Human vs. AI Translation in Multinational Corporations: A Comparative Analysis

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Received date: 25/09/2025 **Revised date: 30/09/2026** **Publication date: 01/10/2026**

Abstract:

This paper investigates the role of translation in contemporary business contexts by comparing the contributions of human and AI-based approaches. It examines how each method supports effective communication in legal, technical, and marketing domains, while also highlighting the potential of hybrid strategies that integrate human expertise with technological innovation. Particular attention is given to translation practices within multinational corporations (MNCs), where the risks of miscommunication are significant and the trade-off between efficiency and accuracy often shapes business outcomes.

Keywords: Multinational Corporations; Translation; Technology; AI Translation; Communication.

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1- Introduction:

In an era of globalization, effective multilingual communication has become a cornerstone of business success for multinational corporations (MNCs). Corporations now operate across borders, serving clients, customers, and employees from diverse linguistic and cultural backgrounds. In such contexts, translation is not merely a linguistic exercise but a strategic necessity for maintaining brand identity, ensuring legal compliance, and fostering positive relationships with stakeholders (Pym, 2010; Venuti, 2017). Miscommunication caused by poor translation can result in reputational harm, financial losses, or even legal disputes, highlighting the crucial role of accurate and culturally sensitive translation in international business (Gambier, 2016).

Traditionally, human translation has been regarded as the most reliable method for ensuring accuracy and cultural appropriateness. Professional translators bring domain expertise, contextual knowledge, and cultural awareness that enable them to adapt language beyond literal meaning (Jiménez-Crespo, 2019). However, this process can be costly, time-intensive, and difficult to scale across the massive volume of communication required in large corporations.

Recent advances in Artificial Intelligence (AI), particularly Neural Machine Translation (NMT), have begun to challenge traditional assumptions about translation in MNCs. AI translation tools such as Google Translate, DeepL, and custom corporate NMT systems are capable of producing output at unprecedented speed and scale, often at a fraction of the cost of human translation (Koehn, 2020). These tools have demonstrated measurable improvements in fluency and accuracy compared to earlier rule-based or statistical models, making them increasingly attractive to companies seeking efficiency (Torres, 2021).

Nevertheless, AI translations still struggle with idiomatic expressions, culturally sensitive content, and domain-specific terminology, raising concerns about their suitability for customer-facing or legally binding communication (Läubli et al., 2020).The tension between human and AI translation raises an important question for scholars and practitioners alike: Under what conditions can machine translation replace, complement, or fall short of human translation?

This paper seeks to address this question by analyzing translation practices in MNCs across three domains: legal, technical, and marketing communication in terms of accuracy, efficiency, and cultural sensitivity. It integrates theoretical insights from translation studies with practical business case studies to evaluate the effectiveness of human, AI, and hybrid translation approaches in real-world corporate communication.

The research is guided by the following questions: (1) How do human and AI translations differ in accuracy and reliability within multinational corporate communication? (2) To what extent do each method

handle cultural nuance and sensitivity? (3) What are the cost and time implications of adopting human translation, AI translation, or a hybrid model?

2. Literature review and theoretical framework

2.1 Human translation in business contexts

Human translation has long been considered the gold standard for cross-cultural communication, particularly in contexts requiring nuance, creativity, and sensitivity. Scholars emphasize that professional translators are not merely language converters but cultural mediators who ensure that meaning, tone, and intent are preserved across languages (Venuti, 2017). In multinational business settings, this function becomes essential for legal contracts, marketing campaigns, and intercultural negotiations, where a misinterpreted phrase can have significant reputational or financial consequences (Gambier, 2016).

One of the primary advantages of human translation is its ability to handle ambiguity, idiomatic expressions, and culturally specific references. For example, Pym (2010) highlights how human translators adapt messages to fit the expectations of target audiences rather than producing word-for-word equivalence. This skill is particularly valuable in marketing and advertising, where cultural resonance determines brand success. Similarly, Jiménez-Crespo (2019) argues that human translators maintain quality by applying domain-specific knowledge, something AI systems still struggle to achieve consistently.

However, human translation faces limitations in cost and scalability. Large corporations often generate vast amounts of multilingual documentation, ranging from internal communications to technical manuals. Meeting such demands with human translators alone can be prohibitively expensive and time-consuming (Torres, 2021). This tension between quality and scalability has led many MNCs to explore technological alternatives.

2.2 AI Translation in corporate environments

The rise of Artificial Intelligence, particularly Neural Machine Translation (NMT), has transformed the translation landscape over the last decade. Unlike earlier rule-based and statistical methods, NMT employs deep learning architectures to produce translations that are more fluent and contextually coherent (Koehn, 2020). Widely used tools such as Google Translate, DeepL, and Microsoft Translator have demonstrated rapid improvement in output quality, making them increasingly viable for corporate use.

