Ethical and Social Impacts of Artificial Intelligence
on Customs and Excise

Introduction:

AI might be a powerful technology, but things won't get better simply by adding AI.

~Vivienne Ming

Artificial intelligence (AI) is becoming increasingly crucial for businesses aiming to enhance productivity and profitability, but it comes with challenges. It costs a lot of money and time to teach people and update things to use AI. Moreover, the rapid evolution of AI technologies means that businesses must stay agile to keep pace with advancements, or risk falling behind.

AI is like a big deal in the world of customs and excise. Some people find it super interesting, while others worry about it. It's like we're standing on the edge of a big change in how we control borders using technology. On one side, there's talk about things happening faster, more safety, and making more money. But on the other side, there are some questions which must kept in mind like what's right and fair?

Imagine the usual scene at customs, inspectors checking things carefully and dogs sniffing around. Now, AI comes into play, and it could change how things work. It's not as simple as adding AI with anything and everything. Tricky questions are popping up, like is AI treating everyone fairly, are our details safe, and what about people losing their jobs?

Using AI everywhere isn't just easy, we must look and see what could it affect, how could it remove people from their existing jobs, so using AI at any place or job needs much consideration so that jobs, people, and each and everything can remain secure and safe.

Artificial Intelligence in Customs and Excise:

AI is a game changer in every field, it is continuously evolving the working processes of Customs and Excise efficiently. It's changing the current way of trading across the globe and executing new ideas for making our border safe and secure. In the AI subfield, we have machine learning (ML) whose task is to predict on a variety of vast datasets. After successful training, it can easily detect and catch things like smuggling, fraud, and other related stuff. It automates the current tasks which could take hours if done manually, it makes things faster for customs and excise people. All this kind of automation not only enhances operational efficiency but also contributes to making global trade safer and more transparent.


Customs Predictive Analytics

Customs and excise people can use AI for assessment purposes, for example, customs folk can use it to determine if certain shipments might be risky or not. According to a study by Smith and others (2020), AI in customs made things quicker and more accurate as compared to existing systems before. It helps these customs and excise peoples to decide where to focus their efforts, making trade smoother and keeping borders safer and secure. So, when AI evolves better then it results in better global trade.

Evolution of AI in Customs:

The use of Artificial Intelligence (AI) at customs and excise people changes overall work for them. From scanning through to the processing documents and credentials it automates each and everything. When AI technology gets more advanced at borders for customs and excise then they can focus on high-risk shipments, making borders more and more secure. It could be done when AI becomes too strong, by applying advanced algorithms that forecast trade flows and detect emerging threats. Integration of AI with other modern technologies like blockchain could add an extra layer of security and transparency to customs operations. In short AI for customs and excise people making advanced risk assessments and making their work more secure and adaptable World Customs Organization. (2023).

Ethical Impacts of AI on Customs and Excise:

