, a gas station trader in Blang Krueng, Darussalam District, on April 18, 2023.

instrument used in the fuel filling process, to prevent misunderstandings or losses due to incorrect measurements.²¹

Based on the interview results, sellers emphasized the importance of accuracy in the process of selling fuel oil (BBM). This accuracy refers to the accuracy of the measure or quantity of fuel given to the buyer. This accuracy must be per predetermined standards, both in terms of government regulations and the specifications of the measuring instruments used. The seller explained that this accuracy is one of the primary keys to maintaining the buyer's trust and ensuring that neither party experiences losses.²²

The seller explained that in practice, the measuring machine used in fuel filling must have a high level of accuracy and comply with applicable standards. The machine undergoes a periodic calibration process, carried out by authorized parties, such as metrology institutions, to ensure that its measurements remain accurate. This calibration ensures that the machine consistently provides precise measurement results every time it is used in a fuel filling transaction.²³

Furthermore, the seller also emphasized the buyer's role in ensuring the accuracy of the measurement. Buyers are expected to understand how the measuring machine works and be aware of the level of accuracy it provides. With this understanding, buyers can be more cautious and vigilant during the fuel-filling process. If there is a difference or discrepancy in the amount of fuel received, the buyer can immediately submit a complaint to the seller so that the problem can be followed up.

The seller also added that transparency in the use of measuring instruments and information on their accuracy is the right of every buyer. This information helps buyers determine whether the amount of fuel received matches the amount paid. Thus, the aspects of fairness and transparency in the transaction can be well maintained.

Additionally, the seller emphasized that a measurement mismatch caused by an inaccurate machine can have a negative impact. For example, if the measuring machine is not up to standard or is damaged, the buyer may receive less fuel than they are entitled to, despite having paid the prevailing

²¹ Interview with the owner of mini gas station/retail fuel in Syiah Kuala Subdistrict on November 23, 2024

²² Interview result with the owner of mini gas station/retail fuel on November 23, 2024

²³ Interview result with the owner of mini station/retail fuel on November 27, 2024

price. This situation will certainly harm consumers and potentially damage the seller's reputation.

Therefore, both sellers and buyers have a responsibility to ensure that the fuel measurement process runs correctly. The seller must ensure that the measuring device is in good working condition and has been regularly calibrated. At the same time, the buyer is expected to have sufficient knowledge about the accuracy of the measuring machine. With this collaboration and understanding, the fuel transaction process can run transparently, fairly, and in accordance with applicable standards.

Overall, the interviews confirmed that accuracy in fuel measurement is a crucial aspect. The seller must maintain the accuracy of the measuring instrument, while the buyer has the right to obtain information about the accuracy. By doing so, both parties can avoid potential problems, such as measurement discrepancies or fuel fraud.²⁴

In the Big Indonesian Dictionary, calibration is a sign that states the scale, calibration (Calibration) is the process of checking and adjusting the accuracy of a measuring instrument, to compare the tool with a predetermined standard, and calibration is used to ensure that the measurement results are accurate and comply with the standard.²⁵ Suppose the measurement results do not match the comparison. In that case, there is undoubtedly something wrong with the measuring instrument or there is something wrong with the measurement, another function is to maintain the condition of the measuring instrument so that it remains at its standardization point according to the predetermined instrument, in other words calibration is an activity to test the correctness of a measuring instrument to maintain a predetermined quality system, deviating or not between the correct price and the price indicated by the measuring instrument.²⁶

Factors that affect changes in the accuracy of the measuring instrument are very many, one of which is weather, environment, temperature, inspection process, inspection method and many other errors that cause measuring instruments to need to be tested for accuracy, therefore why this activity is regulated in the Law because it relates to consumer protection, considering that refueling at gas stations is something that we often find, maybe even today the

²⁴ Kurniawan, B., & Rahardjo, T. (2023). Challenges in implementing fuel metering technology for retailers in remote areas. *Journal of Technology Innovation*, 9(1), 30-40.

²⁵ Kamus Besar Bahasa Indonesia, <https://icicert.com/pentingnya-kalibrasi-dan-manfaatkalibrasi-alat-ukur/> Accessed on July 7, 2022.

