SPECIAL FOCUS

A Shock Like No Other: The Impact of COVID-19 on Commodity Markets

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The outbreak of COVID-19 has been accompanied by widespread declines in global commodity prices. The pandemic represents a unique shock that has a major impact on both the demand and supply of commodities. Oil markets have been most affected, given the collapse in travel arising from mitigation measures, and have seen an unprecedented collapse in demand and steepest one-month decline in oil prices on record. Metals prices have also fallen, albeit less than oil, while agricultural prices have been much less affected so far given their indirect relationship with economic activity. Over the short-term, in addition to weaker demand, disruptions to supply chains could cause dislocations in commodity markets, with food security a key concern. The ultimate impact of the pandemic will depend on its severity and duration, but it is likely to have lasting implications. Changing consumer behavior could cause a structural shift in work patterns, reducing travel and demand for fuel. An unwinding of complex global value chains may occur, which could reduce commodity demand. For policymakers in EMDEs, the plunge in oil prices provides an opportunity to eliminate energy subsidies.

Introduction

On March 19, the World Health Organization announced that COVID-19 was a global pandemic—the first pandemic since the 2009 outbreak of H1N1 (swine flu). The number of infections and deaths continue to rise sharply across the world, and the outbreak presents a major shock to an already fragile global outlook. Prior to the outbreak, global growth was expected to rise marginally to 2.5 percent in 2020 from a post-crisis low of 2.4 percent in 2019 (World Bank 2020a). Consensus estimates of growth now suggest deep recessions are likely in many advanced economies, while growth in emerging market and developing economies (EMDEs) is expected to slow sharply. Weaker growth will also result in reduced demand for commodities.

The direct impact of COVID-19 and measures taken to contain it have had substantial impacts on commodity markets and supply chains. Prices of most major commodities have fallen since January, led by oil which experienced its largest one-month fall on record in March (Figure SF.1A; Figure SF.1B). While mitigation measures to control the spread of COVID-19 are essential, they have caused severe economic dislocations and a sharp reduction in travel. For example, passenger journeys in China in March fell by three-fifths compared to their normal level, while subway journeys in New York City have fallen by one-third (Figure SF.1C). There has also been a reduction in the volume of shipping as a result of shrinking global trade. As a result, the International Energy Agency expects global oil demand to decline almost 10 percent in 2020, more than twice as large as the next largest plunge in 1980 (IEA 2020; Figure SF.1D).

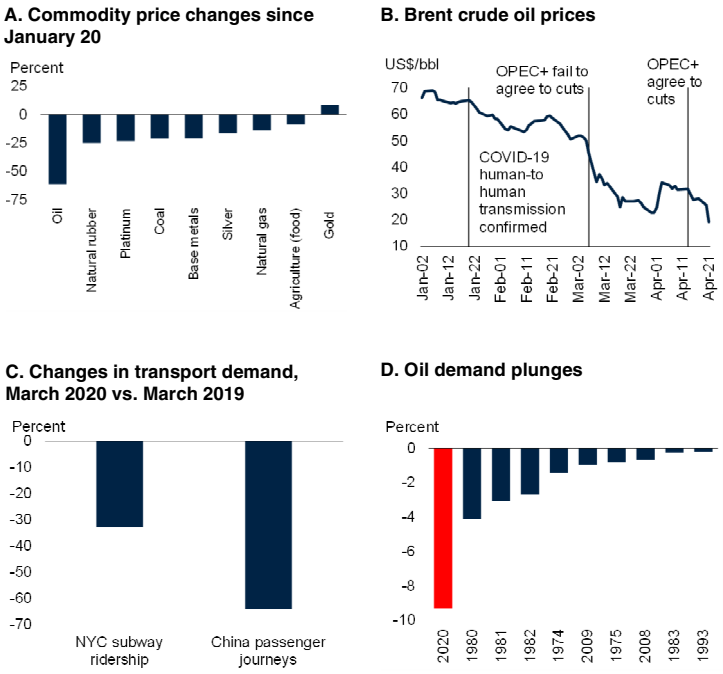
The prospects for commodity prices were already muted when the pandemic hit. Rising trade tensions and slowing growth in China were adversely affecting demand, and most commodities were in ample supply. U.S. oil production reached record levels in 2019, while most food commodity markets experienced near-record high production and stock levels.