A study shows in 2019, on average 40% of workers faced problems with how AI was used at their jobs. These problems were related to ethics, which means they involved situations where the AI did things that were hard to explain, not clear, unfair, or showed bias. For instance, using AI to pick job candidates might favor some groups over others based on gender, ethnicity, age, or other factors, creating ethical concerns.
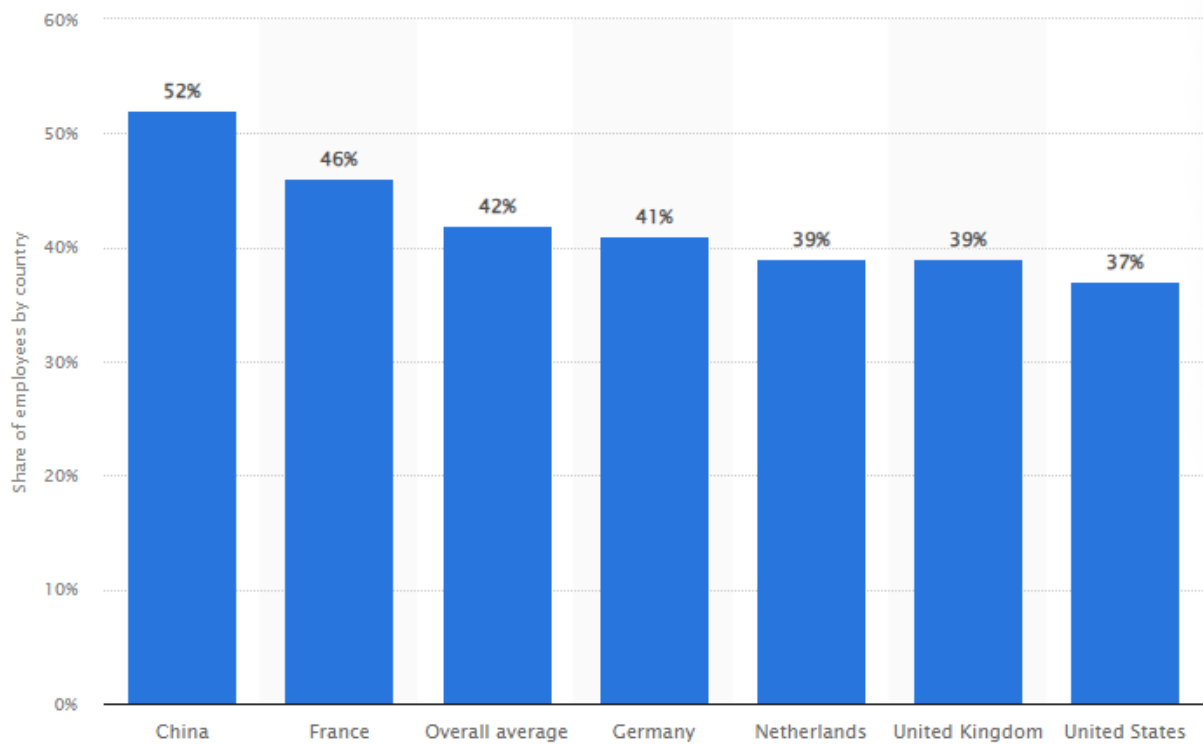
Employees' AI Experience

When AI is used in customs and excise it raises ethical concerns that need proper attention. One of the worries is about accountability and transparency like who is responsible when AI makes decisions? Another concern is fairness, as biased AI algorithms may unfairly target certain groups or countries, like by focusing on one group and discriminating against others which results in bad economic growth and reinforces inequalities. Addressing bias is crucial and necessary. Lastly, it's also really important to consider the impact of AI on human rights, such as privacy and freedom of movement of individuals. Finding the right balance between security and individual rights there must be strict rules, regulations, and careful supervision. Ignoring these ethical challenges could undermine the benefits of AI in customs, emphasizing the importance of actively finding solutions. (Council of Europe, 2020).

Accountability and Transparency in AI Systems:

Imagine if AI didn't recognize someone's belongings at the border due to some internal AI error and let the traveler out of the queue by triggering an alert. So, this lack of accountability and transparency drama could present a major ethical concern with an AI-powered system for customs and excise departments. Without clearly answering the question of Who's responsible for the decisions these systems make? So sometimes AI can also create hurdles and frustration for people traveling across different countries thus resulting in issues for the customs and excise folks instead of giving them ease (Fjeld, J., Achtenhagen, N., & Wachter, S., 2020).

