Lubianko P., Bondzich S., Ladutska N. Containers, Their History and Role in Globalization

Belarusian National Technical University Minsk, Belarus

Sixty years ago, there was a revolution, unnoticed by everyone, that you had never even heard of. From Ireland's largest port, goods are shipped all over the world. But even more recently, in the first half of the 20th century, shipping around the world was a problem. Goods were loaded into bags, crates and barrels. All of this was moved by hand, rolled and lifted on a cargo ship. It was slow, expensive, and dangerous for the cargo. It was easy to damage or steal. But the bigger problem was that the ships were only at sea half the time and the rest of the time they were in port making no money. This is also one of the main reasons why everything foreign was so much more expensive.

But one man changed everything in 1956. Thanks to him we now have phones, cars, fresh fruits and vegetables, food and drink from all over the world. And it took one simple invention that changed the world. These are the containers.

Malcolm McLean was born in 1914 and grew up on a farm in North Carolina. After graduating from high school in 1931, he worked for several years to save enough money to buy a used truck. In 1934 he started his transportation business. Soon McLean expanded his transportation business and had five trucks under his belt. During a routine delivery of cotton bales in 1937 from North Carolina to New Jersey, McLean witnessed dockworkers loading and unloading loads that took hours upon hours. He reflected on what a waste of time and

money it was. From 1937 until the early 1950 McLean focused on his transportation business, which had more than 1,750 trucks and 37 shipping terminals. In fact, it was the fifth largest trucking business in all of America.

The Great Depression was coming to the end in the 1930s. Malcolm McLean, just a truck driver, is waiting his turn at the port for 24 hours, watching the loaders at work. And a simple thought comes to him: "What if the truck could be lifted onto the ship as a whole, without unloading individual boxes?" Just the trailer with the cargo without the cab or wheels. And not just one trailer, but dozens, hundreds of trailers.

It took him 20 years to save up money and pawn all his property and buy a World War II tanker. It was named Ideal X. That's where he tested his idea. And in 1956 there was an event that defined world globalization. A ship with 58 containers on board was departed from New York to Houston.

After arrival, the containers were loaded onto trucks and delivered to the recipients. While it used to cost \$6 to load one ton of cargo, it now costs 16 cents. The unions, of course, were angry: for hundreds of years the loaders had earned honest money, and now they have simply been replaced by some cranes and containers [1].

Nowadays every port in the world is stocked with EVERGREEN and MAERSK containers. There are also special containers for bulk cargo with an airlock at the bottom and for liquids and gases in tank form. And in these refrigerated containers, fruit is brought from far away countries. The ships have special sockets for them. But on their own, metal boxes on large ships could not change the economy. It was intermodality that changed it.

Intermodality is the idea the whole shipping logistics is built. As soon as cargo arrives at a port, it is removed by

crane and immediately put on a train or truck without being unpacked or unloaded. All over the world, the same standard clamps are the same, just like on Lego cubes: put, clamp, take away [2]. Globalization began, and the size of ships began to grow at an insane rate. In 60 years, their tonnage increased 200 times.

If you put it upright - it will be higher than the skyscrapers of Moscow City. One of its engines is the size of a five-story house. How many containers do you think new ships can carry? 300? 500? 1000? About 21000 containers. And each one weighs like a tank. To unload and haul this stuff on the ground would require 50 trains two and a half kilometers long, or 10,000 trucks. "How many people do you think it takes to move 21,000 containers?" 200? 300? 1000? About 20 people. That's the captain, first, second and third mates, engineers, helmsmen, technicians and a cook and mate. The trick is that each of them can be replaced by another in case of illness or death. Of the entire crew, only the captain and his assistants know what they are carrying. But they know the weight and contents of the containers only from the documents. That is why most of the drugs, migrants and weapons are transported by sea, in containers. The crew of 20 people don't care what is inside each container. What matters to them is to deliver containers to their destination point [3].

Sometimes containers fall out into the ocean. But what about the storms? Yes, no matter how mighty the big container ships may seem, it would be an exaggeration to say that they are immune to storms. On 14 February 2020, the 346-metre giant Svendborg Maersk was caught in a storm in the stormy Bay of Biscay. As a result, 520 containers were lost. The total number of containers lost each year is not known precisely; estimates range from 2,000 to 10,000 per year. Neither shipping companies nor insurance companies are in any hurry

to share the real accounts, so as not to scare the customers, especially since we are talking about a tiny fraction of the 160 million containers that are transported by sea every year [4].

Container delivery is one of the most profitable and convenient, it allows transporting oversized cargo at an affordable price. Competent use of containers of the appropriate type in the technological process can significantly reduce transport costs. However, the apparent simplicity of container shipping requires the participation of qualified professionals who will take into account all the nuances for competent, safe and inexpensive delivery of goods.

Globalization began with one simple idea - the idea of using one metal box on the whole planet. That's how a simple metal box changed the world. Today, the experience of all countries is available to us. Traditions, opportunities, entertainment, products. The world has become a huge supermarket. Think about that the next time you read the country of origin on the label.

References:

- 1. The history of Malcolm McLean [Electronic resource]. Mode of access: http://eurologistics.ru/articles/120495/. Date of access: 18.02.2020.
- 2. Introduction of container transportation [Electronic resource]. Mode of access: https://www.discovercontainers.com/a-complete-history-of-the-shipping-container/. Date of access: 18.02.2020.
- 3. Design tricks of the container ship [Electronic resource]. Mode of access: https://youtu.be/hwEZU83jQVg. Date of access: 20.02.2020.
- 4. Container losses [Electronic resource]. Mode of access: https://gcaptain.com/number-of-containers-lost-at-sea-falling-survey-shows/. Date of access: 20.02.2020.