While the current pandemic has few precedents in history, past episodes of major economic recessions or disruptions, as well as previous major disease outbreaks, can provide valuable insights into how commodity markets may be affected. For example, the terrorist attacks on the United States on September 11, 2001, led to widespread travel disruptions and reduced demand for oil. Past outbreaks of disease have had substantial localized impacts, particularly on agricultural markets. Past global recessions have been accompanied by sharp declines in industrial commodity demand.

The consequences of COVID-19 are large and likely to persist, with widely varying impacts on individual commodities. Against this backdrop, this Focus examines the implications of COVID-19 for

FIGURE SF.1 The impact of COVID-19 on commodity markets

The outbreak of COVID-19 has had a substantial impact on commodity prices, with declines in most commodities, particularly crude oil. Natural rubber and platinum (both used extensively in the production of transport equipment) also experienced large price declines. Oil prices have declined by two-thirds since January due to the unprecedented combination of a major demand and supply shock. On the demand side, COVID-19 containment measures have sharply reduced travel, and therefore oil demand. Oil demand is forecast to fall by almost 10 percent in 2020, more than twice as large as the previous record.



Source: Bloomberg, BP Statistical Review; International Energy Agency; Metropolitan Transportation Authority, WIND, World Bank.

A. Change in commodity price since January 20, the date of the first confirmed human-to-human transmission. Base metals includes aluminum, copper, lead, nickel, tin, and zinc. Agriculture (food) shows an average of the three main grains: corn, soybeans, and wheat.

B. Last observation is April 21, 2020.

C. Chart shows the change in passenger demand from March 2019 to March 2020. "NYC subway ridership" is the sum of entries into each station in New York's Metropolitan Transportation Authority network, which serves a population of 15.3 million people across a 5,000-square-mile travel area surrounding New York City, including Long Island, southeastern New York State, and Connecticut. "China passenger journeys" include all daily passenger journeys in China.

D. Chart shows all historical episodes where oil demand has fallen since 1965. 2020 shows IEA forecasts.

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commodity markets. Specifically, it addresses the following questions:

- What has been the impact thus far on commodity markets?
- How does COVID-19 compare with earlier shocks to commodity markets?
- What are the potential long-term implications of the pandemic for commodity markets?

What has been the impact thus far on commodity markets?

COVID-19 unleashed a unique combination of shocks to commodity markets, impacting both demand and supply simultaneously. Mitigation measures, while essential, disrupt both demand and supply of commodities. The unfolding economic recession presents a further major shock to demand. The combination of these demand and supply shocks manifest themselves through a variety of channels, with varying impacts on different commodities.

Reduced energy demand for travel. The shutdown of travel has resulted in a substantial fall in demand for fuel for transport, which accounts for two-thirds of global oil demand. Many countries have implemented wide-ranging travel bans and stay-at-home orders, sharply reducing travel. Lower demand and prices for oil also reduces the price of crops used for biofuels, such as corn and soybean oil.

Lower demand during economic downturn. The global recession is resulting in weaker commodity demand. Unlike demand for agricultural goods, demand for energy and metals is strongly affected by a slowdown in economic activity given its higher income elasticity (Baffes, Kabundi, and Nagle 2020).

Disruption to supply chains. Some mitigation measures drive a wedge between consumer and producer prices of commodities, or between commodity exporters and importers. For example, disruptions to food supply chains may result in food security concerns, which in turn can trigger hoarding by consumers. That could push prices higher at the consumer level, while at the same time ample harvests, such as for grains, could lead to lower producer prices. Similarly, for metals, shutdowns of refineries could create a wedge between the prices of refined metals and ores.

Disruptions to agricultural commodity production. For agriculture, the upcoming growing season may be affected by shortages of available inputs resulting from mitigation measures. The labor force available for commodity production

may be curtailed if vast numbers of people are subject to movement restrictions, including across borders. This is of great concern for agricultural production, especially in advanced economies, where there is a heavy reliance on migrant workers who may no longer be able to travel.