So, these hindrances and issues can harm people as well as custom individuals differently, so it needs to be solved and to be tackled. So, for these concerns, governments must establish clear frameworks for AI accountability. This involves clearly defining who's responsible for the system development, deployment, and decision-making (Algorithmic Decision-Making, FAID) processes. Additionally, AI systems should be designed with explainability in mind, like to allow users to understand why their goods are flagged, and why AI made an alert or cleared their stuff. By promoting transparency and accountability, we can ensure AI serves as a reliable partner in customs and excise, making their work easy and fast and not creating hindrances for them.
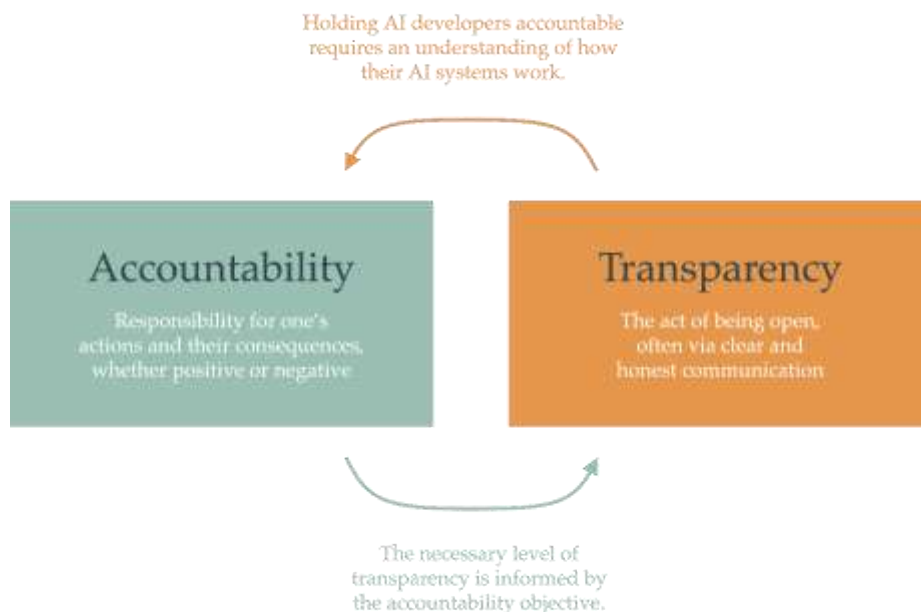
Accountability and Transparency in AI

Fairness and Equity in Customs Procedures:

Not training well in AI systems can cause false results, for example, biased results could occur due to the overfitting of one kind of data, or conversely underfitting of a second kind of data.
This could lead to inequitable customs procedures, like targeting specific groups or countries while discriminating against others due to inaccurate or incomplete data (Crawford, K., & Hudson, V., 2018). The study of (Crawford, K., & Hudson, V., 2018) focuses on algorithmic discrimination and proposes strategies for mitigating such biases.

To prevent this, it's crucial to actively address bias in AI algorithms for trade and customs. This involves utilizing diverse datasets for accurate training of the AI models, constantly monitoring and auditing algorithms for their bias, and implementing mechanisms to correct any discriminatory outcomes, which could in turn destroy the system. By ensuring fairness and equity in AI-powered customs systems, we can protect vulnerable groups and promote a level playing field for global trade (Eubanks, V.,2018).

Addressing Bias in AI Algorithms for Trade and Customs:

Using AI for customs and excise is a good thing, but there are a lot of issues and hurdles that must be kept in mind so that everything remains smooth. One of the main concerns is Algorithm Bias. Algorithm Bias is the behavior of an algorithm in which it is just fair to one party, it's not trained properly, so it makes bad decisions, so proper training is really necessary so that it can't discriminate between any party or gender. So, to tackle with algorithm biasing a lot of training data with a lot of different situations is required so that the algorithm can learn properly with no errors.

So, solving the issue of algorithm bias can help people (Algorithmic Justice League, 2020). So now how we can solve the issue? One possible solution is proper training, training with different people, and training in different situations (Crawford, K. (2019). So that the algorithm can first know about different stuff so that later on it doesn't confuse or have know-how of what it was fed before. In the machine learning context, the more training data we have the better we can make predictions

(but not every time). So, resolving the issue of bias and algorithms can make a significant change for customs and excise people to automate their tasks and daily routines stuff.

Bias in AI

Human Rights Considerations:

The use of AI in customs and excise is to ensure security, and safety and make things fast and efficient but the thing that must be kept in mind is fundamental human rights must be protected by every individual, and there must not be any compromise on loosing someone's basic right (Jobin, A., Ienca, M., & Vayanos, P., 2019). It could happen to consider extensive data collection by AI systems and concerns about privacy and freedom of movement for people across the globe. Travelers might feel uncomfortable knowing their every step is monitored.

