Understanding the economic geography of commodity trade


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It is often argued that the competitiveness of ports depends on their ability to insert themselves in global supply chains. However, the influential role of commodity traders in managing these global supply chains is not well understood by port planners. The case for commodity trade is compelling. It is linked with the financial sector on the one hand and with production, storage and distribution on the other. And these activities do not necessarily need to be in each other's proximity. Another compelling reason to look at commodity trade is that access to, and control over, increasingly scarce commodities and contested supply routes are becoming more and more of a geopolitical concern. The aim of this research is therefore to understand the economic geography of commodity trade.

What is commodity trade?

Commodity trade is an investment strategy where goods (raw materials, production inputs) are traded instead of stocks. Commodities traded are often goods of value, consistent in quality and produced in large volumes by different suppliers such as wheat, coffee, sugar, oil, ore and non-ferrous metals. The role of the commodity trader is to match supply with distant demand and negotiate a premium. In essence, the competitive advantage (the capacity to negotiate a premium) of the commodity trader is based upon its knowledge of and information on supplies, demand, quality, prices and risks. These factors

A fictional transaction in oil: (Jacobs & Von Dongen, 2012; derived from Berne Declaration, 2011)

differ geographically. In order to take full advantage of these geographical differences, traders need to understand complex financial-economic instruments while at the same time need to carefully manage global logistics to ship the commodities on the right time to the market. This is what consultant Oliver Wyman calls 'optionality': "the ability to pay producers more than end users while selling more cheaply to end users than producers can afford".

Who are the commodity traders?

There are two types of commodity traders. Firstly the 'paper' traders, those who speculate on price fluctuations without necessarily taking physical control of the commodities. They are typically banks, hedge funds and institutional investors such as pension funds or sovereign wealth funds. Secondly, there are the commodity houses that actually have physical ownership of the commodities and are responsible for shipping them to markets. This distinction is somewhat artificial as some banks, most notably Goldman Sachs and BNP Paribas, do actually own physical assets, while all the large commodity houses engage in paper trade to mitigate risks in price fluctuations, the so-called futures trade. This trade in futures actually has an indirect effect on ports. When future prices are higher than current ones, a situation known as 'contango' occurs and the traders have the incentive to store their commodities in tanks or warehouses that are often located in ports. Yet, when the futures price is lower than the price paid on the spot market (known as 'backwardation'), then the traders want to sell immediately instead of storing the commodities.

The large commodity houses that have actual physical control over the commodities are relatively unknown to the public. They have been dubbed by press agency Reuters as 'the trillion dollar club' due to their large turnovers. Within agri-bulk related commodities the largest traders are referred to as the ABCD, which stands for the US companies ArcherDanielsMidland, Bunge Limited, Cargill and French-based Louis Dreyfus. In the oil and energy related business the biggest traders are Vitol, GlencoreXstrata, Trafigura, Gunvor, Mercuria and Koch Industries. In addition to these pure trading groups, some large producers mainly in the oil business such as Shell, BP and Total have also their own trading desks. And there are new global entrants, mainly from Asia and Russia. For example, Russian oil producer Rosneft recently took over the entire oil trading desk of the American bank Morgan Stanley.

How is commodity trade conducted?

Commodities are traded through spot markets and on commodity exchanges. The largest commodity exchanges are the Chicago Mercantile Exchange (CME), New York Mercantile Exchange (NYMEX) and the Intercontinental Exchange (ICE, the former International Petroleum Exchange based in London). There are also specialised exchanges such as the London Metals Exchange (LME) and London International Financial Futures and Options Exchange (LIFFE). The exchanges used to be places where the traders met face-to-face to buy and sell within so-called 'calling pits'. During the mid-1990s however, these exchanges have become fully digitised allowing the trade to be conducted from more or less anywhere as long as one has access to the internet. More recently there has been a process of mergers and acquisitions. The most spectacular of these is the purchase of the NYSE- Euronext stock exchange by the ICE in 2012. Other recent examples are the takeover of the LME by the Hong Kong Exchange and of the NYMEX by the CME.

