Barge transportation comprises an extensive network, ideal for carrying seaborne cargo to inland destinations and exports alike. Responsible, in part, for the worldwide trade of bulk transport, the industry is of great significance to the agricultural sector. In North America, The Army Corps of Engineers maintains and operates over 12,000 miles of canals, rivers, and inland waterways. The Illinois Waterway and Mississippi River are the major waterways in the region that are responsible for moving agricultural and farm products through barges. Shifting preferences toward marine transportation, especially for liquid cargo across the region, will fuel barge transportation market growth.

The North America barge transportation market accounted for USD 22.2 billion in 2016 and is predicted to reach USD 31.1 billion by 2024 with around 5% CAGR from 2017 to 2024. Rising petrochemical shipments across the region have contributed to the industry growth in the region. The extensive usage of inland waterways by various farm belts for the transportation of agricultural chemicals and farm products will further propel the regional growth. The strong interconnectivity of rivers and canals will positively impact the industry and will lead to an increased demand for petrochemical transportation. This could result in an increased production of tank barges, further impacting the industry positively. That said, industry has only recently all but completed its latest recapitalization program with the elimination of the last non-double hull barge.

The advantages of barges in terms of capacity, emissions, and fuel usage in comparison with trucks and railcars are the major factors responsible for industry growth. The rising demand for petrochemical shipments across the globe and huge investments from industry players for the modernization of the existing fleet will further propel the barge transportation market growth over the forecast timespan.

In North America, the production of shale oil is enhancing the barge transportation market size for the liquid cargo. The main advantage of the shale oil over offshore is that it has a short lead time from development to production initiation, resulting in time reduction.

The barge transportation industry is witnessing changing government support for the development and modernization of inland waterways across the region. The rivers including Ohio, Mississippi, Illinois, etc., are undergoing modernization. The Inland Waterways Users Board has reported an increased fund support from the government. For instance, in 2015, the government allocated USD 281 million for few priority projects that was a 12% rise from the fund allocated in 2014.

These projects will contribute significantly to the enhancement of efficiency and navigation capacity of inland waterway systems. For instance, Chickamauga project expects the construction of 110-foot-by-600-foot lock located immediately downstream of Chickamauga dam and riverward of existing lock. This project is expected to enhance navigation capabilities and efficiency, simultaneously allowing the movement of nine jumbo barges where only one (at present) can transit at a time.

As the industry is capital-intensive, it requires a huge initial investment. Owing to the capital-intensive nature of this industry, it becomes difficult for a new player to enter this market. The operational costs of the participants increase their CAPEX due to the extra expenditure such as maintenance & repairs, insurance, and the return on investments. The demand for the petrochemical shipment is witnessing a continuous rise across the region. This rising demand will fuel the barge transportation market growth over the coming years as the import and export of these petrochemicals are heavily dependent on the marine transportation. Operators are finding ways to optimize shipment costs for the rising petrochemical and gas production.

Industry stakeholders have made huge investments to increase the capacity of barges and to expand their barge portfolio owing to the increasing petrochemical demand. In 2014, Kirby Corporation invested USD 135 million to construct 66 new inland barges. Similarly, in 2016, the company spent USD 231 million for its expansion along the U.S. Gulf Coast. Later in the year, the company purchased a 155,000-barrel articulated tank barge and a tugboat unit for the ethanol transportation from the Great Lakes to Northeast region. The import and export of petrochemicals contribute to almost half of the revenue of the major industry players.

The rising demand for crude oil in North America owing to technological advancements in hydraulic fractur-
ing and horizontal drilling has fueled its oil production over the last decade. In the U.S., the crude oil production has increased from 3.8 million barrels to approximately 9 million barrels per day; a 137% rise. Due to the increased production of crude oil, the demand of tank barges has increased considerably over the past years in the region.

Barge transportation market has numerous participants in these markets. American Commercial Barge Line (ACBL), Ingram Marine Group, Kirby Corporation, SEACOR Holdings, Campbell Transportation Company, APL Logistics, and Crowley Maritime Corporation are among the most prominent vendors in the industry.

The industry leaders are focusing on new barge constructions with larger loading capacity and technologically advanced features. The demand for tank barges is increasing owing to the rise in the crude oil production. For instance, in 2014, Kirby Corporation made an investment of USD 135 million for the construction of inland towboats and 66 inland tank barges. In 2012, the barge operators in the U.S. purchased 336 new tank barges with an overall capacity of over 8 million barrels. Short term, however, there are too many barges for available domestic cargoes – both in the dry bulk and liquid markets. Hence, freight rates have suffered.

Industry participants have recently focused on mergers, collaborations, and partnerships. For instance, in May 2012, Ingram Marine Company completed the acquisition of United Barge Line for the expansion of its workforce and strengthening of its inland footprint. This acquisition further helped the company in the extension of its product line by adding 650 barges and 17 towboats. In May 2016, Kirby Corporation acquired inland barge fleet of SEACOR Holdings that consisted of 13 towboats and 27 inland barges. Consolidation may well continue well into the future.