Final Exam, “The Use of Blockchain in Trade Facilitation,” UNCTAD course

**Robert L. Wallack, United States**

**2. Which are the measures/areas/projects where, in your opinion, the use of blockchain technology could be more beneficial?**

**Answer:**

The problems encountered in the area of cargo insurance can be improved with blockchain technology which encompasses the goods (damage, loss, stolen), the driver, the vehicle, their equipment and their performance across all modes and facilities of cross-border trade. Insurance processes would benefit from the shared records of data between computers with encryption, time stamps, hash functions as well as smart contracts for faster, secure processing of claims and payments. The examples of the thefts from the United States railroad company and trucks of e-commerce parcels and of one United States freight insurance company can illustrate the use case in detail.

Cargo insurance costs are a growing international trade concern among many other landed costs for the stakeholders that are traders, transportation and insurance carriers in an e-commerce digital economy. (“Key areas where blockchain hold potential in financing and payments,” Insurance processing…can streamline insurance process and even reduce cost, Module 1, p. 33). Insurance costs are an important landed cost variable determined at point of sales and purchase orders in their choice of INCOTERMS. The buyer and seller will choose the INCOTERM in how costs and risks are apportioned. “Trade volumes are increasing, driven by an ever-growing e-commerce sector with millions of small parcels crossing borders annually.” (Module 1, Customs Clearance, Risk Management, p. 53).

To illustrate blockchain technology’s importance for cargo insurance is the example of “the Union Pacific railroad tracks in Los Angeles, California, USA where thousands of discarded e-commerce parcel boxes are strewn around the tracks from freight trains after thieves broke locking devices on the shipping containers stacked on the trains. Each year billions of dollars (estimated, $15 billion to $35 billion and $50 billion, globally) of goods are stolen in transit. Most freight is moved by trucks (intermodally) and more stolen off trucks”. (“The Great Freight-Train Heists”, Wollan, Malia, The New York Times Magazine, January 28, 2024, pgs.18,20). Many shippers, insurance companies, police, railroads, truckers and retailers are reluctant to discuss this problem. “The Transported Asset Protection Association organized these stakeholders to track misappropriated goods across borders” (p.21). The use of blockchain technology and the guidelines to implement would go a long way in facilitating the changes needed.

Cargo insurance companies are answering the need with better technology solutions where blockchain technology could also be designed, integrated, tested, deployed and maintained. The recent trend of nearshoring supply chains and more cross border trading between the United States and Mexico proves the case. “Cargo theft incidents amounting to over 17,000 per year are reported occurring in Mexico. Reliance Partners, a U.S. freight insurance company for losses in transit, set up a user portal to automate shipper and logistics service provider processing and can integrate with transportation management systems (TMS)” which by extension could include blockchain technology integrations. (“Cross Border Risk Management Helps Companies Win Nearshoring Game,” Glasscock, Jenny, FreightWaves, August 25, 2023).

Stakeholder coordination by instituting a public private dialogue (PPD) mechanism is still paramount for the technology and regulation success of blockchain involving cargo insurance design, integration, testing, deployment and maintenance. Other agenda items for PPD to discuss for implementation of blockchain technology for cargo insurance is for a data agreement between the border governments and on how far trucks can travel into the neighboring country which involves different insurance regulations, age of truck models and data interoperations. These issues are prevalent in North America and in Asia between China-Mongolia and China-Vietnam.

The examples described show that blockchain technology of encryption, digital keys and signatures, and access rights and authorization levels would all work well with the cargo insurance process from increasing volumes from e-commerce cross border trading. Blockchain could streamline insurance claims and processing of payments in a secure and trusted environment. “The United States Census Bureau collected data on e-commerce and in 1998 sales were $5 billion and on-line sales are now over $958 billion, e-commerce revenue is forecast to exceed $2.5 trillion by 2027.” (p. 21).