# The Relevance of the Usage of Artificial Intelligence and Machine Learning in Legal Analysis (An Analysis of Legal Provisions in the National Sharia Council Fatwa and Financial Services Authority Regulation Using Plagiarism Checker and ATLAS.ti)

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**ABSTRACT**. This study aims to find out to what extent the relevance of the usage of Artificial Intelligence and Machine Learning can be applied in legal analysis and making legal decisions. This study's employed approach was a content analysis by utilizing two computer programs: Plagiarism Checker and ATLAS.ti. Documents as samples analyzed in this study were the National Sharia Council Fatwa (Fatwa Dewan Syariah Nasional) and the Financial Services Authority Regulation (Peraturan Otoritas Jasa Keuangan). Therefore, in this study, the researcher sought to what extent these two computer programs can be applied in analyzing legal documents and their benefits. The results of this study indicated that both programs could be applied to analyze legal documents more efficiently. For their benefits, these programs can be used (1) to assess the transformation of the fatwa in statutory regulations, (2) to find out the relationship between the National Sharia Council Fatwa and the Financial Services Authority Regulation, and (3) to be as doctrinal analysis instruments.
***Keywords:*** *Artificial Intelligence, Machine Learning, Plagiarism Checker, ATLAS.ti*.

## 1. INTRODUCTION

Over the past few years, technology has a significant impact on legal practice. With the advent of the internet, most Americans have had far greater access to legal information for the last few decades. Legal practice for lawyers has also changed. Previously, lawyers had to do all their legal research using books. Today, however, most of that research can be conducted electronically with legal research databases, such as Westlaw and Lexis Nexis. Some of the recently created technologies have changed the legal profession significantly (Burk, 2020). Furthermore, Wahyu Yun Susanto mentioned that America had implemented technology in conducting a contract analysis using natural language processing – a simulation application – since 2016. Based on his study results, he continued that the technology performs faster contract analysis than five legal analysts (Admin, 2019).

However, it does not mean that Indonesia has not implemented technology in the legal sector. Online Single Submission (BKPM (Badan Koordinasi Penanaman Modal), 2019) and e-Court (Mardatillah, 2018) are two examples of technological reform in this sector. Unfortunately, both are still assistive technologies for legal management, not for legal analysis. The use of legal technology in the legal analysis process had begun to be conducted by the Indonesian Regtech and Legaltech Association, and Jakarta Legal Hackers collaborated with @america in 2019. Three aspects become their focus: (1) increasing understanding and utilization of Regulatory Tech and Legal Tech, (2) providing information regarding the existence of Regulatory Tech and Legal Tech, and (3) becoming a liaison among Regulatory Tech and Legal Tech enthusiasts (Admin IJRS, 2019).

In the field of legal analysis, the Competition on Legal Information Extraction and Entailment (COLIEE) in 2018 introduced two new models in legal document processing. They are a legal case retrieval task (processing two legal documents on the same topic in a judicial institution), and a legal case entailment task (involving identifying paragraphs of an existing case that require a new case decision) (Kim et al., 2018). A processing system for legal case documents that can fulfill both duties will benefit lawyers in finding relevant information to form arguments for their purposes. This task will make their main task easy, which is taking legal cases.In addition, Tran et al. (2020)

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continued that the COLLIEE findings above may summarize documents into a continuous vector space for taking legal cases. Apart from that, this study is a form of development for a machine learning system by designing artificial intelligence for summarizing legal cases on their core components – a phrase assessment framework in building a system for taking legal cases. This study also explores the benefits of using different types of similarity measures in terms of lexical similarity (keyword matching) and semantic similarity (meaning matching). On the one hand, lexical similarities and semantic similarities differ from each other and have the potential to complement each other. Lexical similarity can be found by an approach where the text is compared to a direct form with the possibility of several transformations, such as stemming, lemmatization, or stop-word deletion. High lexical similarity can indicate a high match. However, low lexical similarity has little effect. The results show the importance of using this tool to complete the task of legal cases.

In Indonesia, Khakim et al., (2020) conducted a clustering on the Legal Documentation and Information Network (Indonesian: *Jaringan Dokumentasi dan Informasi Hukum* (JDIH)) managed by ministries in Indonesia. In this study, the results indicate that each JDIH included in the same cluster has linkages and similarities. This study also utilizes Artificial Intelligence as an analytical tool.

## 2. METHODOLOGY

The approach used in this study is a grammatical comparative that compares the DSN-MUI fatwa in the economic sector with the Financial Services Authority Regulation (POJK). In contrast, the analysis technique used is content analysis, namely analyzing and understanding using plagiarism checking software and ATLAS.ti.

## 3. RESULTS AND DISCUSSION

### *A. Artificial Intelligence (AI) in the Field of Law*

The use of AI and Machine Learning in some circumstances is particularly relevant in the field of law. Machine Learning and law operate on very similar principles – both of them use historical logic to deduce rules to be applied in new situations (Rob, 2019).