AI translation offers significant advantages in speed, cost reduction, and scalability. Lau and Yung (2020) note that machine translation enables companies to process millions of words within seconds, a feat that would be impossible with human translators alone. In corporate environments where time-to-market is critical, this efficiency provides a competitive edge. Furthermore, AI systems can be trained on domain-specific corpora, improving accuracy in technical fields such as medicine, law, or information technology (Toral & Way, 2018).

Despite these advantages, limitations persist. AI translations often fail in handling figurative language, idiomatic expressions, and culturally embedded meanings. Laübli, Sennrich, and Volk (2020) demonstrate that even high-performing NMT systems tend to produce literal translations that miss pragmatic subtleties, making them unsuitable for sensitive or high-stakes communication. Moreover, AI systems may reinforce existing biases present in their training data, raising ethical and reputational concerns for companies (Bender et al., 2021). As a result, scholars increasingly suggest that while AI is valuable for efficiency, its use must be carefully managed when cultural nuance is critical.

2.3 Human-AI synergy in corporate communication

In practice, multinational companies often adopt a hybrid approach that combines the strengths of both human and AI translation. Research indicates that AI translation tools are frequently used for internal communication, technical documentation, and real-time multilingual

interaction, while human translators are reserved for marketing, branding, and legal documents (Jiménez-Crespo, 2019; O'Hagan, 2020). This division reflects a pragmatic balancing of cost, efficiency, and quality.

Corporate strategies also reveal an increasing reliance on post-editing machine translation (PEMT), where human translators revise AI-generated output. According to Toral and Way (2018), PEMT has become a cost-effective method for ensuring acceptable accuracy while maintaining speed. However, post-editing introduces new challenges related to translator workload, job satisfaction, and the evolving professional identity of human translators (O'Brien, 2019).

Additionally, studies show that perceptions of translation quality affect trust and customer satisfaction in global markets. For instance, even minor errors in customer-facing communication can undermine consumer confidence, particularly when cultural insensitivity is detected (Gambier, 2016). As such, MNCs must strategically determine when AI translation is sufficient and when human expertise is indispensable.

3. Translation practices within multinational corporations

3.1 Human Translation Practices

Human translation remains indispensable in high-stakes contexts where accuracy, nuance, and cultural resonance are critical. For instance, Siemens relies on professional translators for legal and compliance documentation, where mistranslations could have serious legal implications (Schäffner, 2016). Similarly, Coca-Cola adapts its global marketing campaigns using human translators and cultural consultants to ensure that slogans resonate across diverse audiences; the "Taste the Feeling" campaign was translated into more than 200 languages with local cultural adaptations (De Mooij, 2019). Likewise, Toyota frequently employs human interpreters and translators in negotiations and client-facing events to safeguard brand image and intercultural communication (Gambier, 2016). These examples illustrate how MNCs prioritize human expertise when reputational, legal, or emotional stakes are high.

3.2 AI Translation practices

By contrast, AI translation is often deployed in contexts requiring scalability and immediacy. Airbnb, for example, uses AI-powered translation to allow instant communication between hosts and guests across more than 60 languages (Airbnb, 2018). Microsoft employs its own NMT system (Microsoft Translator) to facilitate real-time communication among employees worldwide, ensuring smoother collaboration across global teams (Microsoft, 2021). Similarly, Amazon uses machine translation to localize millions of product listings at scale, making its marketplace accessible globally (Katan & Straniero Sergio, 2021). In such cases, human translation would be prohibitively expensive and too slow to meet demand.

3.3 Hybrid translation practices

Hybrid models, where AI output is refined by human translators, are increasingly common. The BBC World Service uses AI to produce initial translations of news content, which are then reviewed by human editors to ensure accuracy and cultural nuance (O'Hagan, 2020). In the healthcare sector, Pfizer applies machine translation to internal drafts of medical information, but relies on professional translators for public-facing patient safety documents to avoid misinterpretation (Craciunescu, 2019). Similarly, IBM integrates post-editing machine translation (PEMT) for technical manuals: AI handles bulk translation, followed by human post-editors who ensure terminology accuracy and consistency (Toral & Way, 2018).

These translation practices demonstrate how MNCs strategically align translation methods with communication goals: human translation for sensitive or creative texts, AI for high-volume and time-sensitive content, and hybrid approaches when both speed and quality are essential.

