J.P. Morgan Center for Commodities at the University of Colorado Denver Business School



Commodity Consequences of the U.S.-China Trade Disputes

Colin M. Waugh

Editorial Advisory Board Member, Global Commodities Applied Research Digest

As the United States enters an election year, the on-again, off-again trade disputes with China rumble on into its third year with no definitive end in sight. The Phase One Agreement in Washington DC on January 15 of this year did mark a cooling of tensions between the parties (Donnan *et al.*, 2020). However, many actors on the U.S. side reserved judgement on whether the measures pledged by China could be implemented while the U.S. administration confirmed at the time that the bulk of existing tariffs would remain at existing levels pending completion of a Phase Two deal and until at least November of this year. And as of early April, with global health issues at the fore, even this tentative timeline is beset with uncertainty.

In review, the hallmark of the entire conflict which has its origins in the steel and aluminum tariffs imposed in March of 2018 by the U.S. on various countries, including Mexico, Canada and the EU, only later focusing on Chinese exports, is that any agreement can be torn up and any commitment can be reversed at short notice. Furthermore, despite the Phase One confirmation of continuing tariffs in the short term, accelerating political pressures both internal and external, on the U.S. president and mounting economic threats facing the Chinese leadership, suggest that the potential remains for eventual compromise and resolution.

In the global clash of systems and against a backdrop of the unprecedented upheaval which commercial conflict has wrought against the Old Commodity Order, there is a risk that consequences for many established supply chains will, to a greater or lesser extent, become irreversible. Already shattered by a regime of lightning U.S. tariffs and devastating Chinese food supply destruction from disease, even with a benign outcome to negotiations, the structure and sourcing of China's commodity imports may never return to pre-2018 arrangements.

Equally, firms on both sides of the Pacific with international operations are taking evasive action, relocating facilities and diversifying marketing efforts to new regions. Corporations in sensitive sectors such as critical minerals, technology and communications may fear potential future regulatory curbs or legal sanction as an increasing cost of operations in their strategic competitor's market.

Although restrictive trade measures may be effective in protecting domestic market share in the short term, for neither side can protectionist tariffs come close to surpassing the opportunities offered by the scale and potential of access to the Chinese and U.S. economies respectively. Yet, due to the trade disputes, the commodity industry's twin pillars of economies of scale and lowest cost sourcing of product are in the process of potentially becoming irrevocably distorted as free trade is dismantled and strategic considerations eclipse economic ones as the primary drivers of supply chain construction.

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While private actors in the U.S. scramble to protect their interests, hedging against the worst-case outcome and as exporters abroad seek opportunities suddenly thrown before them to exploit new market openings, the long-standing commodity trading order based on supply and demand is being turned on its head. Now, in a new order defined by trade dispute exigencies, stability, reliability, availability and increasingly, the political compatibility of sourcing are becoming Beijing's priorities with market price as the determinant of supplier choice falling away into second place.

There is a significant asymmetry in the trade skirmishes which broke out in the second quarter of 2018. On the U.S. side, the dispute has largely been about economic, and especially trade imbalances as well as intellectual property protection, while on the Chinese side retaliatory tariffs imposed by Beijing appear to have had a distinctly political flavor, often targeting sectors and states widely seen as key constituencies for the incumbent president's campaign in the forthcoming U.S. elections. We will examine the respective commercial actions taken by each side as of early 2020, and their impact, in the main part of this paper.

A Historical Context: A Predictable Phase in Global Economic Rebalancing?

When the U.S. administration targeted Chinese exports to the U.S., some observers viewed this action as one of several illogical measures from an unpredictable U.S. administration. However, economic historians might say that while the timing and dimensions of the clash initiated by the U.S. administration may have been unexpected, the broader evolution of China's rapid economic growth in relation to the West made such an outbreak of commercial hostility a likely development.

It is true that China's leaders and historians have frequently viewed the West's economic and political dominance since the mid-eighteenth century as a temporary or at best cyclical phenomenon which would run its course; meanwhile many Westerners have continued to view the post-industrial revolutionary order of first British, Western European and then American dominance as the natural state of things. However, the latter part of the twentieth century clearly evidenced an Asian resurgence with China taking the lead from Japan from the 1980s onwards. To other analysts, there was an inevitability to this and there was only discussion as to what the reactions of the different parties to the struggle for dominance would be.

