IDSCIPUB
Indonesian Scientific Publication

Legalis
Journal of Law Review

Check for updates

OPEN ACCESS

*CORRESPONDENCE
Md Samirul Islam,
m.islam.265@westcliff.edu

RECEIVED 15 January 2026
ACCEPTED 02 March 2026
PUBLISHED 30 April 2026

CITATION
Islam MS, Sayed A, Mahjabin A, Rimi NN (2026) Artificial Intelligence and the Future of International Trade Law: Balancing Innovation, Regulation, and Global Fairness. *Legalis : Journal of Law Review*. 4 (2), 88-101.
doi: 10.61978/legalis.v4i2.1349

TYPE Original Research
PUBLISHED 30 December 2025
DOI 10.61978/legalis.v2i4.1349
VOL 4 Issue 2 April 2026

Artificial Intelligence and the Future of International Trade Law: Balancing Innovation, Regulation, and Global Fairness

Md Samirul Islam[1*], Abu Sayed[2], Anika Mahjabin[3], Nur Nahar Rimi[4]

[1234]International American University, Los Angeles, USA

Abstract

The international trade system will see the growing influence and use of artificial intelligence (AI), which has had important implications for regulation, decision-making, as well as global governance on both sides of borders. Building on legitimacy theory, this research provides the first empirical evidence of how AI knowledge competences, perceived ethical and transparency standards of AI, global fairness concerns over them and trust in AI impact governance alignment and how such governance alignment drives support for integrating AIs into international trade law. A quantitative study was designed in the form of a survey administered to U.S. policymakers, legal experts, business professionals and scholars. Following data screening, 320 returned cases were considered in Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings show that all the four antecedents variables, namely firm scope, power asymmetry, strategic interpenetration and home country legitimacy, have a positive impact on governance alignment. Governance alignment is shown to have a significant direct impact on AI integration in international trade law, and it also strongly mediates the relationships between AI talent competencies, ethical and transparency standards, global fairness concerns, trust in AI and AI integration. The results emphasize governance alignment as a core mechanism. By doing so, it offers empirical evidence for the institutional and ethical requirements needed for responsible AI adoption in international trade law, while providing policy-relevant insights addressing the challenge of fostering innovation while ensuring fairness, transparency and global equity.

KEYWORDS

artificial intelligence; international trade law; governance alignment; global fairness; trust in ai; ethical and transparency standards.

Introduction

Artificial intelligence (AI) is increasingly embedded in international trade governance, influencing areas such as automated customs risk assessment, tariff classification, trade compliance monitoring, and cross-border enforcement mechanisms. These applications offer improvements in efficiency, consistency, and cost reduction, but they also introduce complex legal and institutional challenges related to transparency, accountability, fairness, and regulatory coordination across jurisdictions (Liu & Lin, 2020). As trade authorities and stakeholders rely more on AI-driven systems, concerns arise regarding how algorithmic decisions are governed, justified, and aligned with international trade law frameworks. This creates a central governance challenge: balancing technological innovation with legal legitimacy, ethical standards, and global equity. Without coherent governance alignment, AI-

based trade decisions may increase regulatory fragmentation, reinforce power asymmetries between countries, and weaken trust in trade institutions. Despite the growing importance of these issues, empirical research on how governance alignment shapes institutional support for AI integration in international trade law remains limited. Effective governance policies are therefore necessary to ensure that AI technologies are deployed in compliance with legal standards and global trade principles. AI is transforming global trade by enhancing customs checks, enabling predictive analytics in policymaking, and improving logistics efficiency. Equity remains a critical concern in AI-driven trade systems. The use of AI in areas such as tariff classification, customs duty determination, and trade dispute resolution raises questions about fairness, particularly if algorithmic outcomes favor certain countries or industries. Ethical considerations are equally important, as AI systems are often perceived as opaque, raising concerns about transparency, accountability, and potential bias. A lack of transparency can reduce trust among governments, businesses, and consumers, making trust a key factor in AI adoption. For AI to be widely accepted, it must be transparent, accountable, and aligned with international norms (Markus et al., 2025). The integration of AI into international trade law presents both opportunities and challenges. AI can improve trade processes by increasing speed, accuracy, and transparency. However, its implementation requires governance mechanisms that align with existing legal frameworks and policy objectives (Kashefi et al., 2024). Automated systems such as customs inspections, predictive regulatory analytics, and supply chain optimization enhance efficiency but also raise concerns about how decisions are made and justified. If AI decision-making remains opaque, it may undermine public trust in trade regulation. Therefore, transparency and accountability are essential for ensuring the legitimacy of AI systems in international trade law. Governance challenges are particularly evident because many existing legal frameworks were not designed to accommodate algorithmic decision-making. This creates risks of regulatory gaps, accountability deficits, and inconsistent enforcement across jurisdictions (Emery-Xu et al., 2025). Governance alignment is therefore essential to ensure that AI systems operate within established legal and ethical boundaries while supporting efficiency and policy objectives. In contrast, governance misalignment can limit the effectiveness of AI, reduce trust in trade institutions, and exacerbate structural inequalities in global commerce (Abbas et al., 2025). Trust in AI is a critical factor influencing its adoption in international trade law. Without trust, governments and firms may hesitate to rely on AI systems, limiting their potential benefits. Building trust requires transparency, ethical design, and strong governance frameworks that ensure fairness and accountability. These factors influence how stakeholders perceive AI and determine whether it is accepted as a legitimate tool in trade regulation. This study examines the integration of AI in international trade law by analyzing how AI knowledge competency, perceived ethical standards, transparency, global justice, trust in AI, and governance alignment interact. These factors can act as enablers or barriers to the adoption of AI in global trade systems, influencing whether AI contributes to fair and efficient outcomes. Understanding these relationships is essential for developing governance frameworks that maximize the benefits of AI while minimizing associated risks. Recent research highlights the need for coordinated regulatory approaches to prevent legal fragmentation and unequal economic outcomes in AI-driven trade systems. Digital trade governance now extends beyond traditional tariffs and customs regulations to include algorithmic decision-making, cross-border data transfers, and automated enforcement mechanisms (Burri, 2015). Without appropriate legal and ethical oversight, AI may create regulatory imbalances that disproportionately benefit technologically advanced economies (Brownsword, 2019). Ethical governance frameworks are therefore necessary to ensure that AI integration promotes transparency, accountability, and inclusivity rather than reinforcing existing disparities (Floridi et al., 2018). The study is important because it addresses the intersection of technology, law, and international trade, where AI is reshaping global trading systems. Understanding how AI can be integrated into trade law while maintaining fairness, transparency, and legality is critical for policymakers, regulators, and businesses. AI has the potential to significantly improve trade processes such as customs checks, tariff classification, and dispute resolution, making them faster and more efficient. However, these benefits must be balanced against risks related to inequality and governance gaps. The research emphasizes the importance of governance alignment in reducing disparities and supporting equitable trade practices. By aligning AI systems with legal and ethical standards, policymakers can ensure that AI contributes to fair outcomes and does not marginalize less advanced economies. Ethical concerns, particularly related to transparency and accountability, are central to this process. If stakeholders do not understand how AI systems make decisions, trust in trade regulation may decline (Felzmann et al., 2020). Developing clear ethical guidelines and governance frameworks is therefore essential for responsible AI use.

The study also highlights the importance of trust in enabling AI adoption. Trust is shaped by governance quality, transparency, and adherence to ethical standards, and it plays a key role in determining whether AI systems are accepted in international trade law. Strengthening trust requires coordinated efforts to ensure that AI systems operate fairly, transparently, and in compliance with international norms. In addition, the study underscores the role of governance alignment in creating an environment conducive to AI integration. Effective alignment supports collaboration among stakeholders and facilitates the development of AI-enabled trade systems that are both efficient and legally compliant. These insights are valuable not only for academic research but also for governments, international organizations, and businesses seeking to integrate AI into trade regulation. Overall, this research contributes to the development of legal and governance frameworks that support the responsible integration of AI into international trade law. By examining the relationships among AI knowledge competency, ethical standards, transparency, global justice, trust in AI, and governance alignment, the study provides a comprehensive understanding of the factors shaping AI adoption in global trade. As AI continues to transform international commerce, these insights are essential for designing policies that promote innovation while ensuring fair, transparent, and effective trade systems.

