Human VS. AI Translation Accuracy: A Comparative Study of English-Arabic legal Contract Translation

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ABSTRACT

As the title indicates, this study aims to conduct a comparative analysis to evaluate the accuracy of English-Arabic legal contracts produced by expert human translators and artificial intelligence tools; namely, DeepSeek and Qwen Chat. This study employs a prescriptive, qualitative approach. 10 different legal texts were selected randomly from legal contracts and agreements and translated by both professional human translators and AI tools. The findings of this study indicated that the performance of DeepSeek and Qwen Chat in translating legal contracts into Arabic showed promise in producing fairly acceptable translations for legal texts; however, they are not totally accurate and need to be revised by professional human translators. While expert human translators have shown high-quality translations of legal precise terminology and complicated structures that meets the requirements of Arabic legal standards and Libyan context.

Keywords: Human translation, AI translation, Legal contracts, Translation accuracy.

الملخص

كما يشير العنوان, تهدف هذه الدراسة إلى إجراء تحليل مقارن لتقييم دقة ترجمة العقود القانونية من اللغة الإنجليزية إلى العربية, سواء أكانت الترجمة بواسطة مترجمين بشريين, أو تلك التي تم توليدها بواسطة أداتي الذكاء الاصطناع DeepSeek وQwen Chat. اعتمدت هذه الدراسة المنهج الوصفي التقويمي النوعي، وقد تم اختيار 10 نصوص قانونية بشكل عشوائي من عقود واتفاقيات قانونية مختلفة، وتمت ترجمتها بواسطة مترجمين بشريين محترفين وأدوات الذكاء الاصطناعي. أشارت نتائج هذه الدراسة أن أداء تطبيقي DeepSeek وQwen Chat في ترجمة العقود القانونية أظهر نتائج واعدة، وذلك بتقديم ترجمات مقبولة إلى حد ما للنصوص القانونية، ومع ذلك، فهي ليست دقيقة، مما يستلزم مراجعتها من قبل مترجمين محترفين. في المقابل، أظهر المترجمون البشريون ترجمات عالية الجودة للنصوص القانونية، تتسم بالدقة في المصطلحات والتركيبات المعقدة، بما يلبي متطلبات المعايير القانونية العربية والسياق القانوني الليبي.

الكلمات المفتاحية: الترجمة البشرية، الترجمة بالذكاء الاصطناعي, العقود القانونية, دقة الترجمة.

Introduction

In recent times, with the evolution of Machine Translation (MT), which originated in the 1940s, the burden of rendering the message to the audience partially shifted from human translators to artificial intelligence (AI) tools. Li (2024) stated that "with the continuous development of machine translation technology, artificial intelligence technology has been widely applied in various fields" (p.711). Starting from the notion of context and its pivotal role in delivering the accurate rendition of the meaning and by the emergence of AI tools in translation field, this investigation highlights the accuracy of both human translators (HT) and AI tools in the legal context. Khasanova (2023) claimed that context is of great importance for communication since it assist the audience understand the message properly. In order to grasp the meaning of a word, one should pay special attention to the surrounding context within the language, since the meaning of a word may rely on the words that surround it (Nida,1964). Halliday (1999) was the first to raise the issue of different contexts in translation.

Objective and Research Questions of the Study

The present study aimed to:

- Conduct a comparative analysis to evaluate the accuracy of translations produced by both human translators and AI in translating legal contracts from English into Arabic, concentrating primarily on the performance of "DeepSeek" and "Qwen Chat" compared to human translations mostly utilized in Libyan official documentation.
- Identify the strengths and limitations of AI tools and human translators in translating legal contracts from English into Arabic.

The study seeks to answer the following questions:

RQ1) To what extent can the accuracy of AI, specifically (DeepSeek) and (Qwen Chat), be assured in translating English legal contracts into Arabic?

RQ2) To what extent can AI take the place of human translators?

RQ3) what are the strength and limitations of both AI and human translators in legal translation?

Thus, the present study would be crucial since it enhances the comprehension of AI translation within legal context, more especially English-to Arabic legal translation, an area that remains under-investigated. The findings of this study are of great importance since more and more people are utilizing AI tools to assist the translation process.

Statement of the Problem

Legal translation is seen as a serious issue due to the required precision, sophisticated technical terminology, variations in legal systems across countries, and the impact of cultural and legal context. Legal translation has the power to influence legal rights and obligations. Thus, accuracy is crucial. This type of translation requires translation expertise and precise conveyance to assure an accurate reproduction of the source language message since any grave mistake can lead to legal consequences.