Balancing security in customs and excise with individual rights is the main thing. This could be handled by implementing robust regulations and oversight mechanisms (Citron, D. K., 2018). These include data-protection laws that limit the collection and use of personal information, independent oversight bodies to monitor AI systems for potential human rights violations, and appeal mechanisms for individuals who feel unfairly targeted by AI decisions. By prioritizing human rights in the development and deployment of AI in customs, we can ensure this technology strengthens security without compromising individual freedoms and safety.
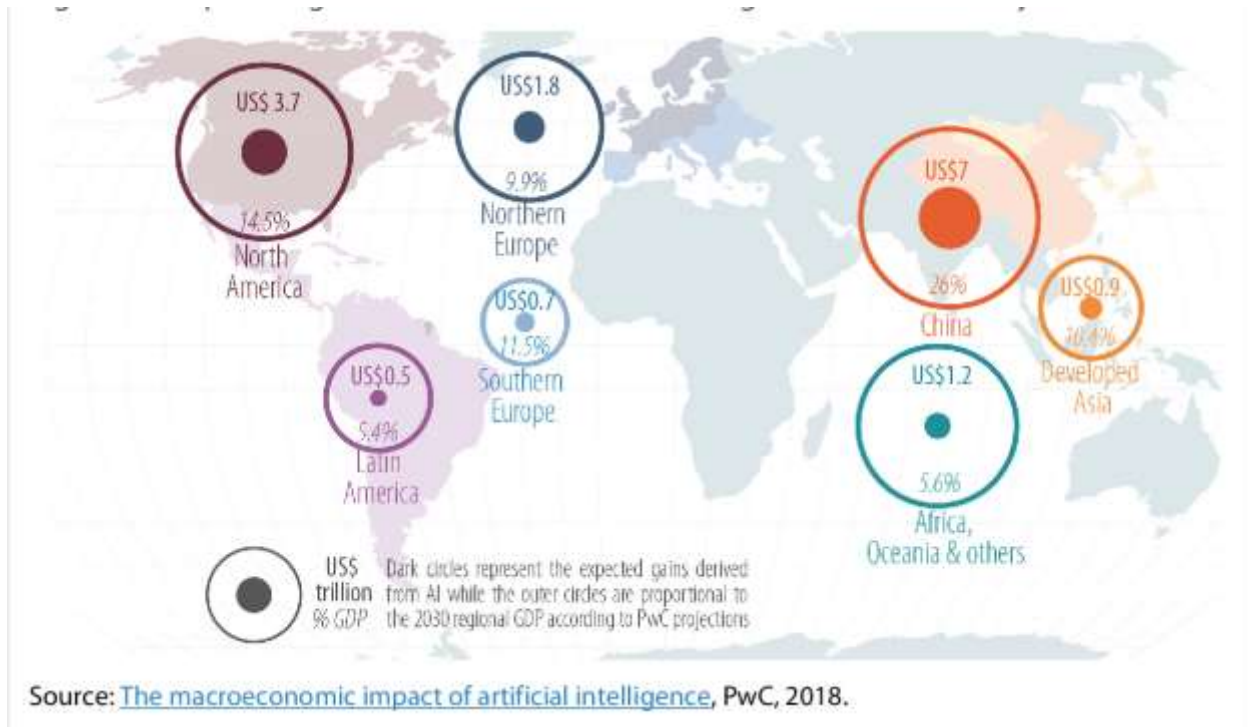
AI and Human Rights

Social Impacts of AI on Customs and Excise:

AI is making trade faster, and also providing more security and safety. It is making tremendous changes by boosting revenues across the globe.

Source: The macroeconomic impact of artificial intelligence, PwC, 2018.

Anticipated AI Benefits Globally by 2030

These kinds of advantages like boosting countries' revenue and economy are a plus point of AI but there are a few other things that also need to be concerned about like job displacement. Job displacement is a worry if AI completely dominates customs and excise, as AI may automate traditional tasks, potentially leading to unemployment and economic challenges for customs officers and their communities which is a huge concern.