Bringing AI into international trade law represents a convergence of technology, legal doctrines, and governance with significant implications for global trade dynamics. As AI continues to evolve, understanding its role in trade law is essential for addressing complex

ethical, governance, and equity challenges. This study highlights key constructs AI knowledge competency, governance alignment, ethical considerations, global equity, and trust as critical for the successful integration of AI in cross-border trade systems. AI knowledge competency refers to the extent to which policymakers, trade practitioners, and businesses understand AI's capabilities and implications for international trade. This understanding is necessary for making informed decisions about the responsible and effective use of AI in trade law. Greater interpretability of AI systems enables stakeholders to recognize both their benefits and risks, helping to mitigate issues such as bias and unintended outcomes (Carolus et al., 2023). Governance alignment is another central concept, emphasizing the need to integrate AI systems with existing legal and regulatory frameworks. AI applications in trade must operate within rules that ensure ethical, legal, and fair use. Proper alignment enhances decision-making efficiency and supports compliance with international legal standards while reducing risks related to data privacy and unfair outcomes. Ethical considerations present a major challenge due to the complexity and opacity of AI decision-making. Establishing principles of fairness, accountability, and transparency is essential to ensure that AI systems operate responsibly. Without such standards, AI may reinforce existing biases and produce uneven trade outcomes favoring certain countries or firms. Global equity further complicates AI integration in international trade law. As AI increasingly influences processes such as tariff classification, customs clearance, and dispute resolution, there is a risk that technologically advanced countries may gain disproportionate advantages. Ensuring fairness in AI-driven trade systems requires policies that prevent inequality and promote balanced participation across nations. Trust in AI is essential for its adoption and effectiveness. Without confidence in AI systems, stakeholders may resist their use, limiting their potential benefits. Trust depends on transparency, accountability, and adherence to ethical standards, which together support responsible AI deployment. These interrelated constructs provide a comprehensive framework for understanding the challenges and opportunities of integrating AI into international trade law. This study examines how these factors influence AI adoption and proposes pathways to maximize its benefits while minimizing associated risks.

AI Knowledge Competency (KC) and Governance alignment (GA)

If Knowledge Competency on AI is important for improving governance alignment, as it fosters decision-making, increases transparency and improves knowledge management. By incorporating AI into their governance structures, organizations can better align strategic objectives with responsible AI practices and gain a competitive edge. Strong evidence suggests that those firms having good AI governance mechanisms have better knowledge management capabilities and knowledge as an input to optimal governance alignment is very much important (Cui et al., 2022). AI and decision-making AI helps drive better decisions by offering companies more powerful analytics, improved predictive insights and the ability to make smarter choices.

The use of AI in the governance system enhances risk management and ethics, thereby guaranteeing that decisions are aligned with sound values. AI technologies improve information symmetry, which is necessary for effective corporate governance, by providing opportunities for knowledge acquisition and diffusion. Those organizations that are using AI for KM can better control the information flow and establish better governance mechanisms (Fernandes et al., 2025). Transparency can be further increased by utilizing AI governance frameworks for organizations. This is an important feature for building public trust in the application of AI within government(Robles & Mallinson, 2025). Crystalline guidelines for AI governance can ease privacy and algorithmic bias fears, allowing equitable services. Competency in AI knowledge can enable alignment of governance; however, it also introduces issues such as privacy and algorithmic bias. These concerns emphasize the importance of effective laws to enable AI programs to act impartially in concordance with the governmental objectives.

H1: AI Knowledge Competency has a significant positive impact on Governance alignment.

Perceived Ethical & Transparency Standards of AI (ETS) and Governance alignment (GA)

The efficacy of governance over AI is largely determined by ethical norms and transparency within the domain. By embedding trust, accountability, and ethical principles into AI systems, AI can be used responsibly. When implementing AI in governance, ethics and transparency are essential. This alignment improves decision-making, increases operational efficiency, and reduces harms from AI products. Explainable AI (XAI) models help restore trust in AI by providing greater transparency than traditional black-box models. This transparency is especially important in ethical data governance and management for compliance rules, as it ensures that people can understand how AI makes its decisions (Olateju et al., 2024). XAI is associated with more ethical data practices and emphasizes the need for transparent processes and strong governance models to build confidence and support informed decision-making. AI applications can improve business decision-making and operational efficiency, but they also introduce concerns related to data privacy and algorithmic bias. Therefore, ethics and transparency must be prioritized if AI is to function effectively in governance. The findings highlight the importance of establishing ethical principles and clear standards to ensure AI systems align with corporate governance and social values (Kalkan, 2024). In the public sector, governance mechanisms focus on accountability and transparency, which builds trust in government and reduces algorithmic risks. Ethical regulation of artificial intelligence is a central issue in regulatory and academic discussions. Openness and accountability are essential for the legitimacy of AI-driven decision-making systems, especially in legally sensitive areas like international commerce (Jobin et al., 2019). Ethical frameworks for AI prioritize explainability, justice, and human oversight as core principles that align algorithmic systems with social norms. Without such rules, AI systems may reproduce opaque decision-making processes that weaken trust in trade-related legal outcomes. The rapid development of AI also challenges existing governance arrangements, highlighting the need for stakeholders to adapt and cooperate in response to emerging risks.

H2: Perceived Ethical & Transparency Standards of AI has a significant positive impact on Governance alignment.

Global fairness concern (GFC) and Governance alignment (GA)

The good governance is impossible without equity. In the NHS ethics are important for making contact with

stakeholders and getting an organization to work (Corbett-Nolan, 2024; Highton, 2024). CSR initiatives consistent with governance have proven to be effective in encouraging implementation of the Sustainable Development Goals (SDGs), and in particular, have allowed for stronger social and environmental performance within the tourism and hospitality industry (Helfaya & Bui, 2025). Such alignment reconciles stakeholders' immediate interests with the longer-term health of the organization. Stakeholder cooperation is key to achieving fairness in global value chains. In the context of clothing, one tends to focus on social and environmental issues (Starmanns, 2007). Furthermore, algorithmic systems implemented without equity-focused governance frameworks may inadvertently favour dominant market participants and perpetuate structural inequities in global trade (Zuboff, 2019). These considerations emphasise the need of including notions of fairness and distributive justice into AI governance frameworks under international trade law. These joint efforts illustrate the relevance of governance networks to promote compliance with fairness considerations in cross-national supply networks. While it is clear that global fairness has a positive impact on governance alignment, some skeptics would say that the pursuit of fair play does not always run true to form. This will potentially raise interesting issues about practical equity in different governance settings. This fit--mismatch could undermine the overall effectiveness of governance systems.

H3: Global fairness concern has a significant positive impact on Governance alignment.

Trust in AI (TAI) and Governance alignment (GA)

AI confidence is important for governance of AI to satisfy its objectives. This encourages transparency, accountability, and integrity in using AI. Trust is key to successful implementation of AI tools in the public sector. It affects human perceptions of AI-based decision-making models and is important for their effectiveness. Building trust is key to successful AI in governance, and good governance of AI relies on public trust so that societal objectives and values are reflected in AI systems (Lahusen et al., 2024). Explainable AI (XAI) models help improve trust in the system, which is essential for ethical data utilization and compliance with governance policies. Trust acts as a gateway through which AI technologies are adopted and influences the quality of AI-driven decision-making in governmental contexts (Salem et al., 2024). Creating strong rules for information governance and transparency is necessary to develop trust in AI systems. The development of ethical AI frameworks, including principles such as fairness, transparency, and accountability, is necessary to foster public trust and ensure adherence to AI systems (Sajjanapu, 2025). To design effective AI rules, public trust in government is essential, and it significantly affects how governments use and adopt AI. Trust can also be strengthened by involving people in decision-making and maintaining open discussions about the benefits and risks of AI. However, trust in AI is not the only challenge. Confidence in AI systems is widely recognized as essential for institutional and regulatory adoption. Research shows that trust depends on system performance as well as perceptions of fairness, transparency, and explainability (Glikson & Woolley, 2020). Explainable artificial intelligence (XAI) enhances trust by enabling stakeholders to understand and evaluate algorithmic judgments (Arrieta et al., 2020). In international trade law, where decisions can have major economic and political consequences, trust is crucial for stakeholder acceptance. Many concerns remain regarding potential bias and ethical risks in AI, and building trust requires addressing these concerns through fair and ethical AI practices.