The late Italian economist Giovanni Arrighi, writing in 2007, stated what he saw as the three main identifiable obstacles to continued rapid Chinese economic expansion: worsening social and regional income inequality within China leading to unrest; the mounting tendency to achieve growth following a Western energy-intensive model rather than via a more typically Asian energy-sparing growth; and thirdly but most presciently, Arrighi (2007) asserted that China cannot expect the world's most important states, in particular the U.S., not to "... attempt to disrupt its continuing economic expansion." More prophetically he wrote, "It is possible that by the time the U.S. has disentangled itself from the Iraqi quagmire, Chinese centrality in the East Asia region will be consolidated ..."

This was Arrighi writing some thirteen years and four U.S. administrations ago. Earlier still, Mearsheimer (2001) voiced a similar view at the outset of the George W. Bush era, stating: "it is not too late for the United States to ... do what it can to slow the rise of China. In fact, the structural imperatives of the



international system ... will probably force the United States to abandon its policy of constructive engagement ... (pp. 401-402)."

In this context, what has happened since 2018 should perhaps only surprise us by how long it took to occur, rather than any surprise that it happened. Looking further out, one might add that a deep understanding of historical Great Power conflicts can potentially help policymakers on both sides of the Pacific avoid the miscalculations of the past.

Winners and Losers from Commercial Conflict

To the economic purist, free market exchange results in a better-than-zero-sum game, with both buyers and sellers benefiting from specialization and lowest-cost sourcing in the Pareto-optimal environment. In a trade "war" scenario, however these benefits are no longer on offer and even zero-sum outcomes may be unattainable at the macro-level.

However, at the individual firm or country level, there will still be winners as well as losers from trade conflict, as producers buy raw product from second or third best sources and those higher-cost players ramp up production. Expanding output in defiance of formerly uncompetitive cost curves, these opportunist suppliers take advantage of their windfall oligopolistic market dominance and a regime of man-made supply disruptions affecting lower cost competitors.

This article will first examine the major shifts in market share for some of the most affected commodities since the inception of the trade dispute in the summer of 2018, as compared to previously. The overview begins with a survey of agriculture where price and supply swings have been among the most pronounced, followed by examples from energy and mineral commodity markets.

The analysis will attempt to identify who may be set to advance in the commodity supply space not only now but also in the future. Winners and losers can be gauged in terms of costs of operation, revenues and market share gained or lost. Vulnerability and increased risk in the new commodity trading environment bring its own higher cost schedules, whether through sourcing, security needs, hedging expense or insurance.

Next, the discussion will focus on the extent to which this re-channeling of supply chains is reversible, in the short as well as in the long term. In conclusion the paper looks beyond the purely economic analysis to the less quantifiable influence of domestic and geopolitical developments on the horizon, and their influence, constructive or otherwise, with an eventual return to a more stable trading equilibrium between the world's two greatest economic superpowers.

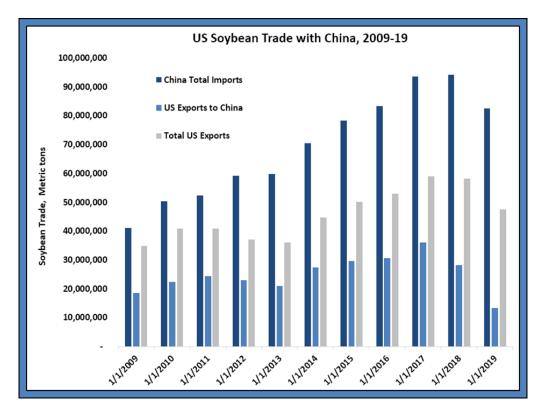
Agribusiness Impact of the Trans-Pacific Trade Dispute

The biggest immediate impact of the recent trade dispute has been a disruption to agricultural supply chains, and particularly to soybean and meat products. Brazil, Argentina and other South American countries have been the main beneficiaries, either through enhanced market share or higher export prices, or both (Fitch Solutions, 2019b). For example, due to the recent trade dispute, U.S. soybean



exports to China have fallen 70% year-over-year, to only 9% of their total supply, from 36% prior to the dispute. China is purchasing the bulk of its soybean import needs from South America, but at a huge premium to the U.S. price. U.S. exporters have, to a limited degree, been able to compensate for the lost market by increasing exports to the EU and other Asian buyers.