From all segments of social sciences, the law is perhaps the closest to the formal logic system. For simplification, legal decisions involve determining axioms derived from precedents, then applying these axioms to certain existing facts until reaching appropriate conclusions. This logic-oriented methodology is the right kind of activity to which machine intelligence can best be applied. Within the field of law, there are some areas where the use of AI is very promising. Exciting progress is being made in each of these areas (Rob, 2019).

AI and Machine Learning can be used as tools for contract review. In this case, each party's attorney generally had to manually review, edit, and replace documents in seemingly endless iterations. The process can be lengthy, resulting in delaying deals and hindering the company's business goals. Mistakes due to human error are common. It is not surprising that attention to small detail is sometimes unnoticed, and a contract document can have thousands of pages. Because of these problems, several startups, including Lawgeex, Klarity, Clearlaw, and LexCheck are developing a contract review system using AI and Machine Learning. These companies are developing AI systems that can automatically absorb proposed contracts, analyze them in full using natural language processing (NLP) technology, and determine which parts of the contract are acceptable and have problems (Rob, 2019).

The other use is as a tool for conducting a contract analysis. Negotiating and signing contracts are only the beginning. Once the parties have a contract, it will be highly complicated to stick to the agreed terms and conditions. This is a severe challenge for organizations of any scale, in which large companies will have millions of unfinished contracts with thousands of different partners across multiple internal divisions (Rob, 2019).

To a great condition, companies currently must operate without knowing the details of their contractual relationship. In this case, AI offers an opportunity to solve this problem. An NLP-supported solution is being developed that can extract and contextualize key information across the contents of a company contract, making it easy for stakeholders across the organization to understand the nature of its business commitments. Kira Systems and Seal Software are two technology companies funded to build such a platform. Meanwhile, newer startup challengers are Lexion, Evisort, and Paperflip (Rob, 2019).

Furthermore, AI and Machine Learning can be optimized as predictive tools in the litigation process. Many AI teams are building machine learning models to predict the outcome of pending cases using a corpus of relevant precedents and fact patterns from specific cases as input. The more accurate these predictions are, the more likely they will have an impact on legal practice. For example, companies and law firms are starting to use them to plan their litigation strategy proactively, manage settlement negotiations quickly, and minimize the number of cases that need to be brought to court. Blue J Legal headquartered in Toronto is one of the startups developing an AI-powered legal prediction

tool, with an initial focus on tax law. According to the company, its AI can predict case outcomes with 90% accuracy (Rob, 2019).

Another usage of AI and Machine Learning is as a tool for conducting legal research. In recent years, a new wave of startups has emerged, seeking to harness advances in NLP technology to transform legal research. Companies, such as Casetext and ROSS Intelligence, are building research platforms with a more sophisticated semantic understanding of what legal opinion means. The platform goes beyond mechanical keyword matching to come up with truly relevant laws. Their semantic model allows them to provide different perspectives on how the different cases related to one another (Rob, 2019).

*B. Plagiarism Checker and ATLAS.ti as Artificial Intelligence and Machine Learning-based Software Programs*

*1. Plagiarism Checker as a Legal Analysis Tool*

Plagiarism detection can be conducted manually or with the assistance of a software program. Manual detection needs a huge effort and very good memory. However, it is impractical if comparing many documents or the original documents are not available for comparison. Software-assisted detection allows many documents to be compared with one another, making the detection success rate much higher.

Many free and commercial (paid) software programs can be used for checking plagiarism. Some of them are Turnitin, Ithenticate, Plagiarism Checker, Viper, Duplichecker, Copyleaks, Paperrater, Plagium, Plagiarisma, Plagscan, etc. (Jharotia, 2018).

In general, the way this software works is similar – comparing text online, doing extensive searches on the internet and various databases to find similar content, and display relevant results. Plagiarism Checker uses a search algorithm supported by Artificial Intelligence and Machine Learning technology that combines advanced search results from multiple sources to ensure that the scanned content is genuine and authentic (Jharotia, 2018).

Plagiarism detection is more than just identical matches between documents. The plagiarism detector uses advanced AI and Machine Learning technologies to detect various similarities, including identical, similar, and paraphrased text. It is more than just checking word-for-word and meaning-for-meaning plagiarism (Jharotia, 2018).

One of the algorithms for Machine Learning that is often used is k-Nearest Neighbor (kNN). This algorithm is one of the simplest algorithms for Machine Learning, which is suitable for pattern recognition. This algorithm often works well in most pattern recognition applications. ‘k’ is the algorithm's parameter. It is necessary to select the correct ‘k’ value for the kNN algorithm by performing several tests with various ‘k’ values. kNN specifies its nearest neighbor as ‘k’ in a set of the text data. This algorithm only reckons all documents in the training dataset and compares the test documents with the training dataset. For this reason, kNN is also known as “memory-based learning” or “instance-based learning” (Sahu, 2016).