H4: Trust in AI has a significant positive impact on Governance alignment.

Governance alignment (GA) and AI integration in international trade law (ITL)

For effective AI integration with international trade law, governance is something that needs to be in sync. It promotes standards harmonization among the nations and encourages trade and innovation. By aligning governance models, we can solve major issues like data privacy, intellectual property rights and regulatory requirements. All of these are essential for AI to fulfill its potential in international trade. Ultimately, this alignment underpins interoperability and innovation, supports market integration and simplifies trade by ensuring that ICT used for border procedures does not create additional barriers to cross-border activities. What follows will provide more detail on how governance alignment would affect the practical use of AI in international trade law. If international trade is to promote interoperability and innovation, then we will need national consensus on how AI should be governed. This suggests that data protection regimes and traditional intellectual property rights will have to be harmonized in order to secure the free flow of data and AI-generated outputs across borders (Khan, 2024). The G7's Hiroshima AI Process is an example of countries working to ensure that their national approaches to AI governance are consistent with international norms. Thus, all parties concerned will be able to understand and manage the risks involved.

Academics increasingly contend that the successful incorporation of AI into international trade law relies on regulatory harmonization and collaboration among international institutions. Algorithmic governance necessitates standardized legal frameworks to guarantee interoperability, accountability, and ethical adherence across countries (Yeung, 2018). Integration of AI can improve trade by better predicting demand, optimizing routes and enabling faster customs. This leads to better logistics and stock control (Ozturk, 2024). Governance congruence will guarantee AI driven trade finance solutions, such as automated processing of document and risk assessment is legible and usable thus reducing transactions. Convergence in governance is essential to curb ethical and technological risks related to AI use in business. It makes certain that AI algorithms respect notions of honesty and fairness. We are confronted with the issues of data quality and public perception; however, we can overcome this by promoting international cooperation on AI governance. This is certainly help to gain confidence in accepting AI technology in business. The alignment of governance is essential to connections between AI and international trade law; however, it has to be admitted that there are difficulties for such an alignment. The fast pace of AI development has surpassed current regulatory systems, leaving a governance gap. Furthermore, it is difficult to establish regulations that can be applied globally as each country has different interests and agendas (Tosun 2023). Still, global cooperation and clear communication are key to moving past these challenges and maximizing the potential of AI in international trade.

H5: Governance alignment has a significant positive impact on AI integration in international trade law.

Mediating role of Governance alignment

This research examines the role of governance alignment in shaping support for integrating AI into international trade law. It proposes that governance alignment moderates the relationship between AI knowledge competency and support for AI integration. Individuals and institutions with strong AI knowledge competency are more likely to support its application in trade law, particularly when appropriate regulatory frameworks are in place. Governance alignment strengthens this relationship by ensuring that AI systems operate within structures that promote fairness, transparency, and legality. In contrast, weak governance alignment may reduce support due to concerns about bias, accountability, and justice. Thus, governance alignment enhances the positive impact of AI knowledge competency on readiness for AI integration. The study also highlights the role of governance alignment in shaping perceptions of ethical standards and transparency. Stakeholders are more likely to support AI integration when systems are perceived as fair, accountable, and transparent. Policymakers, in particular, show greater willingness to adopt AI when it aligns with ethical principles and global trade regulations. Governance alignment reinforces this support by embedding AI within legal and ethical frameworks, ensuring responsible and compliant use. Without such alignment, even ethically designed AI systems may face resistance due to implementation risks. Governance alignment is also critical in addressing global equity concerns. Stakeholders may worry that AI could disproportionately benefit certain countries or sectors, exacerbating trade imbalances. Support for AI integration increases when these technologies are perceived to promote fairness and equitable outcomes. However, this support depends on governance structures that ensure legal, ethical, and regulatory conditions for fair implementation. Governance alignment therefore helps mitigate inequality and supports balanced participation in global trade. Trust in AI is another key factor influenced by governance alignment. While trust enhances stakeholders' willingness to adopt AI in trade law, it must be supported by effective governance mechanisms. Transparency, accountability, and adherence to ethical standards strengthen trust and encourage acceptance. Stakeholders are more likely to support AI when systems are well-regulated and ethically governed. Conversely, poor governance alignment can undermine trust, leading to resistance due to fears of misuse or unintended consequences. Overall, the study proposes that governance alignment mediates the relationship between trust in AI and support for its integration into international trade law. Effective governance ensures that AI is applied in accordance with legal and ethical standards, strengthening acceptance and enabling responsible integration.

H_{6a}: Governance alignment mediates the relationship between AI Knowledge Competency and support for AI integration in international trade law.

H_{6b}: Governance alignment mediates the relationship between Perceived Ethical & Transparency Standards of AI and support for AI integration in international trade law.

H_{6c}: Governance alignment mediates the relationship between global fairness concern and support for AI integration in international trade law.

H_{6d}: Governance alignment mediates the relationship between trust in AI and support for AI integration in international trade law.

Conceptual Framework:

This Study's foundation is built on the connections found in existing literature. Factors like AI Knowledge Competency, Perceived Ethical & Transparency Standards of AI, Global Fairness Concern, Trust in AI, and Governance Alignment all shape AI Integration in International Trade Law, particularly when it comes to business trade. (See Figure 1).

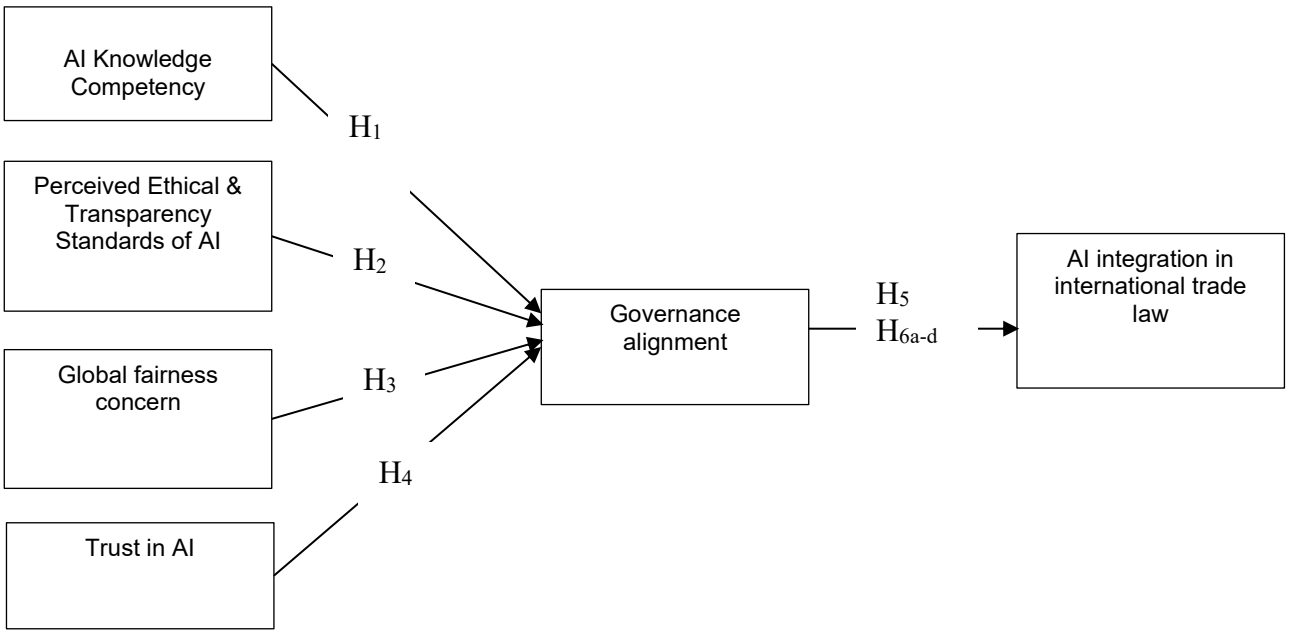

Figure 1.Conceptual Framework

Methods

Research Design

This study examines the role of governance alignment in linking various factors, including AI knowledge competency, perceived ethical and transparency standards, global fairness concerns, and trust in AI, with support for the integration of AI into international trade law, particularly in the USA. We used Partial Least Squares Structural Equation Modeling (PLS-SEM) to test our ideas and look at both the measurement and structural models. We chose this method because it works well for complicated models with many constructs, latent variables, and interaction terms, even when the data isn't normally distributed.

