

# Abstract

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## **The challenges and risks of the Arctic passages on Suez Canal**

As a result of global warming and rise in temperature, the Arctic region witnessed melting of ice. The technological development for the extraction of oil and natural gas in the Arctic in addition to political instability and piracy in the Middle East pushed the Nordic countries (Germany, Russia and Canada) to do research, studies and experiments to take advantage of these resources and to exploit the short distance to transfer trade between Western countries (Europe, America and Canada) to the east countries (Japan, China and South Korea). Two German ships succeeded in September 2009 to sail from a port in South Korea to the Dutch Rotterdam port across the North Sea along the northern Russian border Northern Sea Route 2013, (Information Office), followed by the success of the Russian gas tanker «Baltika» to sail from the Russian city of Murmansk in the August 14, 2010, to the Chinese city of Shanghai, accompanied by the nuclear icebreaker «50 years of Victory»; across a route inside the territorial waters of the coast of northern Russia from the Arctic Ocean carrying 70 tons of gas condensate to be a substitute for the southern route through the Suez Canal. Projections indicate that the volume of trade passing across the Northern Sea Route NSR in 2015 to be 4 million tons and may reach to 65 million tons per year in 2020 and to 120 million tons in 2030 (Keil, 2014). In spite of the many alternatives of the Suez Canal such as the Panama Canal, the Cape of Good Hope and also North South land corridors could develop as land bridges from the Persian Gulf via Iran to Russia, the East-West rail corridors, a set of railway lines connecting East Asia and the western part of Russia with the Eastern part of Russia, are becoming more commercially interesting. One of the main arteries is the Trans-Siberian Railway which connects St. Petersburg with the port of Vladivostok. But the NSR corridor may be considered the most rival of all these corridors. This paper discusses the description of the maritime corridor in north of Russia in the Arctic in terms of positivity for the countries in the region such as benefiting from the wealth of the Arctic and the passage fees and shortening the distance thus reducing the cost of the trip, as well as the difficulties facing this passage such as construction expenses, financing expenses, economic feasibility and climatic conditions and absorptive energy of these corridors for the transport of goods from reducing ships speed and strong design to body of the ships and their need for ice breakers and other difficulties. The paper also addresses the impact of this new route between the east and the west in regards of the challenges and risks of competitiveness on the Suez Canal and also discusses the importance of speeding up the establishment of transit ports, logistics development, maintenance of transiting ships, deepening and duplication and expansion of the waterway of the canal and re-considering the fees and services, transit and training of human resources in addition to the transport network development of roads, railways, bridges, tunnels, power grids, irrigation, water and sanitation. All the risks and constraints such as piracy and bureaucracy and routine, must be illuminated and working on taking actions that will make the Suez Canal at the top of the competition, to increase the gap between the Canal and the new competitors and therefore making difficult for them to compete where it is still in the research and studies and experiments phase either have dismissed the creation of this new passages deadline for non-economic feasibility, at least if they created it the Suez Canal will be the best able to attract global trade.