Text analysis can be conducted to determine whether the text has been copied or not. Statistical measures can determine whether a text has been plagiarized by identifying the frequency of words and sentences to find plagiarism in a text compared to other texts. Parsing is a technique used to parse a set of texts. Using the parsing technique, we can find out how a set of texts is classified into tokens, in which it has various ways to implement, such as string tokenizer, stream tokenizer, scanner class, pattern class, and match class. The tokenizer is mainly used to split sentences and break strings into tokens. The string tokenizer can tokenize a line. Some operations advance the current position beyond the processed character. The token is returned by retrieving a substring of the string used to create the string tokenizer object (Sahu, 2016).

*2. ATLAS.ti as a Legal Analysis Tool*

Concerning the ATLAS.ti software (Schebesta, 2018) argued that using a software-supported content analysis approach in legal research, research findings could be more robust scientifically (for example, objective, reproducible, and transparent). In more detail, the process of coding in research using ATLAS.ti must be adjusted to the research question. Some coding techniques that have special relevance in the legal analysis are as follows. The first is attribute coding that refers to descriptive coding, in which some information in a set of data that may later be important for quantitative and/or qualitative analysis is coded. For example, in a court decision case, the information could be the year or the jurisdiction/country when and where the judgment was given. The second is quantity coding for finding out the intensity, frequency, weight, or importance of a variable. It is also to find out the presence of a variable. In addition, this coding technique offers evaluative markers (e.g., positive, negative, neutral, or mixed), which are useful in determining general metrics for evaluation. The third is simultaneous coding, in which the content of the main document can justify more than one code (e.g., overlapping or nested code). It is very useful for conceptual analysis. Therefore, it is sometimes used for defining and analyzing legal

concepts. The fourth is structural coding which covers specific topics and links them to specific data segments. This type of coding structures the source of documents which is usually applied in larger text segments. In the field of law, this coding can be used to differentiate party submissions from court ownership. Finally, the fifth is descriptive or topic coding which can be used to mark certain data segments, to identify content, and, for the further stage of analysis, to build hypotheses and theories (SALDANA, 2021).

In this case, according to Schebesta (2018), the main purpose of coding is to identify patterns (their presence or absence) in a set of data, which are characterized by similarity, difference, frequency, sequence, correspondence, or causation. Its purpose is to explore theoretical concepts and support theoretical developments using research tools that show patterns or relationships in a set of data. In a sense, all lawyers, when analyzing legal documents, must go through an implied "mental coding" process.

They note the development of court reasoning over time or how the interpretation of a concept differs in different judgments. Therefore, software programs – that support content analysis and coding – do not offer radically new ways of analyzing legal data but can make research more systematic and methodologically consistent (Schebesta, 2018).

The first and the easiest method of analysis is the word cruncher, which counts the number of times the word appears in the document. This can yield insights for adjudication and will be able to show how often courts refer to certain concepts (Schebesta, 2018).

The second is the use of hyperlinks, in which various free codes or quotes can be linked throughout the document. This is conducted by introducing initial and target anchors and selecting the relation tag from the default tags (followed by contradicting, criticizing, discussing, extending, explaining, justifying, and supporting) or by editing relations in the editor section. This method of analysis is highly useful for legal analysis. It can potentially be applied for many purposes, such as checking inconsistencies in judicial disagreements and court decisions that contribute to the interpretation of legal concepts or the identification of precedents (Schebesta, 2018).

The third is the query tool, co-occurrence explorer, and co-occurrence table, which allows analysis based on what code appears simultaneously as the code input. Different types of queries can be used when analyzing how code is embedded, overlapped, coincided, continued, and followed. For grounded theory-based coding, this feature is the most useful and relies heavily on code design by using the analytical possibilities of features. As emphasized by Franzosi et al. in their analysis of software options, they argued that 'The CAQDAS query tool can determine code-naming criteria' (Schebesta, 2018).

The fourth is the main document-code table which can also show the number of times code is used in a document or a set of documents, thereby allowing systematic analysis of variables and their dissemination through the source document. The recurring legal question will be a specific concept analysis on law cases. Regarding primary documents that are ordered by time, the primary document-code table can be used to show whether there is a tendency for the court to use a particular concept (Schebesta, 2018).

### *C. The Use of Plagiarism Checker and ATLAS.ti as Analysis Tools for Shariah Economic Law*

#### *1. The Use of Plagiarism Checker in Shariah Economic Law Analysis*

The documents used as samples in examining this software are the National Sharia Council Fatwa and the Financial Services Authority Regulation. Furthermore, the selected software program to be used in this study is Plagiarism Checker X. This software program works similarly with some other plagiarism checker, which can compare the level of similarity between documents. However, this program has a limitation in which the program is only able to compare one document. Therefore, in the process of examining this program, the compared documents are those that have a similar theme. Because of this, the selected Financial Services Authority Regulations are the circular letter concerning Products and Activities of Sharia Banks for People's Financing and the circular letter about Products and Activities of Sharia Commercial Banks and Sharia Business Units. The similarity between these two regulations is analyzed using the Plagiarism Checker X.