Figure 1



Sources: Customs General Administration, PRC; USDA.

In a separate but closely related dispute, Canadian meat exports to China have also been curtailed since mid-2019 in the wake of the tit-for-tat apprehension of a senior Huawei executive on a U.S. arrest warrant and the detentions of two Canadian citizens in China, the latter of which is covered in *Reuters* (2019). In the earlier stages of the trade dispute, Canada's meat export industry had been a beneficiary as a result of the U.S. being partially shut out of Chinese pork markets, but the Huawei incident as well as a heightened war of words over Hong Kong between Prime Minister Trudeau and President Xi essentially threw that trend into reverse.

In the case of meats, the trade dispute impact is less clear, but the upheaval in pork supply chains which was already underway has resulted in a major reconfiguration of U.S.-China trade. Overall, in the mid-2018 to mid-2019 period, the U.S. in fact increased its meat exports to China, but with the pork products' share declining.

The other massive factor affecting pork is the outbreak of African Swine Fever (ASF), which has meant huge destruction of domestic supply as some 50% of the entire Chinese pig population, 25% of all pigs



worldwide, had to be culled in response (Gale, 2019). According to Xiong and Zhang (2019), it is Europe, not the U.S., which has benefited the most from China's growing meat demand due to ASF.

Figure 2
China – Agriculture and Food Imports by Country (% of Total Value)

	2011	2012	2013	2014	2015	2016	2017	2018 20	19 YTD
Brazil	17.3	17.1	19.5	18.3	17.9	18.3	20.4	25.7	19.1
USA	24.8	25.6	21.9	23.2	20.9	21.5	19.5	11.5	8.2
EU	3.7	3.8	5.3	5.8	7.8	9	8.2	8.6	8.3
Canada	3.3	4.8	4.8	4.5	4.5	4.9	5.4	6	6.9
Australia	4	4.3	5	4.8	4.9	3.9	4.9	5.4	6.0
New Zealand	2.8	3	4.4	5.4	3.5	3.9	4.8	5.2	6.6
Thailand	3.3	3.6	3.8	4.3	4.5	4	3.8	4.3	5.5
Vietnam	2	2.6	2.6	3	3.8	4.4	4.2	4.2	3.8
Indonesia	4.7	4.4	3.2	3.6	4	3.9	4.3	4.2	4.1
Russia	1.9	1.5	1.4	1.3	1.5	1.9	1.8	2.5	2.6
Chile	1	1	1.1	1.2	1.5	1.9	1.5	2.1	3.2
India	4.7	4.7	4.6	3.3	2.7	1.7	1.7	2.1	3.0
Malaysia	5.8	4	3.4	2.9	2.3	2.1	2	1.8	1.8
Argentina	6	4.7	4.3	3.7	4.5	3.9	3	1.6	3.6
Peru	1.5	1.2	1	1.1	1.3	1	1.5	1.3	1.7

Source: Trade Map ITC, Fitch Solutions (2019a).

Note: YTD 2019 is for average monthly imports over the period, January-May 2019.

In October 2019, the Chinese authorities released pork supplies from stockpiles ahead of the traditional National Day holiday celebrations to alleviate the shortages; at the same time longer term measures include pivoting production towards meat and poultry, as alternative protein sources.

In cotton, loss of U.S. market share versus the pre-trade dispute period has been over half, from 44% to 17% in tonnage terms but again, building on new export channels already underway to Vietnam, Pakistan and other Asian buyers has been a compensating factor.

Lastly the non-exchange traded products such as seafood where China is the largest market for U.S. produce and fruits, a booming market and where exports to China had been growing at a healthy pace, have been impacted significantly in percentage terms.