So, to tackle these concerns governments must invest in retraining programs to equip personnel with skills to work alongside AI so that they couldn't be replaced by AI but instead can work alongside AI. Another concern could be if certain country systems are not up to date for AI, so for this concern international cooperation is needed to ensure inclusivity of AI solutions and prevent of scanning of goods from certain regions. For all of that trusting these systems is important because if someone can't trust these systems then they can't be ready to accept the decisions made

by these systems. So, these systems can be improved by Prioritizing human oversight and clear communication which in turn results in better operations of the customs and excise operations (Council of Europe, 2020).

Job Displacement and Workforce Changes:

The integration of AI in customs and excise operations is rapidly transforming the working landscape of these folks. While AI automates repetitive tasks, potentially leading to job losses for roles like data entry or document verification, alongside this it also creates new opportunities in areas like data analysis, system maintenance, and AI oversight (Smith & Johnson, 2020).

This requires a focus on reskilling and upskilling existing customs folks to adapt to these changing demands, to compete with AI by upskilling and upgrading themselves. Embracing lifelong learning and providing targeted training programs will be important to ensure a smooth transition and equipping these folks with the knowledge of modern AI tools will help them to go with the pace and prosperous instead of worrying. New skills can be learned through online courses, physical coaching, seminars, workshops, and through other means.

Effects on Global Trade and Relations:

The application of AI in customs and excise can significantly impact global trade and international relations massively. Streamlining customs processes and enhancing border security through AI-powered risk assessment and proper inspections can facilitate faster and more efficient movement of goods across borders. This can boost trade volumes, promote economic growth, and strengthen international partnerships (Global Alliance for Trade Facilitation, 2019).

But there could happen certain trade imbalances and inequalities due to AI, also due to technological gaps between countries across the globe can damage the process (Eubanks, 2018).

So, AI-driven policies, rules, regulations, and proper international cooperation (Moss & Nissenbaum, 2017) are a necessity for the smooth working of these systems.

Building Trust in AI Systems for Customs Operations:

For the better utilization of AI at customs and excise there is most concerning thing is trust, the trust of people over these AI systems, once they are ready to trust these systems then integration of them isn't that difficult. But for the trust development, these systems must ensure transparency and accountability. Customs and excise authorities must communicate and convey how AI will be used, what will be the criteria of the decision-making process, and how they are going to handle the bias to safeguard everyone (European Commission, 2019). All this could be more trustworthy if customs authorities let people know how and where their data is going to be used. Proper sharing of algorithmic, and dataset information can also add more trust and fairness (Crawford & Hudson, 2018). Regular evaluations of these systems can improve their efficiencies and can reduce issues like biasing, also proper public appealing rights for the individuals who are treated unfairly by AI can further boost the trust of people in these systems.

Strategies for Upskilling Customs Personnel:

As AI is continuously reshaping the world of customs and excise so upskilling and reskilling existing personnel are critical to ensure a smooth transition and maintain a competent workforce. Investing in training programs that equip these customs and excise folks with the necessary skill set can improve their level of understanding of new AI systems. So, this could be done in different ways like training them to let them know about data analysis, interpretation of AI outputs, algorithmic bias detection, and responsible AI practices (Smith & Johnson, 2020). Additionally, a culture of continuous learning and encouraging collaboration between human and AI systems can optimize the performance of these systems.

Reskilling and Retraining

Fostering Inclusive Economic Growth through AI in Customs:

AI in customs and excise can boost economic growth but it is also crucial to ensure these benefits are distributed inclusively. Concerning all is the main thing like creating AI solutions that meet the requirements of small and medium-sized enterprises (SMEs) and developing countries can narrow the digital gap and encourage fair involvement of all parties in the global trading system (World Customs Organization, 2023). Also, ensuring transparency and fairness in AI-driven customs procedures can strengthen the overall system regardless of the size or origin (Global Alliance for Trade Facilitation, 2019) of the business.