Plagiarism Checker X - Report

Side by Side Difference

Overall Similarity: **92%**

Date: Jan 14, 2021

Statistics: 21777 words Plagiarized / 23695 Total words

Remarks: High similarity detected, you must need to improve the document.

Fig. 1. Document Check Results Using Plagiarism Checker X in Percentage

The data shown in the figure above indicates the degree of similarity between the two regulations, meaning that they contain almost the same

regulation. The background for both regulations is also the same, which can be seen in the following figure containing the software analysis results.

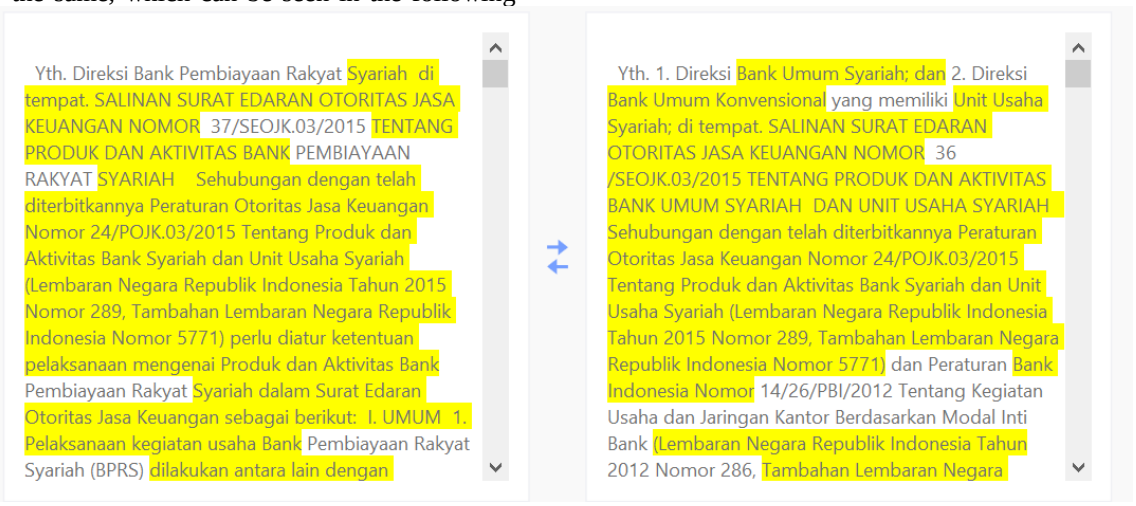


Fig 2. Comparison of Results of Two Legal Documents of POJK and PBI

Besides being applied to regulations that have the same topic, this application can also be used on regulatory topics that are historically or hierarchically related. For example, Bank Indonesia Regulation No. 13/1/PBI/2011 concerning the Commercial Bank Soundness Level Assessment with the Financial Services Authority Regulation No. 8/POJK.03/2014 concerning the Soundness Level of Commercial Sharia Banks and Sharia Business Units.