Literature Review

Artificial Intelligence and its Use in the Field of Translation

Al-Khalifa (2023) defines artificial intelligence as the replication of human behaviors and functions by machines, relying on a collection of techniques and algorithms that aid in decision-making and problem-solving. Artificial intelligence AI is the ability of computers to imitate human intelligence and may also be defined as a technology that machines use to mimic many intricate human skills (Sheikh et al., 2023). Nowadays, a large number of people communicate across language barriers by utilizing smartphones and online machine translation apps, which helps to bridge the gaps among linguistic systems and cultures. Artificial intelligence has revolutionized the translation industry with its creative ways to overcome linguistic obstacles and promote international communication (Seyidov, 2024). According to Balayev and Alizade (2016), artificial intelligence AI has transformed translation, enabling organizations and individuals to communicate across linguistic boundaries with unprecedented ease and effectiveness.

Artificial Intelligence AI Tools

1. DeepSeek

DeepSeek is a Chines firm launched in 2023 by Liang Wenfeng, the founder of High-Flyer, an AI-powered quantitative hedge fund. The firm focuses on creating open-source artificial intelligence models. Its mobile app, which carries the same name, distinguishes itself from other AI tools such as OpenAI's "ChatGPT" in its ability to clarify the logic behind its responses prior to presenting them to users. This model enables the mobile automated chat application, which gained global attention with the online interface as a considerably less expensive alternative to ChatGPT.

DeepSeek model is seen as a powerful competitor to the latest releases from OpenAI and Meta.

2. Quen Chat

Qwen Chat is an AI tool driven by the Qwen series of models. It is available to everyone and free to use. Qwen is a huge language model created by the Chinese company Alibaba cloud. In July 2024, it was regarded as the top Chinese language model in many criteria. With deep research, tasks that used to take a long time can now be performed in a matter of minutes.

Legal Translation

Legal translation is not an easy task. Translating legal documents is a tough job that requires both linguistic accuracy and deep understanding of legal concepts, especially when translating between two languages that differ syntactically and culturally, such as English and Arabic (Altakhaineh et al,. 2025). Legal translation is defined by its peculiarity; it requires deep understanding of the law and legal jargon in both source and target languages (Ben Zayed, 2024). It involves the translation of contracts, patents, court documents, international treaties and agreements, personal documents such as (certificates and passports), commercial records, and official correspondences. Legal translators must have a strong background in the legal language in order to deliver an accurate version and avoid ambiguity and misinterpretation.

Newmark (1982) stated that, legal texts have a dual purpose as directive and imperatives. In (1988), he added this observation by suggesting that legal texts may also have an expressive purpose. Legal translation is differentiated from other types of translation in that the message is expressed utilizing codes that represent certain legal concepts (Farghal & Shunnaq, 1992).

Characteristics of Legal Language

Legal language is unique due to its specialized nature, which is defined by its clarity, generality, and precision. The following characteristics are also considered as issues of legal translation.

Firstly, legal language sometimes integrates words from other languages. According to Rahim (2024), "legal language sometimes incorporates words from other languages" (p.200). Such as the legal term "force majeure" which derives from the French civil law. The clause "force majeure" refers to a superior force that prevents one of the contracting parties from performing their contractual obligations. It can be translated as "القوة القاهرة" or "شرط القوة القاهرة".

Secondly, legal context tends to use of archaism. Some lawyers and specialists tend to utilize archaism (Old words not commonly used) instead of new ones. For example, they tend to utilize (peruse) instead of (read), (inquire) rather than (ask), etc. The utilize of archaism (old words) is intentional (Alcaraz & Hughes, 2002). The reason behind this is to provide a sense of formality to the language to which they are associated.

For example:

The word thereafter which can be translated into Arabic as
من الآن فصاعدا

Hereinafter referred to as___.

المشار إليه فيما بعد في هذا العقد بـ ____.

The parties hereto agree as follow.

تم اتفاق الطرفين بموجب هذا العقد على ما يلي.

Thirdly, the use of the modal "shall". In legal context, "shall" expresses obligation or responsibility rather than futurity. Sabra (1995), asserts that any legal verb preceded by "shall" is commonly translated into Arabic in the present form. For example:

First party shall pay the brokerage fees not less than four months.

يدفع الطرف الأول أتعاب الوساطة في مدة لا تتجاوز أربعة أشهر.

Ultimately, legal language is basically concerned with reference accuracy, which leads to lexical repetition and, as a result, functional redundancy. Words like "the above mentioned", "first party", "second party", "lease", "lessee" and "lessor". When translating legal documents into the target language, it is advised to preserve the same level of redundancy as the original one. Therefore, legal translators should emphasize that the suggested version is as obvious as the original. For instance, the lessee shall pay to the lessor at the office of the lessor. يدفع المستأجر إلى المؤجر في مكتب المؤجر .

Challenges of Legal Translation

1. Variations between Legal Systems

Each country possesses a distinct legal system, such as Islamic law (Sharia), common law, civil law, or a combination of civil and common law. In addition, some Islamic countries adopt civil law influenced by Islamic law, which means a combination of civil law and "Sharia". All of these systems have their own terminology. English legal systems may be based on civil law, common law, or a combination of both systems. For example, UK rely on common law, whereas Scotland based on mixed law. It is worth mentioning that the English legal systems within on language differ from country to another, for instance in the UK and US, the term lawyer, attorney, solicitor, barrister, advocate, counsel, and counselor are utilized differently. These terms are commonly translated into Arabic as "محامي" ; however, they are not synonyms, and incorrect utilize of either term may lead to legal consequences.