Measurement Instruments

The survey tool was made using scales from previous research, but the wording was changed to fit the international business law and trade performance in USA. On a five-point Likert scale, 1 meant "Strongly Disagree" and 5 meant "Strongly Agree." (See Table 1).

Three technology adoption specialists meticulously reviewed the questionnaire to verify its accuracy. Subsequently, we evaluated it with 20 respondents to ascertain its clarity and reliability. Before full implementation, we made some minor adjustments to the phrasing

Population and Sample/Informants

This study focuses on a heterogeneous group of respondents based in the United States who possess academic, professional, or practical exposure to international trade and artificial intelligence–related issues. Eligible participants were required to meet at least one of the following criteria: (i) formal education or research experience in international trade, law, economics, or business; (ii) professional experience in trade-related sectors such as customs operations, compliance, logistics,

Table 1. Scale and item sources

Constructs	Item code	Number of items	Scale (Likert)	Source
AI Knowledge Competency	KC	4	5 Points	(Markus et al., 2025) (Carolus et al., 2023)
Perceived Ethical & Transparency Standards of AI	ETS	4	5 Points	(Kashefi et al., 2024) (Felzmann et al., 2020)
Global fairness concern	GFC	4	5 Points	(Liu & Lin, 2020)
Trust in AI	TAI	4	5 Points	(Abbas et al., 2025)
governance alignment	GA	4	5 Points	(Emery-Xu et al., 2024) (Khan, 2024)
AI integration in international trade law	ITL	4	5 Points	(Jones, 2023)

Table 2. Demographic Profile

Particulars		Frequency	Percentage
Gender	Male	208	65%
	Female	112	35%
Age (Years)	21-30	167	52.2%
	31-40	87	27.2%
	above 40	45	14.1%
	Below 20	21	6.6%
Profession	Business	80	25%
	Homemaker	16	5%
	Service	64	20%
	Student	160	50%
Income	2500-3500	95	29.7%
	3500$--4500$	59	18.4%
	above 4500$	49	15.3%
	Below 2500$	117	36.6%

Source: Survey Report, 2025

policy analysis, or international business; or (iii) demonstrated familiarity with AI governance, digital trade, or technology-driven regulatory systems through academic coursework, training, or professional engagement. A non-probability purposive sampling technique was employed to ensure respondents had sufficient knowledge to evaluate AI knowledge competency, governance alignment, and AI integration in international trade law. This approach is suitable for perceptual and governance-related studies where informed judgment is more important than population representativeness. In line with Structural Equation Modeling requirements, sample size adequacy was ensured for statistical power and model stability. Following Hair et al. (2019), PLS-SEM is appropriate for complex models with multiple constructs when minimum sample size requirements based on power considerations and the "10-times rule" are met. Given the structural paths and latent variables in the model, a minimum of 200 respondents was sufficient. To address incomplete responses, 400 questionnaires were distributed between November and December 2025 using online and face-to-face methods. After screening, 320 valid responses were retained, exceeding the minimum requirement and ensuring adequate statistical power for PLS-SEM estimation.

Data collection

We collected data through an online survey which was distributed to professionals and experts nationally in the USA throughout platforms such as LinkedIn, professional associations (including email) etc. The survey was designed to be user-friendly with simple instructions and a logical sequence of questions, in order both to increase response rates and to minimize potential bias. Participants were asked to signal their degree of agreement with different statements on AI knowledge, ethics, fairness, trust and governance and their thought about incorporating AI into trade law. A detailed demographic profile of the survey respondents is available in Table 2.

The demographic profile indicates that a majority of respondents are male (65%) and fall within the 21–30 age group (52%). Students constitute the largest category (50%), followed by respondents employed in business (25%) and service-related professions (20%), while a smaller proportion identified as homemakers (5%). This composition reflects the study's focus on perceptions and attitudes toward AI governance and trade law, rather than organizational decision-making authority. Accordingly, the findings should be interpreted as reflecting informed stakeholder and public-facing evaluations of AI integration in international trade law, rather than direct policy enactment or institutional implementation.

Measurement model, analytical tools and technique

The measurement and structural models were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM), implemented through SmartPLS version 4.1.1.6. PLS-SEM was selected due to its suitability for complex models involving multiple latent constructs and its robustness under conditions of non-normal data distributions and mixed respondent backgrounds. All constructs in this study were operationalized as reflective constructs, consistent with their conceptualization as latent perceptions measured through multiple Likert-scale indicators. The measurement model was therefore evaluated using established reflective-model assessment criteria, including indicator reliability, internal consistency reliability (Cronbach's alpha and composite reliability), convergent validity (average variance extracted), discriminant validity (HTMT ratio and Fornell–Larcker criterion), and collinearity diagnostics. Following standard PLS-SEM procedures, a two-step approach was applied. First, the measurement model was assessed to confirm the reliability and validity of the constructs. Second, the structural model was evaluated to examine the hypothesized relationships among AI knowledge competency, ethical and transparency standards, global fairness concern, trust in AI, governance alignment, and AI integration in international trade law. Bootstrapping with 5,000 subsamples was used to test path significance.

Result and Discussion

Analysis and Interpretation

This table 3 presents the Common Method Bias (CMB) test, which assesses whether the study's findings are compromised by data from all variables being sourced from a single entity (Podsakoff et al., 2003). The test uses variance inflation factor (VIF) values, which indicate that if the scores fall below the cautious threshold of 3.3, common method bias is not an issue (Kock, 2015). The findings indicate that all constructs fall within the permissible range. ETS is at 2.162, GFC is at 2.507, KC is at 2.518, and TAI is at 2.935, all of which are below 3.3. GA has a VIF of 1.000, indicating no collinearity issues. These figures reassure us that the correlations among the variables are not unduly inflated by shared method variance, indicating that the dataset is suitable for deeper structural investigation.

The results indicate that all variance inflation factor (VIF) values fall within acceptable thresholds, suggesting that multicollinearity and common method bias are unlikely to pose serious concerns in this study. These findings imply that no single construct disproportionately influences the relationships among variables. While this diagnostic does not eliminate the possibility of common method variance entirely, it provides reasonable assurance that such bias is not severe enough to compromise the interpretation of the structural relationships examined. This suggests that the data collection method ensured that no variable was excessively correlated with another. This enables us to regard the study's findings as authentic rather than merely a consequence of measurement errors.

This table 4 presents the outcomes of the construct validity and reliability assessment, which evaluates whether each measurement item accurately reflects its intended concept and whether the overall measurement model is coherent and statistically robust (Hair, 2014). The findings

indicate that all constructs exhibit robust convergent validity, as each item loaded over the suggested threshold of 0.70. Cronbach's alpha scores span from 0.846 to 0.885, while composite reliability values range from 0.897 to 0.920, far exceeding the minimum acceptable threshold of 0.70. This indicates that internal consistency is also firmly established. The AVE values for all constructs span from 0.684 to 0.743, exceeding the 0.50 threshold. This suggests that each construct accounts for over fifty percent of the variance of its indicators (Fornell & Larcker, 1981). All VIF scores are below 5, indicating no multicollinearity. This shows that each construct contributes uniquely to the model. The results suggest that the measurement model is both valid and reliable, providing a solid foundation for further structural investigation.