Disruptions to industrial commodity production. Mitigation measures may result in the closure of key commodity-producing operations. This could lead to lower production of affected commodities. For example, several copper mines have temporarily closed and new projects put on hold in major copper-producing countries.

Adverse impact of policy responses. Trade restrictions could also impact food markets, for example, if food-exporting countries restrict exports, or if border closures affect the trade of commodities. During the 2007-08 food crisis, as many as one-third of countries adopted trade restrictions, increasing global food prices. An estimated 45 percent of the increase in world rice prices and almost 30 percent of the increase in world wheat prices during this period was due to such policies (Martin and Anderson 2011; World Bank 2019a). Currently, global food markets are markedly less vulnerable than in 2007-08, with production and stocks-to-use ratios of key food commodities near record highs, and prices unusually stable. Nevertheless, policy action by individual large countries could yet destabilize markets, as discussed below.

Oil markets

The impact of COVID-19 has been most severe for the crude oil market. Crude oil prices have fallen by two-thirds since January 20, the date of the first recorded human-to-human infection. The oil market has been hit by an unprecedented combination of negative-demand and positive-supply shocks. Mitigation measures to stem the pandemic and a global recession have coincided with the collapse of the production agreement by OPEC and its partners in early March (OPEC+, Box 1, Energy section).[1] This stands in contrast with supply shocks facing many other industries, which likely face a reduction in supply due to mitigation measures.

Weaker demand. Transport disruptions and an economic decline have weakened demand.

- *Transport disruptions.* The largest factor driving the collapse in oil prices has been the sharp reduction in demand arising from mitigation measures. The unprecedented drop in transport in many countries has led to a sharp fall in fuel demand. Oil demand fell by 6 percent (6 mb/d) in 2020 Q1, and the International Energy Agency anticipates it will fall by 23 percent (23 mb/d) in 2020 Q2, as a growing number of countries have put in place mitigation measures, particularly the United States (the largest consumer of oil).

- *Slowdown in economic activity.* The slowdown in economic growth will also reduce global oil consumption. Oil has a relatively high-income elasticity of demand, which suggests that declines in economic growth can lead to falls in oil demand (World Bank 2018a, 2018b).

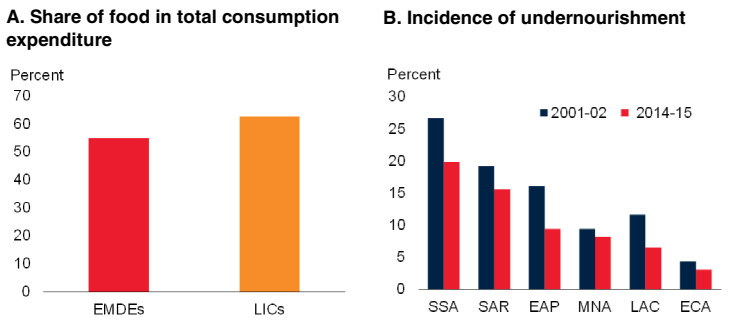
Fluctuations in supply. Oil prices have also been buffeted by the collapse and rebirth of production agreements among OPEC+ members.[2] The breakdown of the OPEC+ production agreement in early March exacerbated the ongoing fall in oil prices, with a decline of 24 percent the day after the announcement. While the potential increase in supply arising from the end of production restraint (around 2-3 million barrels per day) was small compared with the expected fall in demand, it nonetheless aggravated expectations of chronic oversupply. In mid-April, the group agreed on historically large production cuts of 9.7mb/d. However, the announcement did little to support prices, given the uncertainty of demand and

[1] The relative importance of demand and supply factors in driving prices can ordinarily be estimated using a structural vector autoregression model (Baumeister and Hamilton 2019; Caldara, Cavallo, and Iacoviello 2019; Kilian and Murphy 2014; Kilian and Zhou 2017). However, the implementation of mitigation measures has led to a structural break in the relationship between income and oil demand, limiting the usefulness of these models at present.

[2] OPEC+ includes OPEC countries and Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, Sudan, and South Sudan.

FIGURE SF.2 Food security

Low-income countries are particularly vulnerable to food insecurity, as food accounts for a larger share of their total consumption. Despite substantial improvements in the incidence of undernourishment among EMDEs, levels remain high, particularly in Sub-Saharan Africa.