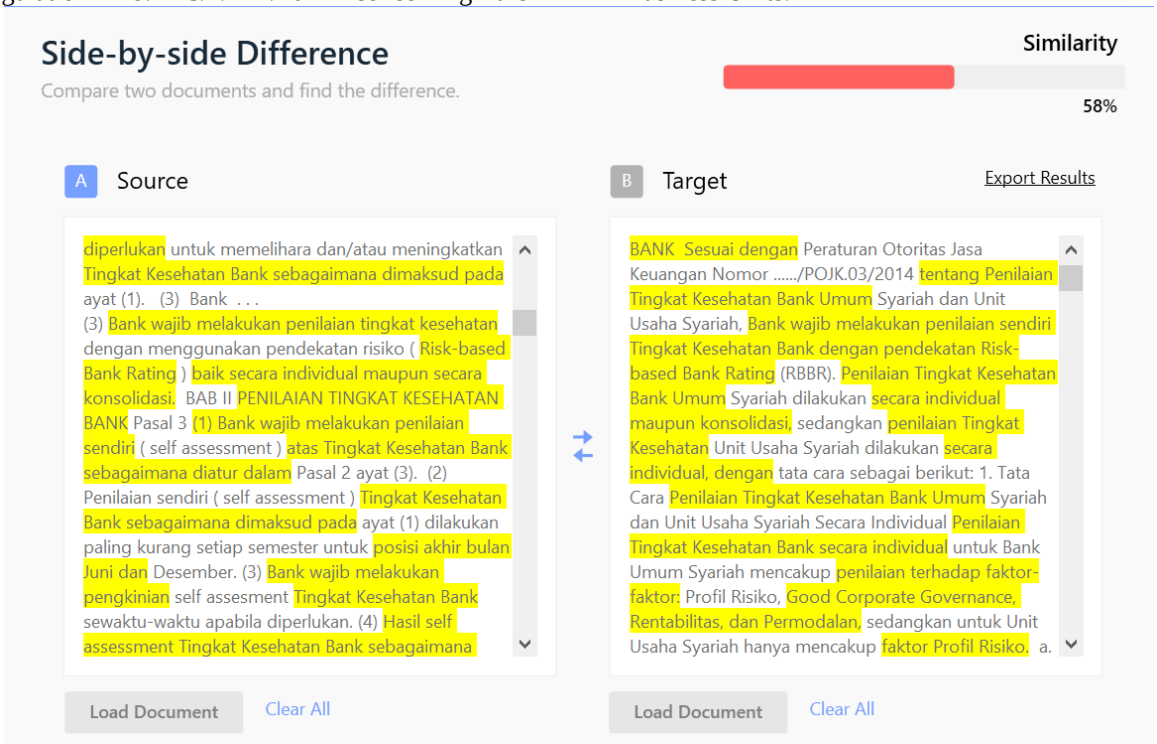


Fig 3. Comparison of Results of Two Legal Documents of POJK and PBI

The result indicates that the similarity level is 58%, meaning that these two regulations contain almost similar contents. For example, the yellow-highlighted text in the figure above indicates that the approach used for commercial banks and sharia commercial banks is similar, namely the risk-based bank rating.

Besides analyzing the Financial Services Authority Regulations, the researcher also applies this analysis to compare the Financial Services Authority Regulation and the National Sharia

Council Fatwa. The sample documents for this analysis are the Financial Services Authority Regulation No. 15/POJK.04/2015 concerning the Use of Sharia Principles in the Capital Market and the National Sharia Council Fatwa No. 40/DSN-MUI/X/2003 concerning the Capital Market and General Guidelines for the Use of Sharia Principles in the Capital Market Sector.

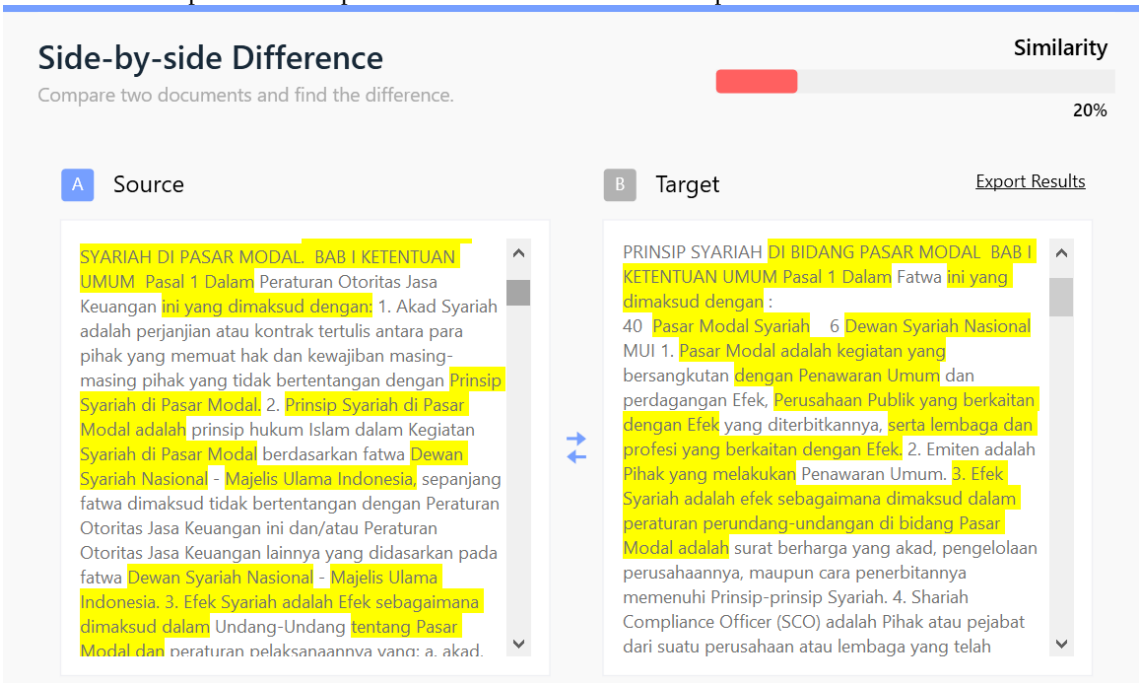


Fig 4. Comparison of Results of Two Legal Documents Sharia Principles in the Capital Market

After being compared, the similarity score is only 20%, meaning that many texts have been changed in the Financial Services Authority Regulation related to the National Sharia Council Fatwa about the capital market sector. However, it does not mean that these two regulations' substance is different, as shown in the figure below.