Concomitant with the impact on their produce, American farmers as a sector have been hit the hardest in terms of income loss as a result of the trade dispute. Farm debt levels soared to record highs and bankruptcies rose, aggravated by poor weather conditions across the Farm Belt in 2019. The Trump administration stepped in with \$28bn of aid to offset the impact of falling incomes, which the USDA has estimated will represent one third of total farm incomes for the past calendar year (Zumbrun and DeBarros, 2020).

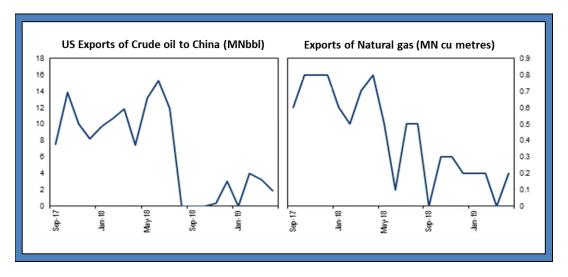


Moving to the energy sector, both with respect to U.S.-sourced oil and natural gas, China has been reducing its dependence and diversifying for some time.

China's imports of U.S. crude oil peaked in early 2018, but even at that time, they represented no more than 3% of the Chinese total; for the U.S. however, the picture is different: in the three years prior to the onset of the trade dispute, the U.S. rapidly increased exports as a share of its export total, to 11%. This has however already fallen back to around 3%, with South Korea, India and other Asian buyers taking up the slack in U.S. exporters' order books.

In natural gas, a similar picture emerges, with early Chinese State-Owned Enterprise stockpiling and diversification to suppliers such as Qatar, keeping dependence on the U.S. low. Again, even at its peak in 2018, the U.S. only accounted for 4% of China's import needs, while Chinese natural gas trade represented some 10% of the United States' rapidly expanding exports. U.S. sellers are now increasingly targeting Europe as an alternative market, where in the near future they face a different strategic clash: Russia's Nord Stream 2 pipeline to Germany and other buyers in the EU has already been the subject of U.S. sanctions, approved by the U.S. president late last year and challenged by the U.S.' European allies.

Figure 3



Source: U.S. Energy Information Administration.

Distortion, Contraction, Misinformation

However, while the economic news for the U.S. is not all catastrophic as a result of trade dispute developments and China's reactions are in part a reflection of its dealing with an equally devastating home-grown animal disease crisis, the international trade dispute is sending the wrong signals to markets. The starkest example is the trans-Pacific trade in soybeans, where the U.S. and Brazil have long dominated both production and exports.



Clearly, trade dispute tariffs sharply diminish the attractiveness of U.S. soybeans to Chinese consumers and in consequence the Chinese export market is in sharp contraction. As noted by Caruso (2019), the trade dispute-distorted market is telling South America to expand production at the same time as the U.S. is holding record inventories. "If markets could operate freely, the lowest cost supplier, in this case the U.S., would see an increase in exports allowing its balance sheet to improve while pressuring South American premiums and signaling that current production is adequate, and expansion unnecessary," concludes Caruso (2019).

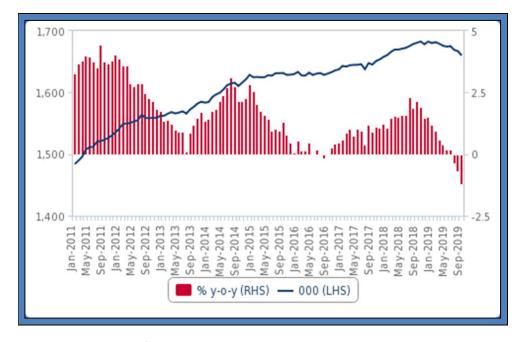
The concern going forward is whether supply chains have been altered forever (McGregor, 2019). And therefore, domestic producers face the decision of whether to cease, or at the very least reduce, capital investments. Such decisions being made now, with the currently available information, could have major ramifications for years to come.

This same type of scenario is playing out in several industries beyond agriculture. In manufacturing, the U.S. fared worse than China towards the end of 2019 (Lockett, 2019). The U.S. Purchasing Managers' Index (PMI) fell below the psychologically important 50 mark in Q4 after standing at 59 a year earlier and above 60 at the beginning of 2018 according to Bloomberg data; meanwhile China's Caixin PMI rose to 52 in the final months of 2019 after languishing in the upper 40s for most of the year.