Source: USDA; World Bank.
A. EMDE = emerging and developing market economies, LIC = low-income countries. Indicates share of food in total consumption expenditure of lower-income households. Data is available for 63 non-LIC EMDEs and 25 LICs. The base year of the household surveys differs but the data has been converted to a common reference year, 2010. The share of income spent on food is likely to be different.
B. SSA = Sub-Saharan Africa, SAR = South Asia, EAP = East Asia and the Pacific, MNA = Middle East and North Africa, LAC = Latin America and the Caribbean, ECA = Europe and Central Asia.
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worries the announced supply cuts will be insufficient.

Industrial and precious metals

Industrial metals. The prices of most industrial metals have fallen but substantially less than oil prices. The largest declines have been in copper and zinc, which have fallen by around 15 percent since January (Metals and Minerals section). Metals are most affected by the slowdown in global activity, particularly in China which accounts for more than half of global metals demand. However, production disruptions resulting from mine and refinery shutdowns arising from COVID-19 are also impacting supply. Industry estimates suggest 15 percent of copper mines and 20 percent of zinc mines are currently either offline or operating at reduced capacity. Conversely, major iron ore operations in Australia and Brazil are less impacted because of their highly automated and remote operations.

Precious metals. Gold prices have risen 8 percent since January 20 but have fluctuated significantly as investor sentiment has evolved. Uncertainty and safe-haven flows have driven prices higher, although declines were seen in March (possibly reflecting gold sales to cover margin calls amid a broader market sell-off). Silver and platinum prices fell sharply in March and remained lower in April, dropping by as much as one-third, although with some recovery more recently. Price declines were driven both by concerns about economic activity—silver and platinum prices correlate with industrial metals prices more closely than gold prices—as well as investor selling to meet margin calls. Since more than 40 percent of platinum demand is for catalytic converters, demand for platinum has also been affected by plunging automobile production. On the supply side, a 21-day stoppage at mines in South Africa—which produces over half of the world's platinum—gave some reprieve to prices.

Agricultural commodities

Global agricultural markets have been less affected so far than industrial commodities. Prices of the main food commodities have declined about 9 percent since January 20 (Agriculture section). This modest decline reflects a lower income elasticity of demand for agricultural commodities (compared to industrial commodities) and, hence, less demand pressure from the global recession currently underway. Natural rubber (used purely in industrial purposes) was an exception. It has declined 25 percent largely because almost two-thirds of its consumption is accounted for by the production of tires for the transport sector. In addition, the decline in crude oil prices and gasoline production have affected crops used in biofuels, such as corn and soybeans.

Food security. Global food markets remain amply supplied following recent bumper harvests, especially in maize and wheat. For major staple food commodities, stock-to-use ratios are very high by historical standards. Nevertheless, recent announcements of trade restrictions by some key exporters (e.g., Russia for wheat and Vietnam for rice), as well as "excess" buying by some importers (e.g., Philippines for rice, Egypt and Saudi Arabia for wheat), have raised concerns about food security (Glauber et al. 2020). If such concerns become widespread, hoarding may result (Schmidhuber, Pound, and Qiao 2020). Low-income countries (LICs) are more vulnerable to

food insecurity, as food accounts for a larger proportion of their consumption than in EMDEs, particularly among the poorest households (Figure SF.2A). Most LICs are located in Sub-Saharan Africa where about one-fifth of the population suffers from malnutrition (Figure SF.2B).

Supply chain disruption. Disruption of supply chains has already affected the export sector of EMDEs, especially for perishable products such as flowers, fruits, and vegetables (World Bank 2020b). For example, following travel disruptions from East Africa to Europe, Kenya's exports of fresh flowers dropped nearly 80 percent. Shipments to Western European markets, including the United Kingdom, the Netherlands, and Germany, fell from 60 to 15 tons per day. Production is also being affected by disruption to key inputs. For example, low availability of pesticides are already affecting crop protection efforts and will likely reduce yields later in the year. A lack of pesticides is also hampering efforts to contain pest outbreaks, including the current locust outbreak in East Africa (Schmidhuber, Pound, and Qiao 2020). Labor availability for agricultural supply chains is increasingly becoming a problem, especially for highly labor-intensive sectors, such as fruits, vegetables, meat, and dairy production.