The table indicates that all questions employed to assess each concept are functioning effectively and are consistent with one another. The data corroborate that each idea is clearly defined, reliable, and distinct from the others. This indicates that the data is dependable and suitable for a more comprehensive investigation in the research.

This table 5 lays out the discriminant validity test, which is essential for determining if the constructs in the model are genuinely distinct from one another. It also checks whether each variable accurately measures its intended concept and does not overlap with others (Henseler et al., 2015). The HTMT values for all construct pairs are comfortably below the conservative threshold of 0.85, which shows that the constructs are well differentiated. For instance, ETS–GA (0.747), GFC–TAI (0.833), and KC–GFC (0.797) all fall within acceptable ranges, indicating that there's no excessive similarity between any construct pairs. Additionally, the Fornell–Larcker Criterion backs this up, as the square root of AVE for each construct exceeds its correlations with others: ETS (0.827), GA (0.851), GFC (0.839), ITL (0.853), KC (0.837), and TAI (0.862). This pattern confirms that each construct has more variance with its own items than with any other construct, which strengthens the validity of the measurement model.

To put it simply, the table shows that all the variables in the study are distinct from one another. They aren't mixed up or measuring the same thing, and the numbers remain within safe limits. This gives us confidence that each concept stands independently, making the model robust and reliable for further analysis.

This table 6 shows the model fitness test, which checks how well the structural equation model fits the observed data and whether the estimated model is statistically sound for interpretation. The SRMR values for both the estimated model (0.088) and the saturated model (0.058) are below the accepted cutoff of 0.10. This means that the model fits well (Hu & Bentler, 1999). The discrepancy measures d_ULS and d_G are also within acceptable limits, which means that the differences between the actual and model-implied covariance matrices are not a problem. The chi-square values (1348.307 and 1415.522) are on the high side, but this is normal for complex models and larger datasets, so it doesn't mean that the model isn't good enough overall. The NFI values for the saturated model (0.773) and the estimated model (0.762) are below the conventional threshold of 0.90, indicating a moderate model fit rather than a strong one. However, in PLS-SEM, global goodness-of-fit indices such as NFI are considered descriptive rather than decisive, and model evaluation places greater emphasis on predictive relevance and path significance. Taken together with the acceptable SRMR values and satisfactory measurement model results, the overall fit indices suggest that the model is adequate for structural interpretation, though conclusions should be interpreted with appropriate caution. Overall, these signs indicate that the model is doing well and ready for more structural analysis.

In short, the table shows that the model fits the data well enough to be trusted. The key indicators are within the proper ranges, indicating that the model can find real patterns in the data. Some of the values aren't perfect, but they're still good enough to show that the model works.

This table 7 lays out the results of hypothesis testing, which helps us determine if the relationships proposed between the study's variables are statistically significant and backed by the data. Every hypothesis was accepted, as each path demonstrated a substantial effect with p-values under the 0.05 mark. The findings reveal that Knowledge Competency ($\beta = 0.218$, $p = 0.001$), Ethical and Transparency Standards ($\beta = 0.188$, $p = 0.025$), Global Fairness Concern ($\beta = 0.232$, $p = 0.001$), and Trust in AI ($\beta = 0.242$, $p = 0.002$) all positively influence Governance Alignment. In turn, Governance Alignment has a substantial and highly significant effect on the integration of International Trade Law ($\beta = 0.660$, $p = 0.000$), underscoring its key role in the model. The mediation results indicate that each predictor also impacts ITL indirectly through Governance Alignment, with all indirect paths showing statistical significance. For instance, the paths KC → GA → ITL ($\beta = 0.144$, $p = 0.002$) and GFC → GA → ITL ($\beta = 0.153$, $p = 0.001$) illustrate how Governance Alignment effectively channels the influence of these factors toward ITL integration.

To put it simply, the table confirms that every proposed relationship in the model is supported by the data. All elements—knowledge, ethics, fairness, and trust—contribute to enhancing governance alignment, which in turn leads to better integration of international trade law. The results also highlight that governance alignment acts as a bridge, facilitating these factors to indirectly boost ITL integration as well. (See Figure 2).

The interaction with AI in International Trade Law is a dynamic and complex opportunity to improve efficiency and transparency in global trade operations. With advances in AI technologies, it becomes increasingly important to leverage such capabilities for trade decision-making. This article shows that AI is useful in many ways but also raises concerns that must be addressed for effective integration into the complex system of international trade law. One key

lesson from this study is the importance of AI skill sets for effective mainstreaming of AI in trade law. Markus et al. (2025) highlight that all actors in society (legislators, corporate management, jurists) must have a complete understanding of AI to recognize both its advantages and limitations. This capability enables informed decision-making, reducing risks from bias, opacity, and unintended consequences. This is critical in trade law because AI-driven decisions may affect international trade, tariff classifications, and dispute resolution mechanisms (Jones, 2023). The analysis also supports a positive relationship between governance alignment and AI knowledge competency, as informed stakeholders are more likely to support ethical and transparent use of AI (Papagiannidis et al., 2022). Content alignment between governance and AI technology is essential for compliance with international trade regulations and innovation. Emery-Xu et al. (2024).

Table 3. Common method biased (CMB) test

Variables	ETS	GA	GFC	ITL	KC	TAI
ETS		2.162				
GA				1.000		
GFC		2.507				
ITL						
KC		2.518				
TAI		2.935				

Source: SmartPLS output (version 4.1.1.6).

Table 4.Construct's validity and reliability test

Variables	Item Code	Convergent validity		Internal consistency		Multicollinearity Statistics
		Loading > 0.70	Cronbach's alpha > 0.70	Composite reliability > 0.70	AVE > 0.50	VIF < 3 or 5
Perceived Ethical & Transparency Standards of AI	**ETS1**	0.801	0.846	0.897	0.684	2.029
	ETS2	0.843				2.182
	ETS3	0.858				2.182
	ETS4	0.805				1.929
Governance Alignment	**GA1**	0.843	0.873	0.913	0.724	2.626
	GA2	0.873				2.952
	GA3	0.863				2.542
	GA4	0.824				2.212
Global Fairness Concern	**GFC1**	0.830	0.860	0.905	0.704	2.810
	GFC2	0.878				3.220
	GFC3	0.835				2.348
	GFC4	0.812				2.234
AI integration in International Trade Law	**ITL1**	0.825	0.875	0.915	0.728	2.216
	ITL2	0.859				2.512
	ITL3	0.871				2.655
	ITL4	0.857				2.467
AI Knowledge Competency	**KC1**	0.821	0.858	0.904	0.701	2.093
	KC2	0.879				2.621
	KC3	0.829				2.174
	KC4	0.820				2.047
Trust in AI	**TAI1**	0.858	0.885	0.920	0.743	2.708
	TAI2	0.884				3.038
	TAI3	0.843				2.747
	TAI4	0.862				2.934

Source: SmartPLS output (version 4.1.1.6).

Table 5. Discriminant validity test

	Variables	ETS	GA	GFC	ITL	KC	TAI
HTMT	ETS						
	GA	0.747					
	GFC	0.759	0.783				
	ITL	0.731	0.753	0.727			
	KC	0.757	0.777	0.797	0.709		
	TAI	0.789	0.792	0.833	0.785	0.835	
	Variables	**ETS**	**GA**	**GFC**	**ITL**	**KC**	**TAI**
Fornell-Larcker Criterion	ETS	0.827					
	GA	0.644	0.851				
	GFC	0.647	0.679	0.839			
	ITL	0.629	0.660	0.632	0.853		
	KC	0.645	0.675	0.686	0.614	0.837	
	TAI	0.683	0.698	0.727	0.692	0.729	0.862

Source: SmartPLS output (version 4.1.1.6)

Table 6. Model fitness test.