4. Corporate translated documentation

Translation in multinational corporations (MNCs) spans a variety of documentation categories, each with its own functions, requirements, and challenges. The most prominent among these are legal, technical, and marketing documentation. While all three categories aim to facilitate cross-

border communication, they differ significantly in their degree of precision, cultural adaptability, and tolerance for error.

4.1. Legal documentation

Legal translation represents one of the most sensitive domains in global business. Documents such as international contracts, shareholder agreements, patents, compliance reports, and intellectual property filings must be translated with absolute accuracy, since even minor ambiguities can lead to legal disputes, financial losses, or non-compliance with regulatory authorities (Cao, 2007).

Human translation is generally preferred in this context due to the complexity of legal terminology and the need for translators who are not only linguistically competent but also knowledgeable about legal systems across jurisdictions (Harvey, 2002). For example, the term "consideration" in Anglo-American contract law has no direct equivalent in many civil law systems, requiring a nuanced approach that machines are not yet able to fully capture.

AI translation can play a supplementary role in pre-translating large volumes of legal text, particularly standardized forms or boilerplate clauses. However, the risk of semantic distortion means that human review is indispensable before such documents are finalized (Šarčević, 2015).

4.2. Technical documentation

Technical texts encompass product manuals, engineering specifications, safety guidelines, software localization, and training materials. These documents are often highly structured and repetitive, with consistent terminology that must be applied across different languages and markets (Byrne, 2012).

AI translation demonstrates significant advantages in this domain. Neural machine translation (NMT) systems can process thousands of pages quickly, identify recurring terms, and ensure consistency through integrated terminology databases (Castilho et al., 2018). This makes them particularly

valuable for multinational corporations producing large volumes of technical material for global distribution.

Human translators, however, remain essential for quality control. AI systems may struggle with context-sensitive meanings or new, domain-specific terminology. For instance, a mistranslation in a safety guideline for a chemical product could lead to serious accidents. Human oversight ensures clarity, safety, and adherence to regulatory standards (O'Hagan, 2020).

4.3. Marketing documentation

Marketing materials ranging from advertisements and brand campaigns to websites and social media content differ sharply from legal and technical texts in that their purpose is persuasive rather than informative. They must resonate emotionally with target audiences while preserving the global identity of the brand (Katan, 2014).

Human translation is indispensable in this area. Effective marketing requires not just linguistic transfer but also "transcreation" , where messages are creatively adapted to align with cultural values, humor, idioms, and consumer preferences (Pedersen, 2014). For example, Coca-Cola's global campaigns often adapt slogans to reflect local cultures while retaining a unified brand image.

AI translation, while useful for generating initial drafts or handling routine content, often struggles with nuance, tone, and creativity. A literal rendering of a slogan may produce linguistically accurate but culturally irrelevant or even misleading results. Thus, AI is best positioned as a supportive tool rather than a replacement for human expertise in marketing translation (Jiménez-Crespo, 2022).

The diversity of translated documentation within MNCs underscores the fact that no single translation approach human or AI can meet all corporate needs. Legal texts demand precision and legal literacy, technical documents require efficiency and terminological consistency, and marketing materials depend on cultural adaptation and creativity. Consequently, the

future of translation in business contexts is likely to involve hybrid strategies that leverage the speed of AI while retaining the critical oversight and cultural sensitivity of human translators (Pym, 2014).

5. Practical examples of corporate translated documentation

The present practical examples of translation practices within MNCs seek to explore the role of translation in business contexts by examining the comparative value of human and AI approaches. The aim is to assess how each contributes to effective communication across legal, technical, and marketing domains, while also considering the potential of hybrid strategies that combine human expertise with technological innovation, by analyzing the contexts in which human translation, AI translation, or a combination of both are most effective.

5.1. Legal documentation

Document type: Confidentiality Agreement /Accord de confidentialité

Source: I C C (International Chamber of Commerce) Website

English	Français
Parties: This Agreement is made between [Disclosing Party] and [Receiving Party].	Parties : Le présent Accord est conclu entre [Partie Divulgatrice] et [Partie Réceptrice].
Confidential Information: All non-public information disclosed by the Disclosing Party.	Informations Confidentielles : Toutes informations non publiques divulguées par la Partie Divulgatrice.
Obligations: Receiving Party must keep information secret, not share it without consent, and use it only for the agreed purpose.	Obligations : La Partie Réceptrice doit garder les informations secrètes, ne pas les partager sans consentement et les utiliser uniquement aux fins convenues.
Exclusions: Public information, prior knowledge, independent	Exclusions : Informations publiques, connaissances préalables,

development, or required by law.	développement indépendant ou divulgation exigée par la loi.
Term: Effective from [Date] for [X years], unless ended earlier by mutual consent.	Durée : En vigueur à partir du [date] pour [X années], sauf résiliation anticipée d'un commun accord.
Return/Destruction: All confidential materials must be returned or destroyed upon request.	Restitution/Destruction : Tous les documents confidentiels doivent être restitués ou détruits sur demande.
Governing Law: This Agreement is subject to the laws of [Country].	Loi Applicable : Le présent Accord est régi par les lois de [pays].