2. Specialized Terminology

Legal terminologies have accurate meaning that differ from their typical use. For instance, the English legal term "consideration" in contract law does not mean "reflection" or "thinking" as in general English, but rather "something of value exchanged between parts" it can be rendered into Arabic as "مقابل التعاقد".

3. Neutrality and accuracy

Legal translator must remain faithful to the original text and avoid adding any interpretations. For example, “The dispute shall be settled by arbitration", the appropriate translation into Arabic is " يفصل النزاع عن طريق التحكيم". Adding any extra words such as "التحكيم الدولي" would distort the meaning.

4. Cultural differences

Law is linked to culture, some legal concepts are rooted in history and culture, making them difficult to translate. For instance, the word "قصاص" in Islamic criminal law has no accurate equivalent in English and is often paraphrased into English As "retribution" or "equal retaliation".

5. Lack of Standardized Terminology

no single dictionary can possibly covers all legal contexts, therefore translator must look up relevant precedents and legal texts. For example, the English legal term "tort" can be rendered into Arabic as "المسؤولية التقصيرية" or "الضرر". Both are correct, but rely on the legal context.

Previous Studies

Altakhaineh et al. (2025), in their article, investigated the accuracy of AI generated tools in translating legal texts from English into Arabic, concentrating on the performance of ChatGPT compared to human translations. This investigation employs a comparative research design to evaluate legal texts, including agreements and contracts translated by AI and expert human translators. This study revealed that AI tools

can provide relevant translations for simple documents. However, they frequently fail to convey the exact legal terminology and complicated structures needed for effective legal communications. The results also showed that human translations outperformed AI tools versions across all parameters. Showing high level of accuracy, proficiency, and clarity in rendering legal terminology and complicated structures that meet the formal legal standards and Arabic legal context.

Rahim (2024), conducted a quantitative analysis, examining the Arabic translations generated by (Google Translate) for the English legal articles. The main goal of this study is to examine whether Google Translate can effectively substitute human translators for legal contracts. Six segments of various legal contracts were selected and translated into Arabic utilizing the commonly used free web-based tool (Google Translate), and the translations were evaluated for lexical and syntactic accuracy. The results obtained show that, Google Translate is faster than professional translators in producing English-Arabic translations, but struggles with sophisticated legal terms and grammar. Polysemy, homonym, legal doublets, and adverbs are examples of linguistic errors, while syntactic errors include morphological parsing, concord, and modality.

Moneus and Sahari (2024), applied a comparative analysis of the translation variations of legal texts from English into Arabic, evaluating the performance of ChatGPT, Bing Chat, and ChatSonic in terms of accuracy and fluency compared to human translators versions. The study also explored the worries about decreasing need for human translators as AI advances, as well as evaluating the possibility of relying solely on AI tools in legal translation and analyzing the strength and weakness of both approaches. To achieve this goal, a selection of legal articles from various legal contracts was chosen. These pieces distributed to human legal translators and translated by both human translators and AI tools to examine the differences between them. The results demonstrated that human translators can be distinguished from AI translation due to the professional translator's broad practical experience and legal background.

A comparative study between human translation HT and artificial intelligence AI translation by Abadich (2024), aimed to compare

between AI based machine translation and HT in terms of efficacy. Focusing primary on the variations between them when translating English into Arabic and vice versa. This investigation also aimed to highlight the strength and weakness of both broaches in order to offer a better grasp of the variations between HT and AI-driven translation. The researcher employs a quantitative approach, where both AI-driven machine translation and HT were tested. The chosen texts include cultural and complex linguistic expressions that require deep human understanding. This approach applied a direct comparison of the performance of both AI-driven machine and HT in handling such texts, in order to identify their strength and limitations. The results obtained showed that the human translation remains the preferred choice when handling complex texts that require strong cultural background, while AI-driven machine translation characterized by its extreme speed, making it an appropriate choice for translations that don't require high level of precision.

Ben Zayed (2024), conducted a comparative approach to evaluate the accuracy and reliability of (Google Translate) and (ChatGPT4) in translating legal documents between English and Arabic. The translations were examined based on multiple criteria, including linguistic accuracy, cultural nuances, legal terminology precision, and maintenance of the original intend. To accomplish this task, the researcher selected five samples of different legal documents, translated by both tools (Google Translate and ChatGPT), then carried out a detailed comparison of the translated documents to find out their quality. The findings revealed that (Google Translate) excels in accurately translating precise legal terminology. ChatGPT-4, by contrast, despite possessing a broader conversational capacity, did not perform the same level of accuracy in translating specialized legal document within the tested samples.