Against this backdrop, the U.S. administration's public position has continued to be that "China will pay" for the trade dispute tariffs which have been imposed – omitting the impact of countermeasures on the U.S. consumer and exporter. For the U.S. president's re-election campaign, the importance of actual trends in vulnerable sectors highlights a possible need to address a potential political as well as economic vulnerability: manufacturing employment is disproportionately represented in many key states which helped him win the White House in 2016.



Figure 4
U.S. 2020 Swing States in a Downswing: Pennsylvania, Wisconsin and Michigan – Net Manufacturing Employment



Sources: U.S. Bureau of Economic Activity, Fitch Solutions.

In retailing, in the face of rising costs, prior to 2018 many U.S. firms had already begun the process of resourcing inputs from outside China, as with Thailand, Vietnam and Cambodia, among others in South East Asia as the main beneficiaries. But tariffs on a wide range of Chinese products has accelerated the process. In a wide range of goods from household items to clothing to bicycles, U.S. retailers are turning away from long-standing Chinese suppliers. When a lasting resolution to the trade dispute is reached, will they be able to turn back?

Supply chains in retail and manufacturing may be less reversible than elsewhere. Stated one major retailer, Morris Goldfarb, CEO of G-III Apparel in Gray (2019): "Once you get your production out of China... you can't bring it back. Those factories will go out of business," adding "you still need to keep a foothold [in China], until we fully recognize the depth and term of the problem."

Reversal Misfortune

The impact of tariffs or indeed outright embargos on raw commodity imports can be gauged and is calculable, as well as potentially reversible, if one party, i.e. China has a clear, gaping void in its current supply network, even after allowing for additional supplies from new entrants. This is likelier to be the case with protein and other agricultural foodstuffs given that the U.S. presumably is still a willing legacy supplier, at the ready to return to fill the gap.

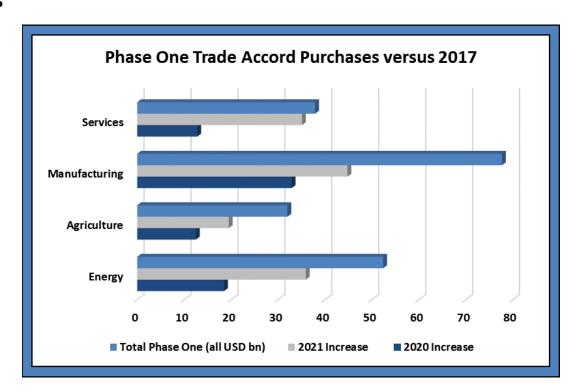


However, where outsourcing of production facilities is concerned, involving long-term investment decisions and suppliers who in turn are also dependent on their own secondary supply channels, the opportunity to restore old relationships and revive prior supply channels is far from obvious, as illustrated above for the manufacturing and retailing sectors.

In agriculture, despite the likely long-term damage to Chinese import levels of U.S. produce, the targets announced by the U.S. administration at the Phase One signing for agricultural purchases in the 2020-21 period not only diverged in the opposite direction: official pronouncements suggested that exports to China must not only rebound but also grow to sharply *higher* levels than they were prior to 2018. Instead of returning to around the previous levels of \$25bn over time, or somewhat less, on January 15th, 2020, the White House confirmed a Chinese pledge to increase agricultural purchases by no less than \$32bn over two years, benchmarked against a 2017 baseline.

Within the Phase One deal, similar pledges were received for purchases of manufactured goods (plus \$77.7bn over two years), energy (plus \$52.4bn) and services (plus \$37.9bn) by the end of 2021, all increased pledges gauged against 2017 rather than 2019 levels.

Figure 5



Source: Economic and Trade Agreement between the Government of the United States of America and the Government of the People's Republic of China, Washington, DC, January 15, 2020.