Fitness Indices	Saturated model	Estimated model
SRMR	0.058	0.088
d_ULS	1.019	2.325
d_G	0.656	0.710
Chi-square	1348.307	1415.522
NFI	0.773	0.762

Source: SmartPLS output (version 4.1.1.6)

Table 7. Hypothesis test

	Path Direction	Estimates (β)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Decision
H_1	KC → GA	0.218	0.068	3.198	0.001	Accepted
H_2	ETS → GA	0.188	0.084	2.249	0.025	Accepted
H_3	GFC → GA	0.232	0.068	3.428	0.001	Accepted
H_4	TAI → GA	0.242	0.080	3.031	0.002	Accepted
H_5	GA → ITL	0.660	0.045	14.604	0.000	Accepted
H_{6a}	KC → GA → ITL	0.144	0.045	3.160	0.002	Accepted
H_{6b}	ETS → GA → ITL	0.124	0.056	2.194	0.028	Accepted
H_{6c}	GFC → GA → ITL	0.153	0.045	3.416	0.001	Accepted
H_{6d}	TAI → GA → ITL	0.160	0.056	2.859	0.004	Accepted

Source: SmartPLS output (version 4.1.1.6); Note: a = P < 0.05; b = P < 0.001

Argue that the integration of AI into global trade depends on governance systems aligned with laws and ethics. AI systems operating under well-defined governance structures are more likely to promote justice, accountability, and transparency, which are crucial for trade integrity. Good governance ensures AI operates within internationally recognized legal guidelines, reducing risks such as privacy breaches, intellectual property theft, and algorithmic bias. This alignment is necessary to keep pace with rapidly evolving AI technologies and emerging regulatory challenges. Ethical and transparency norms around AI systems are also central findings. Felzmann et al. (2020) emphasize that AI must be fully transparent in high-stakes decision-making contexts, including international trade law. The findings show that transparency strengthens stakeholder trust and ensures fairness. Explainable AI (XAI), which clarifies how decisions are made, can significantly improve accountability in trade law systems. XAI reduces concerns about black-box systems by providing visibility into decision processes, thereby increasing trust among decision makers, organizations, and the public. This aligns with Kalkan (2024), who argues that transparency and ethics are essential for AI integration in complex domains. The study also highlights transnational equity concerns in AI use. Liu and Lin (2020) argue that AI may widen global trade inequalities if not properly regulated. The findings suggest that fairness concerns strongly motivate governance alignment at global levels, ensuring equitable outcomes across countries and sectors. Without safeguards, AI may

deepen development gaps between the Global North and South.

levels, ensuring equitable outcomes across countries and sectors. Without safeguards, AI may deepen development gaps between the Global North and South. Therefore, AI in trade must align with governance frameworks that promote global justice and prevent unfair advantages. Trust is another central factor in AI adoption in

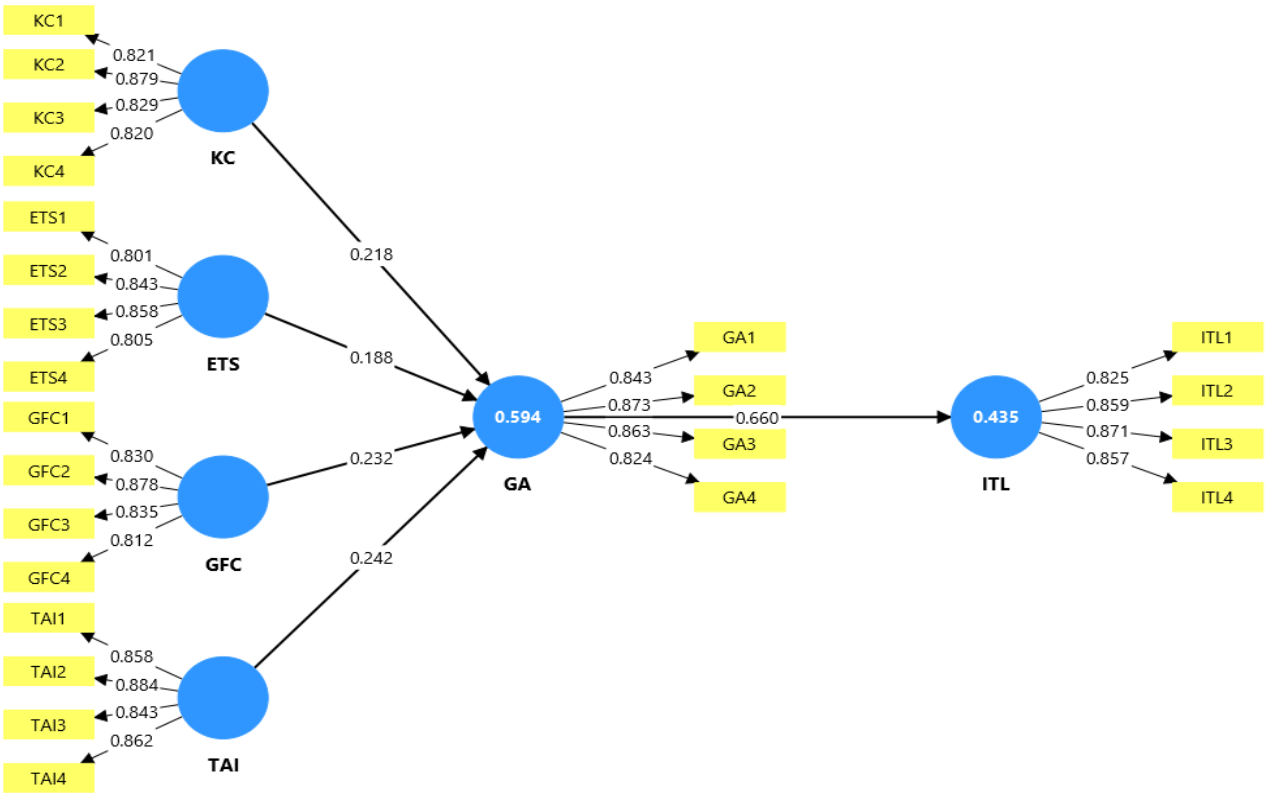

Figure 2. Model resolution by PLS algorithm (version 4.1.1.4).

international trade law. Participants are more likely to accept AI systems when they perceive them as fair, accurate, and transparent. Trust is essential for public acceptance of AI in trade legislation. However, trust is not inherent in AI systems; it must be built through regulation, leadership, and ethical governance. Strong governance approaches emphasizing transparency, accountability, and fairness are therefore necessary.

Overall, the study shows that AI knowledge, governance alignment, ethics, global fairness, and trust are deeply interconnected. Together, these elements enable effective integration of AI into international trade law while minimizing risks and maximizing benefits.

Conclusion

This paper examines the implications of Artificial Intelligence (AI) on international trade law. It stresses the need to build an equitable relationship among AI, law, ethics, and global equity. The study aimed to explore how AI in trade systems can address challenges related to governance, transparency, equity, and trust. The results suggest that strong AI knowledge is a prerequisite for its successful use in trade law. Policy makers, jurists, and business leaders are key stakeholders who need a deep understanding of AI technology and its consequences. This enables more informed decision-making and reduces risks such as algorithmic bias, data privacy concerns, and unexpected outcomes. As AI continues to advance, training stakeholders within global trading systems becomes increasingly important. The report highlights the need for governance alignment to enable effective AI use. Legal and ethical norms should be integrated into governance models for AI practices in trade operations. For the ethical application of AI in trade, governance must align with existing legal rules and ethical standards. This alignment improves the effectiveness and innovation of trade systems while also reducing risks such as biased decision-making, lack of transparency, and reinforcement of inequality. Strong governance is essential for regulating AI systems and ensuring compliance with universal standards. The article underscores the importance of ethical and transparency norms in the use of AI in international trade law. AI systems must be able to explain their decision-making processes so that stakeholders can understand how outcomes are produced. Such transparency is critical for building trust and ensuring accountability, especially in complex areas such as tariff classification, trade dispute resolution, and customs operations. Ethical issues related to fairness, accountability, and data privacy must be addressed to ensure AI-driven trade decisions do not reproduce or create inequities. The study also emphasizes the importance of fair application of AI across global trade systems. While AI has the potential to improve efficiency

and reduce scarcity, it may also disproportionately benefit developed countries or dominant industries, thereby widening the gap between rich and poor nations. To prevent this, AI systems must be designed based on justice and equity principles. Trade policies and decisions should be transparent, fair, and free from favoritism toward any country or industry. The findings highlight the need for governance frameworks that prioritize global equity so that AI tools contribute to a more balanced global economy.