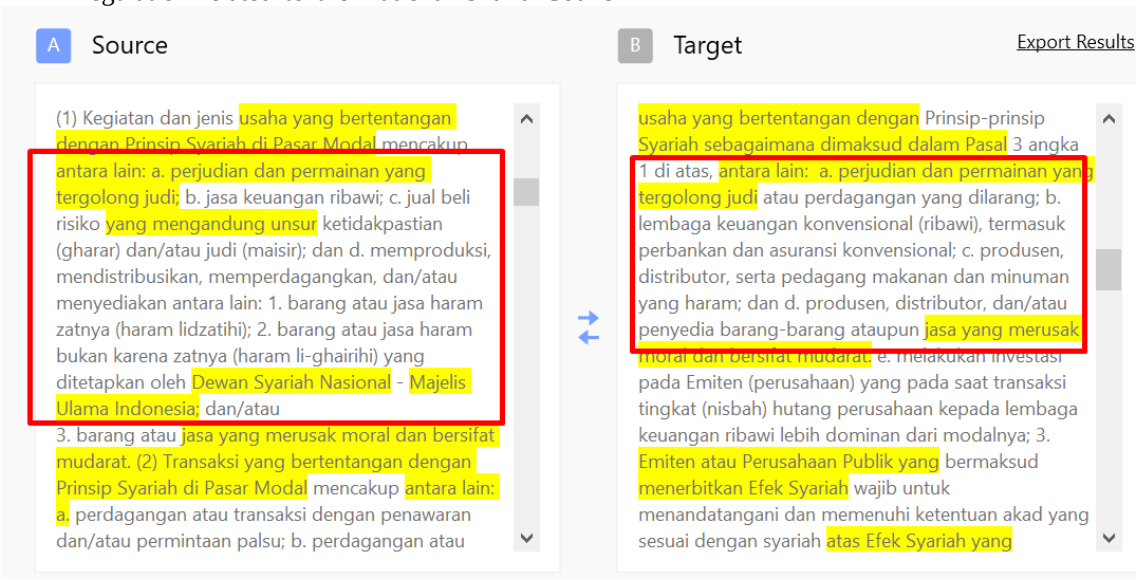


Fig 5. Comparison of Results of Two Legal Documents Sharia Principles in the Capital Market

From the figure above, it can be seen that the wording change is indeed conducted in the Financial Services Authority Regulation. However, the substance of the regulation is not different from the National Sharia Council Fatwa.

2. *The Use of ATLAS.ti in Shariah Economic Law Analysis*

The researcher uses another AI-based software called ATLAS.ti. This software can be used to compare PDF documents that have different or almost similar contents. For this analysis, the compared documents are the Financial Services Authority Regulation No. 15/POJK.04/2015 concerning the Use of Sharia Principles in the Capital Market and the National Sharia Council Fatwa No. 40/DSN-MUI/X/2003 concerning the Capital Market and General Guidelines for the Use of Sharia Principles in the Capital Market Sector. In the process of the analysis, the researcher applied certain principles.

First, the coding on those documents is based on the fatwa format's order: starting from general definitions to sharia principles in the capital market, regulations regarding sharia issuers and securities, and regulations regarding prohibited transactions.

Second, each document is marked and extracted into quotations, then coded based on the content and title stated in the document. For example, in the National Sharia Council Fatwa, the definition of an issuer lies in the general provisions chapter so that it is coded with "*definisi umum*" (English: general definition) and "emiten" (English: issuer) at the same time. On the other hand, in the Financial Services Authority Regulation concerning the Use of Sharia Principles in the Capital Market, an issuer's definition is only found in the provisions concerning the issuer so that the code given is "emiten" (English: issuer).

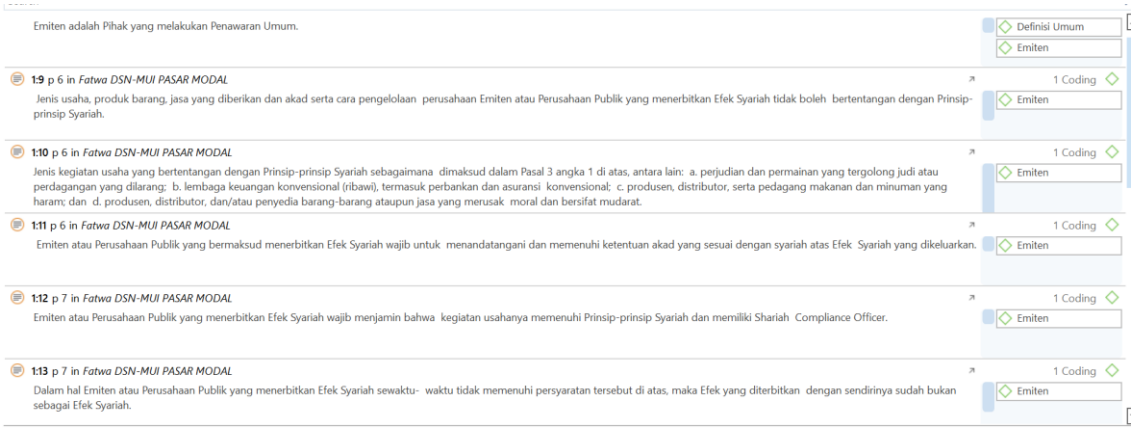


Fig 6. Fatwa Quotation Results and POJK in the Capital Market Sector

In the figure above, the number 1 in the quotation shows the type of document, namely the National Sharia Council Fatwa. Meanwhile, the following numbers – 9, 12, 13, and so on – show the quotation sequence. Furthermore, the right section is the coding. From the figure above, it can be interpreted that 6 paragraphs in the National Sharia Council Fatwa contain regulations regarding issuers (Indonesian: *emiten*). Furthermore, on the bottom line, there are also various regulations about issuers in the Financial Services Authority Regulation regarding Sharia Principles in the Capital Market, as shown in the following figure.