The exchanges thus provide platforms for traders to transact and in such a way prices are set. In addition, the commodity exchange also registers storage facilities, mostly located in

The pipeline strategy of the Noble Group (source Noble Group, company year report).

ports. The exchanges can also de-list certain warehouses from their registers, effectively banning them from the market. An effect that can have serious consequences. For example in 2012 the LME issued a ban on copper sheds in the Dutch port of Vlissingen, largely owned by Glencore's Pacorini Metals warehousing division. The effect of that ban is that copper was moved to the port of Antwerp, stored at sheds largely controlled by Trafigura's (in joint venture with the Shanghai International Port Group) NEMS metal storage division. Up to 2013, Antwerp accounted for 87 percent of all copper inventory stored at LME approved storage facilities in Europe according to Reuters.

From where is commodity trade conducted?

Due to digitisation of the exchanges, there is no need for the traders to have an actual physical presence near to the exchange building. And while most of the traders have a physical presence in ports to operationally handle the flows of commodities, their trading desks are often located far away. Nonetheless, the traders still cluster geographically in only a few places that can offer a combination of location factors, of which skilled labour and a business friendly tax climate are the most important. Due to its financial complexity, traders tend to locate their trading desks in financial centres, typically London. Geneva in Switzerland with its favourable tax climate has however overtaken London's dominant role as many global traders have located their head offices and trading desks there. Geneva currently arranges approximately 50 percent of global trade in coffee, 50 percent of sugar, 35 percent of oil and 35 percent of cereals/rice. It is from these offices in landlocked Switzerland where not only the trades are made and financed, but also from where the logistics are arranged. Of course there are still some places that for historical reasons have managed to secure some trading activities such as grain in Rotterdam, coffee in Hamburg and cacao in Amsterdam. And new trading places are emerging where demand is growing, such as in Singapore which is developing into Asia's leading hub for commodity trade.

Moving down the supply chain

While the commodity traders used to be asset light, over the last years they have been actively building up assets. Due to the importance of logistics, inventory management and the need to anticipate fluctuations in prices and global demand, the commodity traders have started to vertically integrate. For example Vitol set up its own tank storage division in 2006, VTTI, in partnership with the Malaysian shipping company MISC. VTTI currently has tank storage facilities in 11 ports across the globe, including the Eurotank facilities in the ports of Amsterdam, Rotterdam and Antwerp (the so called ARA region). In addition, Vitol also owns its own tanker company Mansell, it has its own captive insurance group Anchor and in 2011 acquired almost the entire downstream division of Shell in Africa. Through the merger with global mining company Xstrata in a deal worth US$80 billion, the Swiss trader Glencore also moved down the chain and effectively secured its global minerals supplies. That same year Glencore also took over the Canadian grain trading company Vittera, including its elevator assets in a deal worth US$6.1 billion. Glencore now controls half of Canada's total grain exports. By moving down the supply chain, the so-called pipeline strategy, the traders can generate profits at various points in the chain and reduce uncertainty.

Outlook

The trading houses have taken full advantage of high commodity prices over the last decade by acquiring strategic assets along the supply chain even though the global bonanza has somewhat slowed down in recent years. However, there are some other structural changes that will change the landscape for the years to come. Oliver Wyman talks about a 'shake out' while McKinsey speaks of 'strategic crossroads'. First of all, competition is increasing as new players are entering the global market. These new entrants come from resource-rich developing countries and are quickly setting up their own trading desks to market their products. The margins of the traders are also put under pressure due to the lack of financial capital to further expand and acquire assets. New financial regulations set in place after the 2008 global financial meltdown have constrained the ability of banks to finance transactions with commodities as collaterals. Therefore it is expected that some medium-sized traders will not survive the coming years and that a new round of mergers and acquisitions will take place.

About the authors

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About the organisation

PortEconomics is a web-based initiative aiming at generating and disseminating knowledge about seaports. It is developed and empowered by the members of the PortEconomics group, who are actively involved in academic and contract research in port economics, management, and policy. Since October 2012, Port Technology International and PortEconomics have been engaged in a partnership.

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