Theoretical contribution

This article provides a powerful theoretical basis for the integration of AI in international trade law, alongside strong governance structures, ethical standards, and global equalization. The study contributes a comprehensive model by investigating the linkages among AI knowledge capability, governance alignment, ethical transparency, global justice, and trust in AI, and identifies the key elements required to successfully introduce AI into trade law. This framework serves as a reference point for future research and policy development in this rapidly changing environment. This article highlights the importance of AI literacy in enabling the integration of AI in international trade law. It emphasizes that all relevant parties such as politicians, lawyers, and business leaders must become informed about AI due to its growing impact. Markus et al. (2025) argue that proper understanding of AI is essential for informed decision-making, allowing stakeholders to understand both capabilities and limitations of the technology. This knowledge competency supports effective governance, as stakeholders with AI skills are more likely to participate in developing and enforcing regulations for responsible and transparent AI use. This contributes to theoretical understanding of regulatory and legal integration of AI knowledge in complex domains such as international trade law. This paper contributes to literature by offering a theory-driven account of governance alignment in AI incorporation into international trade law. It emphasizes that AI technologies must operate within clear legal and regulatory frameworks that ensure transparency, responsibility, and fairness. Emery-Xu et al. (2024) support the view that effective governance is essential for successful AI integration in international trade regimes. The study clarifies how governance alignment shapes the relationship between AI knowledge competence, ethical norms, fairness, and trust, and demonstrates how governance bridges technical AI advancements with legal and ethical dimensions of trade. The study also provides a theoretical analysis of ethical and transparency norms in AI use in trade law. It extends Felzmann et al. (2020) by linking transparency directly with governance alignment. Transparency builds trust and reduces concerns about algorithmic bias and opaque decision-making. This highlights the role of transparent AI systems in building legitimacy and stakeholder support, which is essential for integrating AI in trade law. The article also addresses global justice in AI-driven international trade law. It engages with debates on AI's potential to reinforce global imbalances. The study emphasizes governance frameworks that promote fairness and equitable outcomes in global trade. AI applications in tariff-setting and dispute resolution may either deepen or reduce global inequality, making fairness a critical design principle. Finally, the study develops theoretical arguments on trust in AI. Trust is essential for adoption, as stakeholders are more likely to accept AI systems perceived as transparent, ethical, and accountable. Trust is not inherent but shaped by governance alignment and transparency. This strengthens theory on confidence-building through governance frameworks, ethical norms, and transparency. In sum, this research advances understanding of AI in international trade law by linking AI knowledge, governance alignment, ethics, global fairness, and trust into a comprehensive framework.

Managerial implication

Insights Organizations, governments and business leaders interested in integrating Artificial Intelligence (AI) into international trade law can benefit from the results of this study. With AI transforming global trade, managers and leaders face the challenge of balancing innovation with fair, transparent, and enforceable regulation. The findings provide a foundation for effective governance of AI integration that meets regulatory requirements and addresses stakeholder concerns. Fundamentally, organizations must ensure that all team members are fully conversant with AI. This study highlights the necessity of understanding AI and its implications for trade law. Managers should invest in training and development programs to improve employees' awareness of AI. This enables better decision-making and equips staff to address challenges in AI integration. By building AI-related skills, businesses can better manage issues such as algorithmic bias, data privacy risks, and unintended consequences. Developing AI competencies also allows firms to engage meaningfully in discussions on AI's impact on trade law and policy. The application of AI in trade law must adhere to strong governance. Managers must ensure that AI aligns with governance mechanisms that emphasize transparency, accountability, and ethical considerations. This article also highlights the need for regulatory compliance in international trade to ensure adherence to established legal standards. Businesses must collaborate closely between leadership and legal or policy experts so that AI solutions remain both innovative and ethical. Firms that align governance in this way are better positioned to reduce risks such as liability and reputational damage. The study also emphasizes fairness in AI-guided trade decisions due to global equity concerns. Managers should recognize that AI systems may produce unintended side effects that can favor certain countries or industries, potentially increasing global inequality. To mitigate this, businesses must commit to fairness and inclusivity in AI governance. This includes designing AI

systems that consider diverse stakeholder needs across regions and sectors to ensure impartial trade decisions. Trust is central to the acceptance and effectiveness of AI. Managers must promote transparency in how AI is developed and deployed. Stakeholders, including employees, customers, and regulatory bodies, should be informed about how AI systems operate and how fairness is ensured. By addressing transparency and ethical concerns from the outset, institutions can build the trust necessary for wider adoption of AI in trade law processes. Overall, the study reinforces the importance of technological expertise, governance alignment, global equity, and trust in AI systems. Through these strategies, managers can successfully integrate AI into international trade law, ensuring its benefits are realized fairly, ethically, and transparently.

Academic contribution

This article contributes to the academic debate by shedding light on the integration of Artificial Intelligence (AI) in international trade law. It presents a holistic model that combines key elements including AI skills, governance alignment, ethical principles, global fairness, and trust in AI. It demonstrates how these factors interact and identifies them as fundamental drivers shaping the future of AI in trade systems. The study also highlights the complexities of introducing AI into international trade and emphasizes that a balanced approach is necessary, considering technological progress alongside legal, ethical, and social implications. One key academic contribution is the development of a theoretical construct linking AI knowledge to successful incorporation of AI in trade law. The study addresses a gap in literature on AI literacy and its implications for ethical and legal deployment in international trade by emphasizing stakeholder understanding of AI for effective implementation. The findings suggest that stakeholders with stronger AI understanding are better able to navigate complexities and support governance frameworks that ensure fair and ethical use of AI technologies. The work also contributes significantly to the academic discussion on governance alignment in AI integration within international trade law. It emphasizes that AI must operate within legal and ethical boundaries to ensure fair and just deployment. This contribution is important as it shows how governance can reduce risks such as bias, opacity, and inequality while also encouraging innovation and improving trade efficiency. This study further highlights the importance of ethical transparency in AI-driven trade decisions. It stresses that AI systems should be designed so that all stakeholders can understand how decisions are made. This clarity provides an important academic direction for future research focused on improving transparency in AI systems, particularly in sensitive domains such as international trade. The study also adds to literature on AI and global equity by showing how AI can either reduce or worsen global trade inequalities. It highlights the need for AI systems that promote fairness and equitable outcomes, opening new perspectives on how AI can help address imbalances in global trade and redistribute benefits more fairly. In conclusion, this research advances academic understanding of AI in international trade law through both theoretical and practical contributions, forming a foundation for future studies on governance, ethics, fairness, and trust in AI-driven trade systems.

Limitation and future work

When interpreting the results of this study, several points should be addressed. The research is primarily a quantitative survey, focusing on the United States. This implies that its findings may not be generalizable to other geographies with different regulatory environments, commercial business models and AI adoption levels. Another limitation of our study is that all information was reported by the interviewees themselves, so biases such as social desirability bias or recall bias could potentially affect these results. The paper contributes to the governance and ethical issues of AI in trade law but overlooks the technical challenges associated with deployment of AI systems in trading flows, such as: data quality; transparency of algorithms; and their consistently and constantly integration into trade existing eco-systems.