²⁶ <https://www.kompas.com/skola/read/2020/01/07/200000769/pengelolaan-bahanbakar-minyak-bbm-di-indonesia?page=all> Accessed on July 7, 2022.

activity process cannot be separated from our daily lives. Hence, the fuel calibration test at gas stations is critical and mandatory.²⁷

4. Analysis of the Use of Measuring Machines by Fuel Retail Merchants and Adjustment of Measurements and Successes

The use of fuel oil (BBM) is an integral part of economic activities and community mobility. With the increasing demand for fuel, especially on a small and medium scale, retailers are one solution to meet the needs of people in areas that may be difficult to reach by Public Fuel Filling Stations (SPBU).²⁸

However, one of the problems that often arises is the accuracy in measuring the fuel sold. The use of a fuel metering machine is crucial to ensure that the amount dispensed adheres to the government's standards, both in terms of dosage and quantity. In this case, an analysis of the use of measuring machines by fuel retailers, as well as efforts to adjust the measure and quantity, becomes a crucial issue. Discrepancies in fuel dosing can result in economic losses for consumers and erode public trust in retail fuel traders.²⁹

Therefore, this study is essential for understanding the extent of the use of these measuring machines, the obstacles encountered, and the efforts made to ensure accurate dosing. Use of Fuel Measuring Machines. Fuel retailers typically use simple measuring devices, such as jerry cans, liter bottles, or manual measuring funnels, to sell fuel in small quantities. However, to improve efficiency and accuracy, some traders have switched to using automatic or semi-automatic fuel measuring machines.³⁰ Fuel measuring machines have several advantages over traditional methods, including: Higher Precision The measuring machine can provide a more accurate fuel measurement according to the desired volume unit, such as liters or milliliters. This minimizes the risk of fraud or measurement errors due to human factors.

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²⁷ Sulistiadji, Koes, and Joko Pitoyo. "Measuring Tools and Measuring Instruments", (Article), Serpong 2009, pp. 1-2

²⁸ National Standardization Agency (BSN). (2021). *Indonesian National Standard (SNI) on Measuring, Measuring, Weighing, and Equipment (UTTP)*. Jakarta: BSN.

²⁹ Directorate of Metrology, Ministry of Trade. (2022). *Technical Guidelines for the Use and Calibration of Fuel Measuring Instruments for Retail Merchants*. Jakarta: Ministry of Trade of the Republic of Indonesia.

³⁰ Hidayat, M. I., & Fauziah, S. (2021). The influence of the use of measuring instruments on the accuracy of fuel doses at retailers in West Java. *Journal of Economics and Business*, 15(2), 100-110.

³¹ Indonesian Ministry of Trade. (2020). *Government Regulations and Policies Regarding the Use of Fuel Measuring Instruments in Retail Merchants*. Jakarta: Directorate of Domestic Trade.

Time Efficiency The process of filling fuel using a metering machine is faster than the manual method. This enables traders to serve consumers more efficiently, particularly during periods of heightened demand. **Transparency for Consumers:** The fuel metering machine features a digital screen that displays the amount of fuel being dispensed.³² This increases transparency and reduces consumer distrust of the fuel measurement. **Meeting Government Regulatory Standards** The government, through the metrology institute, sets strict rules regarding the use of measuring instruments in trade, including retail fuel sales. The use of certified measuring machines can help traders meet applicable standards.³³

B. Adjustment of Measures and Quantities

The adjustment of measures and quantities in retail fuel trading aims to ensure fairness for both parties, including sellers and buyers. The concept of *mabi'* in the context of retail fuel trading refers to efforts to ensure that the trade transaction process is fair and beneficial for both parties (sellers and buyers). In this case, *Mabi'* is a principle related to justice, accuracy, and honesty in the measurements and quantities used, so that no party is harmed.³⁴ The following is a more detailed explanation of the concept of *Mabi'* in terms of adjusting the measure and quantity of retail fuel:

1. Use of Verified Measuring Instruments:

- *Mabi'* in this case, means that the measuring instruments used by traders must be verified and certified according to applicable standards. This certification is not only an administrative requirement, but also a means to ensure fairness in transactions. By using verified measuring instruments, consumers can feel

³² Ariyanti, R., & Wahyuni, S. (2021). Evaluation of fuel measurement accuracy in retailers in urban areas. *Journal of Technology and Management*, 8(2), 55-62.