Khoshafah (2023, as cited in Zayed & Nuirat, 2024) discussed the accuracy of ChatGPT as translation tool, and the findings obtained revealed that ChatGPT can be trusted as it able to handle many intricate and language pairs. Nevertheless, the findings also showed that ChatGPT cannot be suitable for translating specialized content that requires high level of accuracy and domain-specific knowledge,

such as legal documents, scientific studies, medical reports, religious, and literary terminology. This study recommended utilizing ChatGPT as long as post-editing by human is possible.

Methodology

This study employs a prescriptive, qualitative research design to evaluate the performance of AI tools and human translators in translating English legal contracts into Arabic in terms of accuracy. This approach concentrated on a deeper evaluation of the cultural and contextual accuracy of the translations, evaluating how effectively each translation fulfills the needs of the Arabic legal context and Libyan formulations.

Participants

Three sworn legal translators took part in translation process, the selection of human translators was based on their experience, since they had more than seven years of experience in legal translation domain, their translations were reviewed and averaged. In addition to (DeepSeek & Qwen Chat) tools, DeepSeek and Qwen Chat were chosen because they are popular and highly recommended tools nowadays among students and translators as well as they are freely accessible and publically available. They also have powerful search engines that allow them to produce comprehensive and quick translations.

Selection of legal documents

Nine authentic legal articles were selected randomly from different legal contracts and agreements. All of these articles were redacted to hide the identities of the contractual parties. Then, translated by both professional human translators and AI tools (DeepSeek & Qwen Chat) from English into Arabic.

Comparative Analysis

In this section, as data of this investigation, nine articles of various contracts are to be evaluated to address the research questions. This

evaluation will concentrate primarily on the accuracy in terms of two criteria:

- Cultural and contextual appropriateness: The extent to which the translation retained the cultural references, idiomatic expressions, context sensitivity, and adherence to legal stipulations in Libyan official documents.
- Naturalness: readability and linguistic fluency of the translated versions**.** Involving the proper use of synonyms and legal doubts.

Article 1

Source Text (ST)	At all times, even after terminating of the Agency, Agent shall guard all secrets concerning principal's business, processes and operations; he shall keep under lock and key any and all documents marked confidential.
DeepSeek Translation	يلتزم الوكيل, في جميع الأوقات, حتى بعد انتهاء الوكالة, بالمحافظة على جميع الأسرار المتعلقة بأعمال الموكل وإجراءاته وتشغيله؛ وعليه ان يحتفظ تحت أقفال في مكان آمن بأي مستندات مُعلّم عليها بأنها سرية.
Qwen Chat Translation	في جميع الأوقات, حتى بعد إنهاء العلاقة والوكالة, يلتزم الوكيل بالحفاظ سرية جميع المعلومات المتعلقة بأعمال الموكل وعملياته وتقنياته؛ ويجب عليه حفظ جميع المستندات المعلّمة بعبارة "سرية".
Human Translation (HT)	في جميع الأوقات وحتى بعد إنهاء الوكالة, يلتزم الوكيل بحماية كل الاسرار المتعلقة بعمل الموكل, وإجراءاته وعملياته, ويحفظ تحت رعايته التامة جميع المستندات التي تتصف بالسرية.

The above translated texts by DeepSeek, Qwen Chat, and human translators showed some variations in translation . For instance, the

phrase (processes and operations) was translated by DeepSeek as "إجراءاته وتشغيله" , the word "تشغيله" is not a legal equivalent for "operations" in the Arabic and Libyan legal context. Its appropriate translation into Arabic would be "عملياته", maintaining the clarity of legal context. Furthermore, the expression "under lock and key" is rendered into Arabic literally as "يحتفظ تحت أقفال" which is slightly unusual, a bit stiff, and not aligned with Libyan legal context. As emphasized by Al-Jarif (2025), AI translation tools should be utilized with care, and he suggests post-editing as a necessary step. Such deviations of DeepSeek reflect its limitations in understanding Arabic and Libyan legal language.

Qwen Chat, on the other hand, as we see in the second sentence, translated the word "Agency" into Arabic as "علاقة", which seems vague, too general, and lacks legal precision. Thus, it could be translated into Arabic as "وكالة", which is more accurate than the word "علاقة" in this context. Human translation (HT), in contrast, In translating the phrase "even after terminating of the Agency", human translators show a high level of accuracy in terms of readability and adhering to the Libyan legal context. Since they appropriately rendered it into Arabic as "وحتى بعد إنهاء الوكالة". Also, human translators rendered the word "Agency" into Arabic as "وكالة" instead of "علاقة" , as translated by Qwen Chat. Moreover, the term "operation" appropriately rendered into Arabic as "عملياته" instead of "تشغيله" as rendered by "Deep Seek". In addition to the phrase "under lock and key" translated into Arabic by human translators as " يحفظ تحت رعايته التامة", which aligns with Libyan legal context.

Article 2

Source Text (ST)	Plot No. (30), situated in____ area, with its metes and bounds as herein described, currently in the possession of Mr. _____.