The researcher's potential biases will be an inevitable problem for future studies to overcome, as that same research should select from a wider geographic distribution of at least some countries or regions in order to develop a superior scope for AI's effect on international trade law. Other qualitative methods such as in-depth interviews or case studies can provide a more granular and comprehensive understanding of the consequences of AI adoption. It would be interesting to analyze the technical issues related to AI applications across global commerce chains, mainly challenges of unified implementation and data sharing among many AI systems. Future research should explore the long-term effects of AI on trade law and how evolving technology and regulation will shape the global trading system in the years ahead. That would provide greater understanding about how AI might also shape international trade in the future and beyond.

Author contributions

Md Samirul Islam: Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Software, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. Abu Sayed: Writing – review & editing, Writing – original draft, Supervision, Methodology, Investigation, Data curation, Conceptualization. Anika Mahjabin: Writing – review & editing, Writing – original draft, Supervision, Software, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. Nur Nahar Rimi: Writing – review & editing, Writing – original draft, Visualization, Validation, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

Conflict of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper

.

References

Abbas, F., Chesterman, S., & Taeihagh, A. (2025). Building trust in the generative AI era: a systematic review of global regulatory frameworks to combat the risks of mis-, dis-, and mal-information. *AI & SOCIETY*, 1–38. https://doi.org/10.1007/s00146-025-02698-9

Arrieta, A. B., Díaz-Rodríguez, N., Del Ser, J., & others. (2020). Explainable Artificial Intelligence (XAI): Concepts, taxonomies, opportunities and challenges toward responsible AI. *Information Fusion*, *58*, 82–115. https://doi.org/10.1016/j.inffus.2019.12.012

Brownsword, R. (2019). *Law, Technology and Society: Reimagining the Regulatory Environment*. Routledge. https://doi.org/10.4324/9781351128186

Burri, M. (2015). The international economic law framework for digital trade. *Zeitschrift Für Schweizerisches Recht*, *135*, 10–72.

Carolus, A., Koch, M. J., Straka, S., & others. (2023). MAILS-Meta AI literacy scale: Development and testing of an AI literacy questionnaire. *Computers in Human Behavior: Artificial Humans*, *1*(2), 100014. https://doi.org/10.1016/j.chbah.2023.100014

Corbett-Nolan, A. (2024). Fairness in Boards and Governance. In *Fairness in the NHS* (pp. 37–49). Routledge. https://doi.org/10.4324/9781003410560-5

Cui, X., Xu, B., & Razzaq, A. (2022). Can application of artificial intelligence in enterprises promote corporate governance? *Frontiers in Environmental Science*, *10*, 944467. https://doi.org/10.3389/fenvs.2022.944467

Emery-Xu, N., Jordan, R., & Trager, R. (2025). International governance of advancing artificial intelligence. *AI & SOCIETY*, *40*(4), 3019–3044. https://doi.org/10.1007/s00146-024-02050-7

Felzmann, H., Fosch-Villaronga, E., Lutz, C., & Tamò-Larrieux, A. (2020). Towards transparency by design for artificial intelligence. *Science and Engineering Ethics*, *26*(6), 3333–3361. https://doi.org/10.1007/s11948-020-00276-4

Fernandes, A. A., Stefani, E., Costa, I., Gaspar, M. A., & Rego, E. A. (2025). Implications of Artificial Intelligence Governance on Organizational Knowledge Governance in the Era of Generative Artificial Intelligence. *Caderno Pedagógico*, *22*(9), e18302. https://doi.org/10.54033/cadpedv22n9-271

Floridi, L., Cowls, J., Beltrametti, M., & others. (2018). AI4People—An ethical framework for a good AI society. *Minds and Machines*, *28*(4), 689–707. https://doi.org/10.1007/s11023-018-9482-5

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39–50. https://doi.org/10.2307/3151312

Glikson, E., & Woolley, A. W. (2020). Human trust in artificial intelligence: Review of empirical research. *Academy of Management Annals*, *14*(2), 627–660. https://doi.org/10.5465/annals.2018.0057

Hair, J. F. (2014). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Sage.

Helfaya, A., & Bui, P. (2025). Governance-Aligned CSR, Corporate Sustainable Development Goals Adoption, and Long-Lasting Performance: An Insight From Tourism and Hospitality Industry. *Sustainable Development*. https://doi.org/10.1002/sd.70164

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Highton, A. (2024). Fairness in Governance in the NHS. In *Fairness in the NHS* (pp. 50–63). Routledge.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*(1), 1–55. https://doi.org/10.1080/10705519909540118

Jobin, A., Ienca, M., & Vayena, E. (2019). The global landscape of AI ethics guidelines. *Nature Machine Intelligence*, *1*(9), 389–399. https://doi.org/10.1038/s42256-019-0088-2

Jones, E. (2023). Digital disruption: artificial intelligence and international trade policy. *Oxford Review of Economic Policy*, *39*(1), 70–84. https://doi.org/10.1093/oxrep/grac049

Kalkan, G. (2024). The impact of artificial intelligence on corporate governance. *Corporate Finance*, *18*(2), 17–25. https://doi.org/10.17323/j.jcfr.2073-0438.18.2.2024.17-25

Kashefi, P., Kashefi, Y., & Ghafouri Mirsaraei, A. (2024). Shaping the future of AI: balancing innovation and ethics in global regulation. *Uniform Law Review*, *29*(3), 524–548. https://doi.org/10.1093/ulr/unae040

Khan, A. (2024). The intersection of artificial intelligence and international trade laws: Challenges and opportunities. *IIUMLJ*, *32*, 103. https://doi.org/10.31436/iiumlj.v32i1.912

Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of E-Collaboration*, *11*(4), 1–10. https://doi.org/10.4018/ijec.2015100101

Lahusen, C., Maggetti, M., & Slavkovik, M. (2024). Trust, trustworthiness and AI governance. *Scientific Reports*, *14*(1), 20752. https://doi.org/10.1038/s41598-024-71761-0

Liu, H. W., & Lin, C. F. (2020). Artificial intelligence and global trade governance: a pluralist agenda. *Harvard International Law Journal*, *61*, 407.

Markus, A., Carolus, A., & Wienrich, C. (2025). Objective Measurement of AI Literacy: Development and Validation of the AI Competency Objective Scale (AICOS). *Computers and Education: Artificial Intelligence*. https://doi.org/10.1016/j.caeai.2025.100485

Olateju, O., Okon, S. U., Olaniyi, O. O., Samuel-Okon, A. D., & Asonze, C. U. (2024). Exploring the concept of explainable AI and developing information governance standards for enhancing trust and transparency in handling customer data. *Journal of Engineering Research and Reports*. https://doi.org/10.9734/jerr/2024/v26i71206

Ozturk, O. (2024). The impact of AI on international trade: Opportunities and challenges. *Economies*, *12*(11), 298. https://doi.org/10.3390/economies12110298

Papagiannidis, E., Mikalef, P., Krogstie, J., & Conboy, K. (2022). From responsible AI governance to competitive performance: the mediating role of knowledge management capabilities. *Conference on E-Business, e-Services and e-Society*, 58–69. https://doi.org/10.1007/978-3-031-15342-6_5

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*(5), 879. https://doi.org/10.1037/0021-9010.88.5.879

Robles, P., & Mallinson, D. J. (2025). Artificial intelligence technology, public trust, and effective governance. *Review of Policy Research*, *42*(1), 11–28. https://doi.org/10.1111/ropr.12555

Salem, A. M., Eyupoglu, S. Z., & Ma'aitah, M. K. (2024). The Influence of Machine Learning on Enhancing Rational Decision-Making and Trust Levels in e-Government. *Systems*, *12*(9), 373. https://doi.org/10.3390/systems12090373

Starmanns, M. (2007). *Fairness in globalen Wertschöpfungsketten durch Governance-Netzwerke?* Wuppertal Institut.

Yeung, K. (2018). Algorithmic regulation: A critical interrogation. *Regulation & Governance*, *12*(4), 505–523. https://doi.org/10.1111/rego.12158

Zuboff, S. (2019). Surveillance capitalism and the challenge of collective action. *New Labor Forum*, *28*(1), 10–29. https://doi.org/10.1177/109579601881946