IN WITNESS WHEREOF, the Parties have signed this Agreement.

EN FOI DE QUOI, les Parties ont signé le présent Accord.

Disclosing Party / Partie Divulgatrice: _____

Receiving Party / Partie Réceptrice: _____

Because of the high stakes of accuracy, compliance, and liability, most of the multinational corporations typically rely on human translators or bilingual legal teams for such documents to avoid misinterpretation.

5.2. Technical documentation

Document type: Bedienungsanleitung / Product Manual

Source: Siemens Products &Services Website

Deutsch	English
Produktübersicht: Drahtlose Kopfhörer, entwickelt für hochwertigen Klang und Komfort. Enthält Bluetooth 5.0, Geräuschunterdrückung und 20 Stunden Akkulaufzeit.	Product Overview: Wireless Headphones, designed for high-quality sound and comfort. Includes Bluetooth 5.0, noise cancellation, and 20-hour battery life.

Einrichtung: 1. Laden Sie die Kopfhörer mit dem mitgelieferten USB-C-Kabel auf. 2. Schalten Sie die Kopfhörer ein (Taste 3 Sekunden gedrückt halten). 3. Aktivieren Sie Bluetooth auf Ihrem Gerät und wählen Sie „WH-200“aus der Liste.	Setup Instructions: 1. Charge the headphones using the USB-C cable provided. 2. Turn on the power button (hold for 3 seconds). 3. Enable Bluetooth on your device and select “WH-200” from the list.
Sicherheitshinweise: - Verwenden Sie die Kopfhörer nicht über längere Zeit bei hoher Lautstärke. - Von Wasser und extremer Hitze fernhalten. - Nur das mitgelieferte Ladegerät verwenden.	Safety Guidelines: - Do not use at high volume for extended periods. - Keep away from water and extreme heat. - Only use the supplied charger.
Fehlerbehebung: - Kein Ton? Überprüfen Sie die Bluetooth-Verbindung. - Akku lädt nicht? Kabelanschluss prüfen. - Schlechte Klangqualität? Nähern Sie sich Ihrem Gerät.	Troubleshooting: - No sound? Ensure Bluetooth is connected. - Battery won’t charge? Check cable connection. - Poor sound quality? Move closer to your device.
Garantie & Kontakt: 1 Jahr eingeschränkte Garantie. Für Service besuchen Sie: www.company.com/support	Warranty & Contact: 1-year limited warranty. For service, visit: www.company.com/support

American, German and Chinese companies rely heavily on AI-assisted translation + human post-editing strategy to process large volumes of technical documentation quickly while maintaining quality.

5.3. Marketing documentation

Document type: Localization messaging

Source: Coca-Cola, McDonald's Localization Cases in FIFA World Cup

Coca-Cola localized its global campaign for the 2010 FIFA World Cup by producing a bilingual Arabic–English version of the official anthem "Waving Flag" « شجع بعلمك »

For the 2022 FIFA World Cup Coca-Cola successfully maintained its global identity while achieving strong cultural relevance across the Arab world. Coca-Cola "Believing is Magic" « الإيمان يصنع المعجزات »

McDonald's campaign "Welcome to the World's Game" « مرحبًا بلعبة العالم » emphasized optimism, with Arabic slogans appearing on packaging during the tournament, highlighting togetherness and football celebration.

McDonald's in Saudi Arabia has modified its products and services to meet local tastes and habits by introducing "McArabia" « وجبة مك أرابيا » while keeping global identity.

6. Discussion

The analysis of translation practices in multinational corporations (MNCs) reveals that effective global communication requires a nuanced understanding of the strengths and limitations of both human translation and AI translation. Across legal, technical, and marketing documentation, each approach demonstrates distinct advantages but also clear shortcomings when applied in isolation.

In legal translation, the stakes of misinterpretation underscore the indispensability of human expertise. While AI can process standardized legal clauses rapidly, it lacks the interpretive capacity to account for differences in legal systems and jurisdictional nuances (Cao, 2007; Harvey, 2002). This confirms that legal documentation remains a domain where human translation dominates, with AI serving only a supportive role.