Fig.7. Fatwa Quotation Results and POJK in the Capital Market Sector

There are 8 paragraphs in the Financial Services Authority Regulation that regulate issuers. This

means that the Financial Services Authority Regulation is more detailed than the National Sharia Council Fatwa.

Then, what is the relationship between the results of the analysis through this ATLAS.ti software? If we look closely at the relationship pattern from the analysis results using ATLAS.ti, it will be as follows.

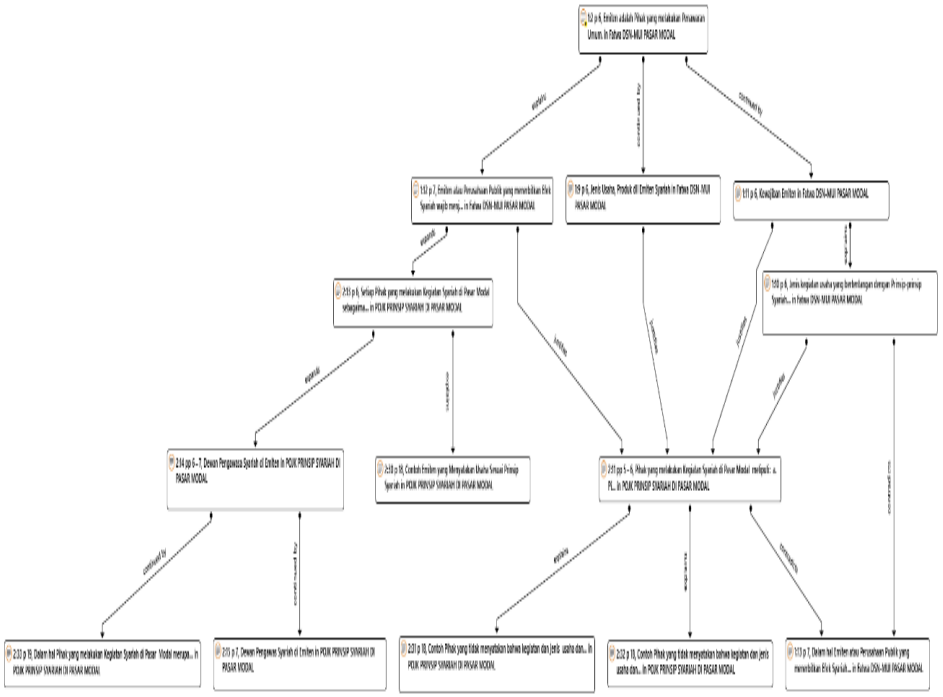

Fig 8. Fatwa Network Results and POJK in the Capital Market Sector

The results of the ATLAS.ti analysis above show the pattern of the relationship between the National Sharia Council Fatwa and the Financial Services Authority Regulation regarding Sharia Principles in the Capital Market. The samples regarding the issuers, can be described as follows.

First, the National Sharia Council Fatwa in the general provisions section explains the definition of the issuer. Furthermore, Chapter III Article 3 describes in more detail the criteria for issuers which cover five things: (1) broader definition of the issuer, (2) the type of unit businesses, (3) the obligation of the issuer to comply with sharia principles, (4) types of business activities that are contrary to sharia principles, and (5) issuers that violate sharia principles.

Next, based on the relationship pattern above, it indicates that Points 1, 2, and 3 – in Chapter III Article 3 of the National Sharia Council Fatwa concerning the Capital Market and General Guidelines for the Use of Sharia Principles in the Capital Market Sector – entirely absorbed and strengthened in Article 4 of the Financial Services Authority Regulation No. 15/POJK.04/2015 concerning the Use of Sharia Principles in the Capital Market (see Quotation Code 2.11). After that, Article 4 of the Financial Services Authority Regulation is clarified further by Article 4 in this regulation, as seen in Codes 2.31 and 2.32, which, if traced in the Financial Services Authority Regulation, will explain in Article 4 Letters a and b. In addition, Article 4 of the Financial Services Authority Regulation also relates to the National Sharia Council Fatwa, which states that if it does not meet the requirements as stated in Article 4 of the Financial Services Authority Regulation and Article 3 of the National Sharia Council Fatwa, the issuer will not be allowed to issue sharia securities.