DeepSeek Translation	القطعة رقم (30) الواقعة في منطقة____, المحددة بحدودها المساحية كما هو موضح هنا, وهي حاليا بحوزة السيد: _____.
Qwen Chat Translation	القطعة رقم (30) الواقعة في منطقة _____, مع تحديد حدودها الدقيقة كما هو موضح herein والمتواجدة حاليا بحوزة السيد:_____.
Human Translation (HT)	قطعة الأرض رقم (30) الكائنة بمنطقة _____, بحدودها ومساحتها المبينة في هذا العقد, والتي ما بيد السيد:_____.

In this text, it was noted that both DeepSeek and Qwen Chat are similar in many ways. In this respect, the phrase "situated in" is rendered by DeepSeek and Qwen Chat as "الواقعة في منطقة", which is an acceptable translation but less formal than expected in legal language. Thus, its appropriate translation into Arabic could be "الكائنة بمنطقة" instead of "الواقعة في منطقة". As well as, the phrase "with its metes and bounds as herein described", translated by DeepSeek as "المحددة بحدودها المساحية كما هو موضح هنا" which is an acceptable translation; however, the suitable rendition for the archaic word "herein" could be "في هذا العقد" instead of "هنا" , adhering to the formal contract language in Libyan context. As with DeepSeek, Qwen Chat showed acceptable conveyance of the article above. Nevertheless, there are certain failures, such as inability to translate the archaic word "herein", which can be rendered into Arabic legal context as " في هذا العقد" , in addition to the inaccuracy in translating some phrases like "currently in the possession of Mr.__" , translated by Qwen Chat into Arabic as

which lacks the precise legal and formal tone required in the Libyan legal context. Thus, it could be conveyed into Libyan legal context as ."والتي ما بيد السيد" ,"والمتواجدة حاليا بحوزة السيد"

However, human translators appropriately conveyed the phrase "situated in ___area" as "الكائنة بمنطقة" instead of "الواقعة بمنطقة" as rendered by DeepSeek and Qwen Chat. The phrase "with its metes and bounds as herein described" conveyed effectively by human translators as "بحدودها ومساحتها المبينة في هذا العقد" instead of " المحددة بحدودها" and "herein مع تحديد حدودها الدقيقة كما هو موضح المساحية كما هو موضح هنا", as translated by Qwen Chat, since it left the term "herein" without translation. Also, the phrase "currently in the possession of Mr._" accurately rendered by human translators as "والتي ما بيد السيد", instead of "والمتواجدة حاليا بحوزة السيد", maintaining the accuracy, readability, tone of legal language, and adherence to the Libyan legal style.

Article 3

Source Text (ST)	Turnover taxes payable in Agent's country on his commission shall be paid by Agent.
DeepSeek Translation	تُدفع ضرائب الدوران المستحقة في بلد الوكيل على عمولته من قبل الوكيل.
Qwen Chat Translation	تُسدد ضرائب الدوران المستحقة في بلد الوكيل على عمولته من قبل الوكيل.
Human Translation (HT)	يدفع الوكيل الضرائب المستحقة على إجمالي المبيعات في بلده عن عمولته.

In the translation of this article into Arabic, it was observed that both

DeepSeek and Qwen Chat have provided the same literal translation for the phrase "Turnover taxes" as "ضرائب الدوران". This translation is unusual in Libyan legal financial usage and Arabic legal standard; a more accurate rendition would be "ضرائب رقم الأعمال" or "الضرائب المستحقة على إجمالي المبيعات".

Furthermore, both DeepSeek and Qwen Chat used the passive form for the word "payable" as "تُدفع" and "تُسدد", while Arabic legal documents usually prefer direct active form as "يدفع الوكيل". DeepSeek and Qwen Chat are similar and close to each other (both resort to a literal translation and less formal).

Human translators, on the other hand, have effectively translated the above Article into Arabic as "يدفع الوكيل الضرائب المستحقة على إجمالي المبيعات في بلده عن عمولته, demonstrating overwhelming superiority over AI translation tools. Utilizing a more precise, readable, and legally relevant translation like "يدفع" instead of "تُدفع" or "تُسدد", and "الضرائب المستحقة على إجمالي المبيعات" instead of "ضرائب الدوران".

Article 4

Source Text (ST)	Agent shall observe the rules of fair competition.
DeepSeek Translation	تلتزم الوكالة بقواعد المنافسة العادلة.
Qwen Chat Translation	يجب على الوكيل احترام قواعد المنافسة العادلة.
Human Translation (HT)	يلتزم الوكيل بمراعاة قواعد المنافسة الشريفة.

In this Article, DeepSeek mistranslated the legal term "Agent" as "وكالة". It shifted the obligation from the agent (the individual) to the agency (the institution), creating inaccuracy in legal responsibility. The obligation is not the Agency itself; the correct subject that accurately reflects Agent is "الوكيل" . in addition, both AI translation tools, DeepSeek and Qwen Chat translated the phrase "fair competition" as "المنافسة العادلة", which is acceptable; however, Libyan commercial legal texts typically prefer the phrase "المنافسة الشريفة" as an appropriate rendition for the phrase "fair competition".