Comparison with similar episodes

The pandemic has triggered an unprecedented combination of demand shocks—a global economic recession and a collapse in transport activity—as well as growing supply shocks due to supply chain disruptions. In addition, the oil market is simultaneously experiencing major swings in supply due to OPEC+ production decisions.

In contrast, previous major episodes affecting the global commodity market have tended to be either demand or supply shocks. However, comparisons with earlier episodes of widespread economic weakness or disruption can provide insights into the current episode. This section conducts an event study to compare the developments in commodity markets with previous major episodes, considering both prices and demand.[3] It considers three types of events: global recessions, episodes of widespread disruption (e.g., travel), and disease outbreaks. Each of these bears a similarity to some of the channels through which COVID-19 is affecting commodity markets.

Over the last 70 years, there were four *global recessions*: in 1975, 1982, 1991, and 2009 (Kose, Sugawara, and Terrones 2020; World Bank 2019b). In each of these episodes, there was a contraction in annual real per capita global GDP and broad-based weakness in other key indicators of global economic activity. Regarding *disruption*, the mitigation measures implemented during the current episode bear some similarities to the widespread travel disruptions in the aftermath of the terrorist attacks on the United States on September 11, 2001. U.S. airline demand fell by 30 percent in the immediate aftermath of the attacks and remained as much as 7 percent lower after two years (Ito and Lee 2005). The attacks also resulted in a sharp spike in uncertainty and contributed to a slowdown in global activity and a recession in the United States. Finally, there have been several instances of *disease outbreaks*: SARS in China in 2003, H1N1 (swine flu) in 2009, and Ebola in West Africa in 2014, among others.

Evolution of commodity prices

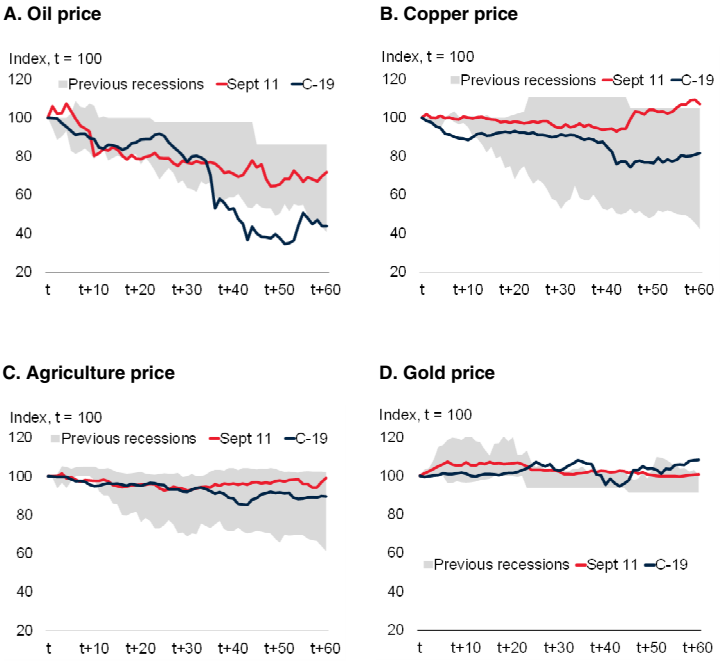
The commodity price decline since early 2020 shares some similarities, but also differs in some respects, with earlier episodes (Figure SF.3A-D).[4] The current pandemic has seen the largest one-month decline in oil prices on record—one-and-a-half times as large as the previous record. This reflects the combination of travel disruptions, a

[3] The structure and size of commodity markets have changed dramatically over the past 50 years, both for supply and demand. As such, the impact of economic shocks on commodity markets is likely to have changed over time.

[4] Crude oil and copper prices were selected as being representative of energy and metals market developments (the former due to its importance in the global economy and the latter as a barometer of industrial activity). For agriculture, an average price of the three main grains and soybean oil was used because of their widespread global use and importance in global calorific intake. Gold prices were selected to capture the effects of safe-haven flows which typically occur during periods of heightened uncertainty.