Another relationship pattern between the two regulations can also be seen in Article 3 of the National Sharia Council Fatwa. Paragraph 4 declares that "issuers or public companies that issue sharia securities are required to guarantee that their business activities meet the sharia principles and has a shariah compliance officer", then being interpreted in detail in 5 regulation points as found in Codes 2.13, 2.14, 2.30, 2.33, and 2.15.

### *D. Benefits of Plagiarism Checker and ATLAS.ti as Analysis Tools for Sharia Economic Law*

Regarding the use of AI and Machine Learning in legal analysis, many studies suggest that both are relevant and make analysis easier. In this case, Nair and Wagh suggested that association rule mining can be used as a knowledge extraction technique that effectively analyzes the relationship between documents in the legal domain. This technique can be applied to analyze legal documents' similarity from court decisions by applying association rule mining (A.M. & R.S., 2018).

Related to the impact of AI on the legal profession, Teng Hu and Huafeng Lu stated that Artificial Intelligence could not fully replace the legal profession. This statement must be answered from the aspect of science and technology and from a philosophical or ethical aspect. For example, how do robots become humans? How does the law define the responsibilities and rights of robots? Can people accept the right of a robot judge to judge them for life or death? Such questions may not be answered. However, the idea about them should not be limited by technological developments. This statement shows that the position of AI is only a tool for legal analysis. It cannot serve as a substitute for humans, lawyers, judges, or legal experts (Hu & Lu, 2019).

Furthermore, AI and Machine Learning are also proven to be useful in conducting a predictive analysis on court decisions at the appeal level as has been done by William et al. Using the Bidirectional Long Short-Term Memory network combined with Conditional Random Fields, William et al. were able to predict the likelihood of an appeal decision with a probability rate of F$\beta$ = 94.79% (Fernandes et al., 2019).

Some of the studies above have shown that AI and Machine Learning can be utilized in the legal analysis process. In practical terms, the usage of AI and Machine Learning in the legal field is as follows. The first is as a technology-assisted review (TAR), which is to organize, analyze, and search for in a very large and diverse set of data for electronic investigations or intensive investigations. The second is a legal analysis using big data, algorithms, and AI to make predictions or detect trends in a large set of data. For example, Lex Machina, currently owned by LexisNexis, uses legal analysis to determine trends and outcomes in intellectual property litigation and is expanding into other types of complex litigation. Many technology companies and law firms have partnered to create programs that can help them in specific areas of practice, including transactional activities, due diligence, bankruptcy, litigation research and preparation, real estate, and many others.

ROSS is an online research tool using natural language processing powered by IBM Watson. It provides legal research and analysis for several different law firms and is reportedly able to read and process more than one million legal pages per minute. The third is as a legal bot. A bot is an interactive online program designed to interact with audiences by answering their questions. Many law firms have developed bots to assist loyal and potential clients in dealing with legal issues based

on their specific circumstances and facts. The fourth is as an assistant for legal decision-making. AI enables judicial decision-making in various ways. For example, the Wisconsin Supreme Court recently endorsed the use of algorithms in criminal sentencing decisions (Alarie et al., 2018).

More specifically, by referring to the analysis results above, some of the specific benefits of using AI-based software in the practice of sharia economic law analysis are as follows. (1) It can be used to assess fatwa transformation in statutory regulations – whether in substance or textual context. This can be seen in the analysis of the Financial Services Authority Regulation and the National Sharia Council Fatwa using the Plagiarism Checker software. (2) It can be used to see the relationship between the Financial Services Authority Regulation and the National Sharia Council Fatwa (are they complementary or contradictory to each other?). (3) It can be used as a doctrinal analysis tool. For example, using a historical approach based on the principles of *lex superiori derogat legi inferiori* (higher hierarchical rules remove lower hierarchical rules), *lex specialis derogat legi gernerali* (special rules prevail over general rules), and *lex posteriori derogat legi priori* (the latest rules remove the older rules) (Arief, 2010).

## 4. CONCLUSION

Plagiarism Checker X and ATLAS.ti are software programs developed using Artificial Intelligence and Machine Learning. Plagiarism Checker can be used in legal analysis as a tool to compare two documents that have the same topic, for example, old and recent statutory rules. Concerning sharia economic law, this software can be used to see the degree of similarity between the Financial Services Authority Regulation and the National Sharia Council Fatwa. The Financial Services Authority Regulation has to absorb the fatwa issued by the National Sharia Council.

Furthermore, ATLAS.ti can be used to perform various document analyzes, such as word crunchers, hyperlinks, network analysis, queries, and others. In terms of sharia economic law analysis, ATLAS.ti can be used to analyze the fatwa contents, either using a historical, comparative, or case approach. Some of the benefits obtained by sharia economic law analysts when using this software are: (1) to assess the form of fatwa transformation in statutory regulations, (2) to see the relationship between the National Sharia Council Fatwa and the Financial Services Authority Regulation, and (3) to be used as a doctrinal analysis tool.

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