Investment Battered

There are few winners as markets become paralyzed and decisions are made under irrational circumstances. The long-term stability needed for capital investment has been badly shaken by the trade dispute too, and due to its nature will doubtless take longer to recover when tensions recede. Overseas fixed investment into the U.S. declined in 2018-19 compared to 2015-16 levels according to the U.S. Department of Commerce; after peaking at average levels of \$150-\$200bn per quarter in 2015 and 2016, quarterly total Foreign Direct Investment (FDI) into the U.S. now averages between \$50-\$100bn. While China was not traditionally a top FD investor into the U.S. compared to Western Europe, Japan and Canada, its share had been growing rapidly in the past decade, a trend which has now stalled as a result of the trade dispute.

For portfolio investors too, keeping up with market opportunities resulting from new trading approaches requires a different analytical framework with strategies crafted to handle what has until now been a volatile, see-sawing environment. Talks which lead to deals that in turn can be cancelled or modified only contribute to raised uncertainty.

In equities trading, initiatives to enhance China's financial reform and eventual freedom of capital movement such as the Shanghai-London Stock Connect and the Qualified Foreign Institutional Investor (QFII) program may also be put in jeopardy. Cost curves, pricing and revenue projections are forced to take a back seat to geopolitical analysis and speculation surrounding summitry as the essential tools of investment decision making, a serious albeit second-level distortion of free trade.

To attest to the fact that we have entered a totally new supply chain order whose influences hail from well beyond the world of business and economics, the examples of the long running social-political strife over Hong Kong's future form of government, as well as the U.S. and Iran edging to the brink of war in the early days of the New Year, serve as two poignant examples. Furthermore, by the spring of 2020, with China recovering but the U.S. still in the midst of its struggle to overcome COVID-19, recriminations relating to the pandemic's initial outbreak and spread seemed likely to further cloud broader U.S.-China relations.

2020 will be a crucial year for both the U.S. and China in stabilizing and redefining their domestic political arrangements as well as in their commercial and political relations with each other. In the introduction to this article a historical framework for analysis was outlined suggesting that the events of the past two-plus years of the trade dispute can be viewed very differently by actors on the Chinese side to those in the U.S., with the former very much looking at the long term and with the sense that the current tide of history is on its side. If pragmatism and compromise prevail, this perspective could still coexist whoever is the next occupant of the White House and whatever the composition of the next U.S. Congress.

The maintenance of smoothly functioning supply chains will remain critical for both countries going forward. But in the of wake of the public health emergencies of 2020 in both countries, the emphasis in future talks is likely to be markedly different from what came before.



Commodity supply channels as we have known them until recently are only partly within the control of the negotiations. Their future shape will depend partly on the speed with which trade deals are completed as well as the flexibility and relative economic strength of third parties outside the conflict. As seen in this discussion, in many cases it may be too late for these to resume their previous configuration which would then present further opportunities for new actors as well as more uncertainty for incumbents.

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Author Biography

COLIN WAUGH

Editorial Advisory Board Member, Global Commodities Applied Research Digest

Mr. Colin Waugh has spent much of his career in investment management, research and trading. He was a Partner, Portfolio Manager and Head of Research in the New York firm of Galtere Ltd, a \$2.5bn global macro fund until 2008 when he joined Lombard Street Research (LSR) as an Associate Director for Commodities Research in LSR's Global Strategy Division. He also worked in commodities at Merrill Lynch, and was Vice President, Commodities at Shearson Lehman Brothers. He joined the Editorial Advisory Board of the GCARD in 2018.

A regular China visitor and event speaker, he maintains an active interest in banking and financial sector reform and digital applications for developing market financial inclusion. He holds a Certificate in Future Commerce from the Massachusetts Institute of Technology and is also a Director of Dublin-based Vitro Software, a global medical technology company.

Mr. Waugh has also worked extensively in Africa on development and migrant-related humanitarian projects and has published two non-fiction books about African political leaders: *Paul Kagame and Rwanda* (2004) and *Charles Taylor and Liberia* (2011). He also contributed the chapter, "Collision: Investing for the New World Commodity Order," in the book, *Intelligent Commodity Investing* (2007).

Mr. Waugh previously contributed to the Winter 2017 issue of the GCARD on the "Convergence in World Natural Gas Prices."