³³ Saputra, D. Y., & Wibowo, A. (2020). Analysis of the effectiveness of automatic fuel measuring machines in increasing fuel sales transparency. *Journal of Appropriate Technology*, 7(1), 45-55.

³⁴ Regulation of the Minister of Trade of the Republic of Indonesia No. 11/M-DAG/PER/3/2017 on the Distribution and Distribution of Fuel Oil also regulates the supervision and accuracy in the distribution of fuel to prevent fraud in transactions that harm consumers.

secure that they are buying the right amount of fuel, without any adverse shortages.³⁵

2. Periodic Calibration:

- Mabi' in the context of periodic calibration aims to ensure that the measurement used is always precise and accurate. Regular calibration ensures that measuring instruments do not experience deviations that can harm consumers or traders. With calibration, there is mutual trust between the seller and the buyer, as both are confident that the measure received or given is appropriate and fair.³⁶

3. Education and Training:

- The concept of mabi' in this case relates to efforts to improve traders' knowledge and understanding of the importance of accurate measurement and the correct use of measuring instruments. With adequate education, traders are expected to conduct transactions that are more transparent and do not mislead consumers. This creates a balance in the trading relationship, where both parties clearly understand their rights and obligations.³⁷

4. Supervision and Enforcement of Regulations:

- Strict supervision and enforcement of regulations are part of *mabi'* which aims to ensure that there are no violations in fuel dosing that could harm consumers. The regulations and sanctions applied serve to maintain market fairness and prevent cheating or manipulation by traders.³⁸

Overall, the concept of mabi' in fuel trading relates to the principles of honesty, fairness and accuracy in every aspect of the transaction. This is crucial for creating healthy market conditions, where both sellers and consumers receive their due fairly, without any party being disadvantaged.

³⁵ BPH Migas, Regulations Related to the Distribution and Distribution of BBM

³⁶ John Rawls, *A Theory of Justice*, Harvard University Press (1971).

³⁷ Minister of Trade Regulation No. 11/M-DAG/PER/3/2017

³⁸ The Economic Theory of Justice, developed by John Rawls in his book *A Theory of Justice*, emphasizes fair distribution in society.

CONCLUSION

This explanation discusses the importance of justice and honesty in retail fuel trading transactions in Syiah Kuala District based on the concept of *Mabi'* in Islamic law. Common problems include the inaccuracy of measuring instruments, inadequate supervision, and cheating that harms consumers. Proposed solutions include educating traders and consumers, strict government supervision, the use of standardized measuring instruments, and periodic calibration. The research highlights the government's role through regulation, as well as the importance of trade ethics in maintaining consumer trust. The qualitative approach reveals that the accuracy of measuring instruments and the quality of retail fuel influence prices, thereby supporting the principles of fairness, transparency, and market sustainability as outlined in Islamic teachings.

Solutions include consumer and trader education, strict government supervision, the use of standardized measuring instruments, and the application of the principle of honesty. Thus, buying and selling transactions can occur reasonably and create a healthy and sustainable market environment that aligns with Islamic values. Based on the research conducted, it can be concluded that retail fuel oil (BBM) transactions in Syiah Kuala Sub-district have significant complexity in terms of the application of the concept of *Mabi'* (traded goods) and measurement accuracy. This research reveals that the quality of retail fuel is the main factor in pricing, in line with Islamic economic principles that emphasize transparency and fairness in trade transactions.

An important aspect of this study is the use of electric measuring devices and retail fuel measuring machines, which play a crucial role in ensuring the accuracy of the volume of retail fuel sold. Both gas station and mini station retailers are expected to use measuring instruments that have been regularly calibrated to ensure the accuracy of the measurements and protect the interests of consumers. This periodic calibration not only fulfills technical requirements but also serves as a concrete manifestation of the principles of honesty and fairness in buying and selling transactions. The research also emphasizes the importance of the government's role through metrology institutions in supervising and setting measurement standards. Through strict regulations, the government seeks to protect consumers from potential fraud in retail fuel dosing. This is in line with the concept of *Mabi'* in Islamic law, which prioritizes transparency, clarity of goods traded, and prevents *gharar* (fraud) in transactions.

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