FIGURE SF.3 Commodity prices during major events

The COVID-19 global pandemic has caused widespread economic and social disruption and weaker economic growth. While its impact has been unique, historical events can offer some insights into its likely implications. Disruption in the aftermath of the September 11 attacks on the United States contributed to a decline in oil prices, while other commodities were less affected. During global recessions, commodity prices tend to fall, with the largest declines occurring during the 2009 global recession for oil and copper prices, as well as a smaller fall in agriculture. Gold prices tend to rise initially during recessions, before dropping back.



Source: Bloomberg; World Bank.
A.-D. The y-axis is a price index, with "t=100" indicating prices at the start of the events. The x-axis shows the passage of time (in days). Start dates for the two events are the first trading day before a major event occurred: 9/10/2001 for Sept 11, 2020; and 1/20/2020 for COVID-19. Swathe shows the four global recessions: 1974, 1981, 1990, and 2008. For the first two recessions, daily data were unavailable, so monthly percent changes were taken (assuming each month lasts 22 working days).
C. Average of wheat, corn, and soybean price.
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global recession, and the collapse of the OPEC+ agreement. Copper prices initially declined only moderately, similar to the 9/11 attacks. However, as the severity of the virus has become more apparent and as estimates for economic growth have been revised down, copper prices have declined more sharply. Agriculture prices fell substantially more during the 2009 global recession than in the current episode, but that decline in large part reflected an unwinding of an unprecedented spike in prices which saw prices of wheat, soybeans, rice, and corn reach all-time highs in 2008. Movements in gold prices have been broadly similar to previous events, with an initial rise followed by a decline, reflecting investor uncertainty.

Terrorist attacks of 2001. In the aftermath of the 9/11 attacks, oil prices fell sharply, while copper and agricultural prices were less affected and gold prices increased. Disruption to travel disproportionately affected oil prices, while heightened uncertainty led higher prices for gold (as a safe haven asset). However, the moves in oil prices were considerably less pronounced than in the past two months.

Global recessions. During recessions, oil and copper prices typically fall, while agricultural prices are less affected. The sharpest declines occurred during the 2009 global recession, when oil and copper prices both fell by about 60 percent in three months, and agricultural prices fell 40 percent (unwinding their historic surge in 2008). Gold prices initially rose as uncertainty spiked but unwound after one month as investors sold their holdings to meet margin calls. Except for oil prices, these movements were often considerably more pronounced than commodity price moves over the past three months of this year.

Previous disease outbreaks. In 2014, the emergence of Ebola in West Africa resulted in second-order effects in regional food markets. Guinea, Liberia, and Sierra Leone experienced severe disruptions in food markets, with supply shortages arising from quarantine-imposed travel restrictions on sellers, while panic buying further reduced available supply (Mann et al. 2015). This resulted in very large food price spikes and regional food insecurity (IFPRI 2020). As yet, the current outbreak has not resulted in localized price spikes, while global food price movements remain muted.

Evolution of commodity demand

Developments in commodity demand in early 2020 share some similarities, but also differ in some respects, with earlier episodes (Figure SF.4.A and SF.4.B). The fall in oil demand has occurred far more rapidly than in previous episodes as a

result of mitigation measures. The International Energy Agency estimates that oil demand will fall 23 percent in 2020 Q2, and by 9.3 percent over the year as a whole, which would be more than twice as large as any previous decline (IEA 2020). Demand for metals is expected to weaken in the first half of 2020 as the global recession deepens and demand from the manufacturing sector falls. Agricultural demand is expected to be little changed, albeit with some temporary fluctuations due to hoarding.

The terrorist attacks of 2001. Commodity demand growth slowed briefly in the aftermath of the terrorist attacks in 2001. Oil demand growth averaged close to zero in the three quarters following the attacks, down from an average of 1.5 percent (y/y) in the previous four quarters. Metals demand also declined slightly in 2001 but bounced back in the following year.