In contrast, human translators proposed a fully acceptable translation for this Article as "يلتزم الوكيل بمراعاة قواعد المنافسة الشريفة", balancing between accuracy and readability as well as adherence to Libyan legal context. Utilizing the phrase "يلتزم الوكيل" instead of "تلتزم الوكالة" as mistranslated by DeepSeek. Also, "المنافسة الشريفة" instead of المنافسة "العادلة" as rendered by both DeepSeek and Qwen Chat.

Article 5

Source Text (ST)	The two parties entered into a contract last year.
DeepSeek Translation	دخل الطرفان في عقد العام الماضي.
Qwen Chat Translation	دخل الطرفان في عقد العام الماضي.
Human Translation (HT)	أبرم الطرفان عقداً العام الماضي.

By looking at the above Article, it is obvious that both DeepSeek and

Qwen Chat mistranslated it by providing a literal translation as "دخل الطرفان في عقد", which sounds odd in the Arabic legal context. Both DeepSeek and Qwen Chat produced literal translations and failed to reflect the Arabic legal tone. Whereas, human translators, on the other hand, delivered a readable, accurate, and natural version as أبرم الطرفان "عقداً العام" الماضي , which meets the Libyan legal style and legal standards in the Arabic framework. In short, both AI translation tools (DeepSeek & Qwen Chat) maintain the general meaning but utilize a literal and less professional style. Human translation (HT) is all in all superior since it applies the accurate legal term "أبرم", which instantly matches the contractual context.

Article 6

Source Text (ST)	The validity for signing this contract is ten 10 banking days as from the date of this contract.
DeepSeek Translation	تسري مهلة التوقيع على هذا العقد لمدة عشرة (10) أيام عمل مصرفية تبدأ من تاريخه.
Qwen Chat Translation	تبلغ صلاحية التوقيع على هذا العقد عشرة (10) أيام بنكية اعتبارا من تاريخ إبرام هذا العقد.
Human Translation (HT)	يسري توقيع هذا العقد لمدة عشرة 10 أيام عمل رسمية من تاريخ تحرير هذا العقد.

Both DeepSeek and Qwen Chat translations suffer from non-standard legal terminology and sophisticated structures, such as the legal term

"Banking days" translated literally by both AI translation tools as " أيام عمل مصرفية" and "أيام بنكية", which are inappropriate translations; its suitable conveyance into Arabic could be "أيام عمل رسمية". Moreover, the phrase "The validity of signing" as rendered by Qwen Chat as تبلغ "صلاحية التوقيع", sounds a bit like a report, not a legal contract. It could be rendered as "يسري توقيع هذا العقد".

By way of contrast, human translators effectively conveyed the phrase "The validity for signing this contract" into Arabic as " "يسري توقيع هذا العقد instead of "تسري "مهلة التوقيع على هذا العقد" or "تبلغ صلاحية التوقيع على هذا العقد" as translated by DeepSeek and Qwen Chat. Also, the phrase "banking days" is rendered into Arabic as "أيام عمل رسمية" instead of "أيام عمل مصرفية" and "أيام بنكية" as translated by AI translation tools. Human translation (HT) combined accuracy, clarity, readability, and adherence to Libyan and Arabic legal context.

Article 7

Source Text (ST)	Whereas First Party through arrangements with Spring Oil Company has the right and privilege to occupy and use a plot of land in ____ area (designed as____) of ____ square Kilometers for setting up camp facilities for its activities in this area.
DeepSeek Translation	وبموجب ترتيبات مع شركة سبرينغ أويل, يتمتع الطرف الأول بالحق و الامتياز في شغل واستخدام قطعة أرض في منطقة ____ (المعرّفة ب ____ مساحة _____ كيلومتر مربع) بهدف إقامة مرافق معسكر لأنشطته في المنطقة.

Qwen Chat Translation	في حين أن الطرف الأول, من خلال ترتيبات مع شركة سبرينقغ أويل, يتمتع بالحق والامتياز باحتلال واستخدام قطعة أرض في منطقة ____ (المعينة كـ _____ بمساحة ____ كيلومتر مربع) لإنشاء مرافق معسكر لمزاولة انشطته في المنطقة.
Human Translation (HT)	وحيث أن الطرف الأول قد آل إليه, بموجب ترتيبات مع شركة سبرينغ أويل, الحق والامتياز في استغلال قطعة أرض كائنة بمنطقة _____ (المحددة بـ _____بمساحة _____ كيلومتر مربع), وذلك لغرض إقامة مرافق معسكر لمزاولة نشاطاته في المنطقة.