In technical translation, AI shows its greatest potential. Neural machine translation (NMT) systems are highly effective in handling

repetitive, structured texts, enabling corporations to reduce costs and streamline product launches across global markets (Castilho et al., 2018). Yet, the risks associated with misinterpretation in safety or engineering guidelines demonstrate the continuing need for human post-editing and domain expertise (Byrne, 2012; O'Hagan, 2020).

In marketing translation, the limitations of AI become most visible. While AI can generate baseline drafts and assist in keyword optimization, it consistently fails to deliver the creativity and cultural resonance required for successful brand messaging (Katan, 2014; Jiménez-Crespo, 2022). Human translators remain essential in shaping global campaigns that resonate locally, ensuring that slogans, advertisements, and digital content maintain emotional appeal and brand integrity.

These models illustrate that the future of translation is not a matter of competition between human and AI, but rather one of collaboration. However, challenges remain. AI translation systems raise concerns about data security in the handling of sensitive corporate documents, while the variable quality of outputs necessitates different levels of human intervention depending on the subject matter (O'Hagan, 2020). Moreover, corporations must invest in training translators to work effectively with AI tools, ensuring that technology serves as an enabler rather than a threat to professional expertise (Pym, 2014).

7. Conclusion

The study demonstrates that translation in MNCs is not merely a linguistic activity but a "strategic function" central to global competitiveness. It thus reinforces the idea that the diversity of translated documentation within MNCs underscores that no single translation approach can meet all corporate needs. Human translation ensures legal accuracy and creative adaptation, while AI enhances scalability and efficiency. Hybrid strategies combining human oversight with AI capabilities- represent the most effective model for global business communication through translations that are not only efficient but also legally sound, technically accurate, and culturally relevant.

8. References:

Bender, E. M., Gebru, T., McMillan-Major, A., & Shmitchell, S. (2021). On The Dangers of Stochastic Parrots: Can language Models Be Too Big? Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency [https://doi.org]

Byrne, J. (2012). Scientific and Technical Translation Explained: A Nuts-and-Bolts Guide for Beginners. Routledge.

Cao, D. (2007). Translating Law. Multilingual Matters.

Castilho, S., Moorkens, J., Gaspari, F., Calixto, I., Tinsley, J., & Way, A. (2018). Evaluating MT for Human Translators in a Commercial Setting. Translation Spaces, 7(1).

Craciunescu, O. (2019). The Role of Translation in Multinational Healthcare Communication. Journal of Specialized Translation, 32(7).

De Mooij, M. (2019). Global Marketing and Advertising: Understanding Cultural Paradoxes (5th ed.). SAGE Publications.

Gambier, Y. (2016). Rapid and Radical Changes in Translation and Translation studies. International Journal of Communication, 10(3).

Harvey, M. (2002). What's so Special About Legal translation? Meta: Journal des Traducteurs, 47(2).

Jiménez-Crespo, M. A. (2019). Translation and Web Localization. Routledge.

Katan, D. (2014). Translating Cultures: An Introduction for Translators, Interpreters and Mediators (2nd ed.). Routledge.

Koehn, P. (2020). Neural Machine Translation. Cambridge University Press.

Lau, K., & Yung, C. (2020). Machine Translation in Multinational Corporations: Benefits and Risks. Asia Pacific Business Review, 26(4).

Läubli, S., Sennrich, R., & Volk, M. (2020). Has Neural Machine Translation Achieved Human parity? A Case for document-level evaluation. Machine Translation, 34(8). [https://doi.org]

O'Brien, S. (2019). Translation and Technology: The Evolving Role of the Translator. Translation Spaces, 8(2).

O'Hagan, M. (2020). The Routledge Handbook of Translation and Technology. Routledge.

Pedersen, D. (2014). Transcreation in Global Advertising Campaigns. Perspectives, 22(4).

Pym, A. (2010). Exploring Translation Theories. Routledge.

Pym, A. (2014). Translation Research Projects. Intercultural Studies Group.

Schäffner, C. (2016). Multilingualism and Translation in Corporate Communication. Perspectives, 24(3).

Šarčević, S. (2015). Language and Culture in EU Law. Multilingual Matters.

Torres, D. (2021). Neural Machine Translation in Business: Opportunities and Challenges. Translation & Interpreting, 13(1).

Toral, A., & Way, A. (2018). What Level of Quality Can Neural Machine Translation Attain on Literary text? In Translation Quality Assessment: From Principles to Practice. Springer.

Venuti, L. (2017). The Translator's Invisibility: A History of Translation (3rd ed.). Routledge.