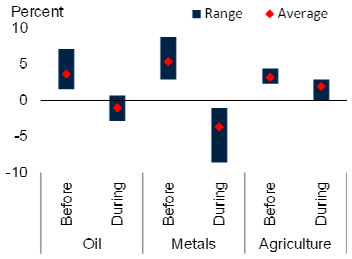
Global recessions. During global recessions, oil and metals demand typically fell, with a larger decline for metals than oil, reflecting its higher income elasticity of demand (Baffes, Kabundi, and Nagle 2020; World Bank 2019c). The largest single-year fall in oil demand was in 1980 when demand fell by just over 4 percent. The largest consecutive decline in oil consumption occurred in 1980-1982 when consumption fell by 9 percent relative to its peak in 1979. A supply-driven spike in oil prices in 1980 resulted in a drop in consumption and also contributed to the 1982 global recession, which further depressed oil consumption.

The largest fall in metal demand occurred during the 1975 global recession when consumption declined by 17 percent. In contrast, the two most recent recessions saw much smaller declines in oil and metals demand. For the 2009 global recession, this likely reflects shifts in the composition of commodity demand, specifically the growing importance of China, which was less affected by the global financial crisis (Baffes et al. 2018; World Bank 2018b). In contrast, growth in agricultural demand slowed more mildly, and typically remained positive during recessions (since its demand is more closely linked to population growth than income growth).

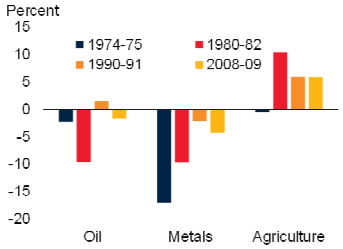
FIGURE SF.4 Commodity demand during global recessions

A fall in global growth typically results in declines in oil and metals demand, with a greater impact on metals. Agriculture, in contrast, in generally unaffected by recessions, with growth tending to remain positive throughout. Commodity demand typically falls for at least two consecutive years during recessions.

A. Commodity demand growth around recessions



B. Cumulative commodity demand growth during recessions



Source: BP Statistical Review, IEA, United States Department of Agriculture, World Bank, World Bureau of Metals Statistics.
A. Dates of recessions taken from Kose, Sugawara, and Terrones (2020). Four recessions are included: 1974-75, 1981-82, 1990-91, and 2008-09. "During" shows average annual growth rates in recession years. "Before" shows average annual growth rates in commodity consumption over the three preceding years with the exception of the 1981-82 recession. In this instance, "Before" refers to the period 1977-79. While technically not a recession, the economic slowdown in 1980 had similar negative growth rates in consumption.
B. Figure shows the cumulative change in commodity demand around recessions (i.e., the peak-to-trough fall). Recession years are taken from Kose, Sugawara, and Terrones (2020). Four recessions are included: 1974-75, 1981-82, 1990-91, and 2008-09. An exception is made for the 1981-82 recession—the figure includes 1980, which saw a fall in GDP per capita in one quarter (although not a technical recession) and a sharp fall in energy and metal demand.
Download data and charts.

Previous disease outbreaks. Previous disease outbreaks did not have a measurable effect on global commodity demand or supply.[5] However, they had negative localized impacts on food and nutrition security—particularly for vulnerable populations including children, women, the elderly, and the poor. In 2003, the SARS outbreak delayed China's winter wheat harvest by two weeks, triggering food market panics in Guangdong and Zhejiang, although production and prices were largely unaffected in the rest of China.

[5] There are two caveats to this. The SARS outbreak in 2003 was associated with a decline in oil prices; however, it occurred simultaneously with the invasion of Iraq which saw a precautionary spike in prices (which subsequently unwound). Similarly, H1N1 (swine flu) was a major outbreak and may have contributed to weakness in commodity demand and prices. However, it occurred during the 2009 global recession. As such, it is very difficult to disentangle any weakness in commodity demand or prices arising solely from these pandemics.

What are the potential long-run implications for commodity markets?

The impact of COVID-19 may lead to long-term shifts in global commodity markets, which will affect both commodity exporters and importers.

Increasing transport costs. Enhanced border checks arising from COVID-19 concerns may permanently increase the cost of transporting commodities, reducing trade flows. This occurred in the aftermath of the September 11 attacks, when additional border checks and security measures were introduced, increasing transport costs (Mirza and Verdier 2006). Regions that were highly open to trade were most affected, and by sector, textiles, agriculture, and food products were more affected, in part due to an already high level of protection against imports of these products (Walkenhorst and Dihel 2002).