In the above Article, as we have seen, DeepSeek translation succeeded in delivering the basic meaning of this article, utilizing terms like "وبموجب", "شغل واستخدام", and "يتمتع الطرف الأول". Such terms reflect the legal tone of the text. Nevertheless, the phrase "designed as" was inappropriately rendered by DeepSeek into Arabic as "المعرّفة بـ", which is less formal than the standard "المحددة بـ" in Arabic legal context. Overall, in translating this Article, DeepSeek provided the legal sense but lacks accuracy and readability. On the other hand, Qwen Chat appropriately rendered the phrase "designed as" into Arabic as "المعينة" instead of "المعرّفة" as conveyed by DeepSeek. However, it employed the expression "في حين أن" which is legally inaccurate, instead of the contract standard "وحيث أن". More critically, Qwen Chat mistranslated the term "occupy" as "احتلال", a term that carries negative connotations of forcible seizures. Such mistakes undermine its accuracy in

rendering legal texts.

By way of contrast, the Human translation (HT) version flows more properly and excels in its professional formulation and adherence to Arabic legal context. It delivered appropriate translations, beginning with "وحيث أن" instead of "في حين أن" , utilizing the phrase "الكائنة بمنطقة", instead of "في منطقة", "المحددة بـ" instead of "المعرّفة بـ", and "استغلال" instead of "احتلال", all of which align with Libyan legal context. In other words, HT displayed a high quality version in terms of readability, accuracy, and adherence to Arabic legal standard and Libyan legal context.

Article 8

Source Text (ST)	Seller expressly warrants that property, improvements, building or structures, the roof, plumping, heating/ or ventilation systems are in good and working order. This clause shall survive closing of title.
DeepSeek Translation	يضمن البائع صراحةً أن التحسينات العقارية والمباني أو المنشآت والسقف والأنظمة الصحية وأنظمة التدفئة و/ أو التهوية تكون بحالة جيدة وتعمل بشكل صحيح. يظل هذا البند ساري المفعول بعد انتقال الملكية.
Qwen Chat Translation	يُقر البائع صراحةً ويضمن أن تحسينات العقار, والمباني أو الهياكل, والسطح, ونظم السباكة, ونظم التدفئة و/أو التهوية, تكون في حالة جيدة وصالحة للعمل. ويظل هذا البند سارياً بعد إتمام نقل الملكية.
Human Translation (HT)	يضمن البائع صراحةً أن العقار محل البيع والتحسينات الملحقة على العقار, والمباني أو المنشآت , والسطح, والسباكة

(المواد الصحية), وأنظمة التدفئة و التهوية, جميعها في حالة جيدة, على أن تسري الآثار القانونية لهذه الفقرة حتى تاريخ التسجيل النهائي وانتقال الملكية الكاملة إلى المشتري.	

By looking at the translation generated by DeepSeek, It can be seen that, DeepSeek produced acceptable translations for phrases such as "Seller expressly warrants" as "يضمن البائع صراحة", "plumping" as "أنظمة صحية", and "building or structures" as "المباني أو المنشآت", reflecting the nature of legal language. Nevertheless, DeepSeek failed to deliver the exact legal meaning of the phrase "This clause shall survive closing of title", and inappropriately rendered it into Arabic as يظل هذا البند ساري المفعول بعد انتقال الملكية", which sounds odd and vague in Libyan legal context. Since its appropriate translation into Arabic could be على أن تبقى هذه الضمانات سارية ونافذة حتى إتمام التسجيل النهائي وانتقال الملكية الكاملة إلى المشتري", or as proposed by human translators (HT) as "على أن تسري الآثار القانونية لهذه الفقرة حتى تاريخ التسجيل النهائي وانتقال الملكية الكاملة إلى المشتري".

Furthermore, Qwen Chat improperly rendered the phrase "Seller expressly warrants" into Arabic as "يُقر البائع صراحةً ويضمن" which "acknowledges" rather than "warrants". In contract language, the term "acknowledge" is weaker than "warrant"; thus, this choice may weakens the binding legal obligation. Moreover, it mistranslated the phrase "plumping" as "نظم السباكة", which lacks precision.

Human translation, in contrast, distinguished as the most professional version in terms of legal accuracy, readability and adherence to legal standards in Arabic legal framework. It accurately conveyed phrases like "Seller expressly warrants" as "يضمن البائع صراحةً" instead of "يُقر البائع صراحةً ويضمن" and "plumping" as "مواد صحية" instead of "نظم "سباكة", as render by Qwen Chat. Crucially, human translators provided an

appropriate rendition for the phrase "This clause shall survive closing of title" as "على أن تسري الآثار القانونية لهذه الفقرة حتى تاريخ التسجيل النهائي وانتقال الملكية الكاملة إلى المشتري" , which is precise, readable, and fully aligned with Libyan legal formulation standards.

Article 9

Source Text (ST)	The Lessor hereby leases to the Lessee, and the Lessee herby accepts the lease of, the building, land, and appurtenances commonly known as____ and located at____ (hereinafter referred to as the "Building").
DeepSeek Translation	بموجب هذا, يؤجر المؤجر الى المستأجر, ويقبل المستأجر استئجار المبنى والأرض والملحقات المعروفة باسم _____ والواقعة في _____ (يشار إليها فيما بعد بـ "المبنى").
Qwen Chat Translation	يؤجر الطرف المؤجر هنا بموجب هذا للطرف المستأجر, ويقبل الطرف المستأجر بالإيجار, المبنى والأرض والملحقات المُعرفة _____ والموجودة في _____ (ويُشار إليها فيما بعد بـ "المبنى").
Human Translation (HT)	أجر المؤجر بموجب هذا العقد للمستأجر, وقبل المستأجر بموجب هذا العقد أن يستأجر المبنى والأرض والملحقات المتعارف عليها باسم ___ والكائنة في _____ (ويشار إليها فيما بعد بكلمة "البناء").

In the above Article, as we have seen, DeepSeek conveyed the overall meaning of the Article, properly captured the mutual obligations and consent highlighted in this Article. Nevertheless, the wording style is

somewhat informal and less aligned with legal formulations of Arabic contracts. For instance, utilizing of the term "ويقبل" in the present tense which is not aligned with contract drafting, it would rendered into Arabic as "وقبل" in the past tense. In addition, DeepSeek, provided expressions such as "بموجب هذا" which can be conveyed as "بموجب هذا العقد", also "الملحقات المعروفة" could be rendered as "الملحقات المتعارف عليها" maintaining the legal tone of the text. As with DeepSeek, Qwen Chat, to some extent, deliver an acceptable rendition for the above "Article"; however, utilizing inappropriate expressions such as "يؤجر الطرف المؤجر" which can be conveyed as "أجر المؤجر بموجب هذا العقد للمستأجر" , also هنا "ويقبل" المستأجر" and "الملحقات المُعرفة" that could be translated into Arabic legal context as "وقبل المستأجر" and "والملحقات المتعارف عليها باسم" .

In comparison, human translators (HT) produced the most legally accurate version of the above Article. In their translation, Human Translators utilized standard legal expressions such as "بموجب هذا العقد" instead of "بموجب هذا" as employed by both DeepSeek and Qwen Chat, also "وقبل المستأجر" instead of "ويقبل المستأجر", "الملحقات المتعارف عليها بأسم" instead of "الكائنة في" , and "الملحقات العروفة" or "الملحقات المعرّفة" instead of "الموجودة في".

Findings and Discussion

The findings obtained from this investigation revealed that, the performance of AI models; namely, DeepSeek and Qwen Chat, in translating English legal contracts into Arabic showed promise in producing acceptable translations for legal texts in certain instances. However, they are not totally accurate in translating complex structures where recognizing and respecting the target culture are essential. Thus, DeepSeek and Qwen Chat translations need to be revised by professional human translators. This finding aligned with

the finding revealed by studies conducted by Altakhaineh et al,. (2025), Rahi (2024), and Moneus and Sahari (2024), since they emphasized that AI modules delivered acceptable renditions for simple legal texts whereas failed to produce an appropriate translation for sophisticated legal terminology. However, this finding contradicts the finding obtained by Ben Zayed (2024), since it demonstrated that AI-powered tools such as Google translate and ChatGPT exceled in appropriately rendering precise and intricate legal terminology. The findings of this study also demonstrated that, expert human translators have shown high-quality translations of precise terminology and complicated structures that meet the requirements of Arabic legal standards and the Libyan legal formulations. This result is in harmony with a study presented by Abadich (2025), which indicated that the Human Translation (HT) remains the preferred chose when dealing with intricate legal terminology. Ultimately, the human mind is indispensable, and artificial intelligence tools are merely assistive aids. This finding is consistent with results revealed by a study conducted by Khoshafah (2023, as cited in Zayed & Nuirat 2024), where they emphasized that AI generated translation should be post-edited by professional human translators as a necessary step. Ultimately, the vast majority of errors committed by AI tools can be classified into two categories: cultural and contextual errors in terms of cultural references and context sensitivity, and linguistic errors represented in the appropriate usage of synonyms and legal doubts.

Conclusion

In conclusion, this research has been conducted to evaluate the accuracy of AI and human translators in translating English legal contracts into Arabic. Based on the findings presented above, translations generated by DeepSeek are not totally appropriate, however they can be so in case of some amendments are made to them by qualified human translators. Thus, AI translation tools, including DeepSeek and Qwen Chat are a promising complement to human translators; they do not yet supplant the necessity for expert human translators, especially in the legal domain.

Human translators, in contrast, have shown a high level of accuracy, readability, and quality required in legal context, maintaining the

Libyan legal tone and Arabic standards. Furthermore, showing a more in-depth awareness of legal culture background and textual nuances.

Recommendations

Based on the results of this investigation, we may conclude with the following recommendations:

- As AI improves, human translators who are skilled in integrating Artificial intelligence in translation will have a better chance than those who are unfamiliar with translation technology.
- AI is helpful; nevertheless, it's not perfect and can sometimes make mistakes or even make things up.
- More research is needed to be conducted in order to update and enrich the literature of AI translation.

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