Unwinding supply chains. Disruption to companies dependent on global supply chains could encourage "reshoring" (moving business back to the home country) or "nearshoring" of production. This may be exacerbated by national security concerns regarding the reliability of supply of critical equipment, such as personal protective equipment, which would favor local production. These shifts could result in the partial unwind of global value chains (GVCs) as corporations restructure their supply chains. For commodity markets, such a development could potentially lower transport demand if it reduces the average distance of imports. All else equal, this would result in permanently lower oil demand, as GVCs are more transport-intensive than other forms of trade (World Bank 2020c). It could also lead to shifts in the source of commodity demand as manufacturing hubs shift.

Increasing substitution among commodities. Transport cost increases and a retraction of supply chains could induce substitution between domestic and imported commodities. For example, a higher cost of imported commodities due to increased transport costs could promote the use of domestic resources. If exact replacements are costly or unavailable domestically, the use of substitutes may occur, such as the use of domestically produced glass in drinks packaging instead of imported aluminum (World Bank 2019c). This would benefit commodity importers at the expense of commodity exporters.

Changing consumer behavior. The mitigation measures implemented in many countries may lead to shifts in consumer habits and the exacerbation of existing trends. The trend toward remote working is likely to accelerate, as the pandemic has forced companies to invest in the necessary equipment, infrastructure, and processes to enable remote work. Once mitigation measures are lifted, a greater number of workers may continue operating remotely, which would reduce commuter journeys and demand for fuel. Similarly, businesses may reduce foreign travel in favor of video conferencing and other remote alternatives. The reduction in pollution resulting from the current restrictions on travel may also lead to greater pressure to implement fuel standards and transition to electric vehicles, as the benefits of lower fossil fuel consumption (and lower pollution) become more apparent. To the extent that these developments result in a permanent reduction in demand for oil, they would reduce export and fiscal revenues for oil exporters, and lead to improved current account balances for oil-importers.

Policy implications. The plunge in oil prices provides policymakers in EMDEs with an opportunity to push through energy-subsidy reforms. These reforms can help restore fiscal space, discourage wasteful energy consumption, and reallocate spending to programs that better target the poor (Baffes et al. 2018; Devarajan et al. 2014; World Bank 2018c). Following the oil price plunge of 2014-16, both oil importers and oil exporters took advantage of lower oil prices to begin dismantling energy subsidies. Between mid-2014 and end-2016, more than half of oil-exporting EMDEs reformed energy subsidies. Despite this progress, there is further to go, with substantial energy subsidies remaining in both oil exporters and importers. The additional fiscal savings could help with the fiscal challenges arising from COVID-19.

Conclusion

The outbreak of COVID-19 has presented a major shock to commodity markets at a time when prospects were already muted. The combination of both major demand and supply shocks occurring simultaneously is unprecedented among previous events. The current pandemic particularly stands out for the speed and magnitude of the decline in both oil prices and oil demand resulting from the sudden stop in activity. Other commodities have seen smaller declines in prices, as they have been less affected by mitigation measures, and are also experiencing supply disruptions. However, as the pandemic continues and the economic recession deepens, larger declines in demand and prices are possible, particularly for metals.

The impact of COVID-19 on commodity markets may persist for an extended period. In the short-term, the deepening economic contraction may further reduce demand for industrial commodities, causing additional declines in prices. Continuing mitigation measures may increasingly impact supply chains, potentially threatening food security for the most vulnerable groups.

Commodity-dependent EMDEs, particularly oil-exporters, are among the most vulnerable to COVID-19. In addition to the health and human toll and the global economic downturn, they face substantially lower export and fiscal revenue. However, lower oil prices provide policymakers in EMDEs with an opportunity to eliminate energy subsidies, freeing up fiscal space which could help meet the challenges of lower revenues (for oil-exporters) and health-care costs resulting from the pandemic (for all EMDEs).

In the long term, behavioral changes may lead to shifts in sources of commodity demand, both geographically and by industry. A shift toward remote working may reduce travel and demand for oil, while a shift to near-shoring and retrenchment of global value chains could cause a permanent restructuring of supply chains and associated commodity demand. Lower oil consumption would also reap environmental benefits.

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