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Research Report

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Covid-19, unequal economic recovery and maritime food trade¹

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The Covid-19 pandemic poses unprecedented challenges to the global economy. While aggregated agricultural trade patterns remained largely unaffected by the pandemic, the World Bank still expects global poverty to rise for the first time in more than twenty years. Since late 2020, several developments have the potential to further jeopardize global food security. Precisely, sea freight rates for bulk carriers, which are primarily used in international agricultural trade, have surged to an eleven-year high. However, despite the significant role that transportation costs play in international food trade, current research tends to overlook the impact they have on trade flows and food price formation. Further, the Food Price Index provided by the Food and Agriculture Organization of the United Nations (FAO) has increased for eleven straight months, reaching a seven-year high. These developments constitute increased risk to food security, particularly in poorer regions. Only strengthened international cooperation and unrestricted trade can safeguard global food security in the coming phase of globally uneven economic recovery. Calls for domestic self-sufficiency, proposals to transition to an over-bureaucratized, command-and-control EU-food system, as well as tightening economic sanctions and countersanctions between leading economic powers endanger food security, especially in import-dependent regions.

The Great Shock

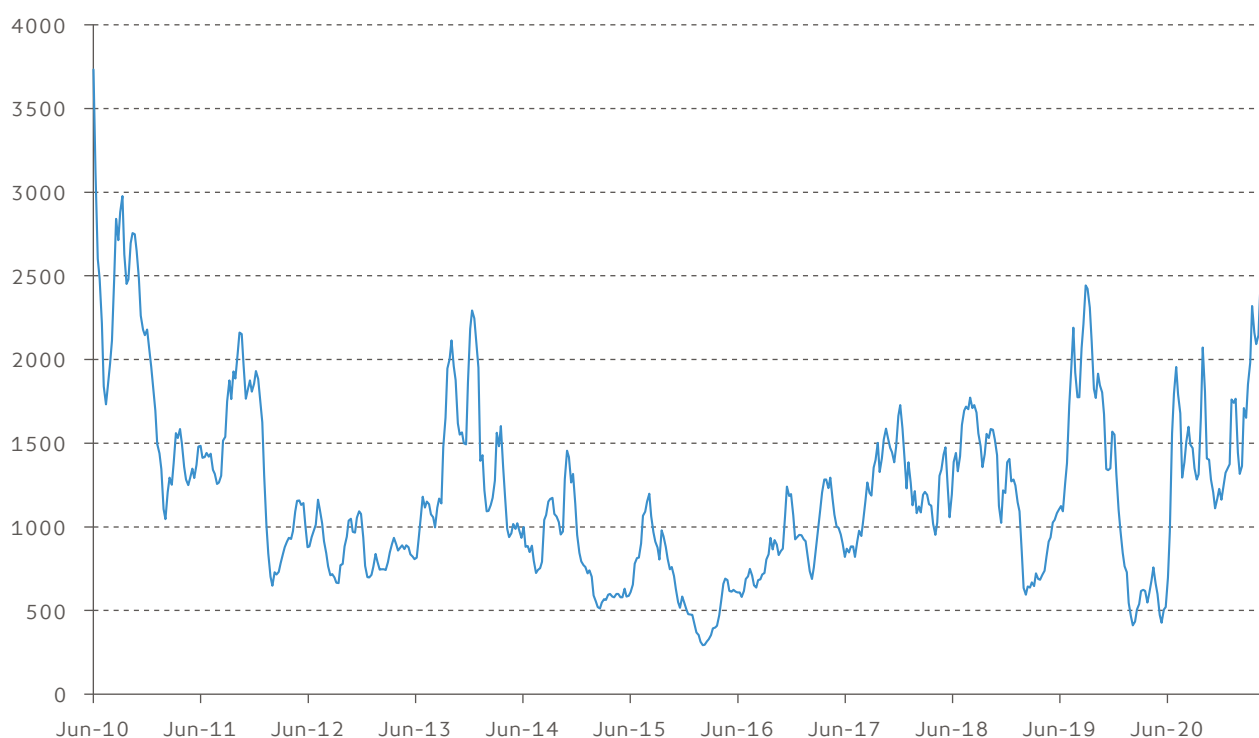
The global spread of SARS-CoV-2 and subsequent containing measures have had a considerable impact on the world economy and global trade since the first quarter of 2020. Unprecedented price slumps on financial markets and, in particular, energy markets were first observed in the second quarter of 2020 (Heigermoser and Glauben, 2020). Subsequently, the closure of entire economic sectors led to a sharp rise in unemployment and furloughs, as well as decreases in national economic output.

In the first half of 2020, physical agricultural trade remained largely unaffected by containment measures and national shutdowns as a whole. Export restrictions, which were introduced sporadically in March and April 2020, were immediately and forcefully rejected by the international community. In effect, they remained short-lived and did not have far-reaching effects on food prices (OECD, 2020).

However, an early FAO study on trade flows in individual regions revealed reduced imports of dairy, fish, and meat products in sub-Saharan Africa (Schmidhuber and Qiao, 2020). This suggests a deterioration in dietary quality and overall food security, particularly in countries where the population spends a large share of disposable income on food stuffs (Laborde et al., 2020; Swinnen und McDermott, 2020). In this respect, the World Bank projects a further 119 million to 124 million people worldwide to have been pushed into poverty in 2020 as a result of the pandemic. This effectively represents the first increase in global poverty since the Asian Financial Crisis, which saw a total of 65 million people fall below the poverty line in the late 1990s (Lakner et al., 2021).

¹ Status 12 May 2021. The authors are grateful to Elisabeth Roth for her comprehensive preliminary research.

Figure 1: Baltic Dry Index (BDI), 2010–2021
Source: Baltic Exchange (2021).



Maritime trade in turmoil

In Europe, the first wave of infections from March to May 2020 was followed by low infection rates and largely unrestricted economic and social activity in the summer months. However, in the fourth quarter of 2020, an increase in infections led to renewed restrictions in the catering, hotel and service sectors, and later to further school closures. Southeast Asian countries, especially China, were largely spared from this second wave and their economic recovery was already underway in the second half of 2020.

Due to largely closed economies and increased remote work, a sharp rise in demand for material consumer goods such as furnishings, consumer electronics and toys could be observed in Europe and the USA in the fourth quarter of 2020. As these goods are often produced in Southeast Asia, this broad demand shock had a significant impact on respective freight prices (Financial Times, 2021).² For example, the container rate for the Suez route from China to Northern Europe almost quadrupled from around 2,200 US dollar in November 2020 to over 8,000 US dollar in mid-February 2021. In the opposite direction, freight rates increased from around 1,000 US dollar to almost 1,500 US dollar per container. Large, direction-dependent price differences also resulted in an increase in empty containers being shipped from US ports back to China to take advantage of increased US-bound rates (Baur et al., 2021). Widespread container shortages also resulted from loading delays at ports due to labor shortages (UNCTAD, 2021).

Most maritime food trade is not carried out by container, but by bulk carriers. However, the Baltic

Dry Index (BDI)³, an index reflecting freight prices for these commodity carriers, has also surged 175 percent since November 2020 and now stands at an eleven-year high (Figure 1). This increase results partly from higher crude oil and bunker fuel prices. A further key driving factor is increased demand for construction materials and industrial commodities such as steel and coal from regions where economic recovery is in full swing. A sub-index provided by the International Grains Council that specifically reflects freight rates for grains and oilseeds has increased around 65 percent since November 2020. Transportation costs represent a central cost factor in trade with agricultural commodities due to a low value-to-weight ratio.

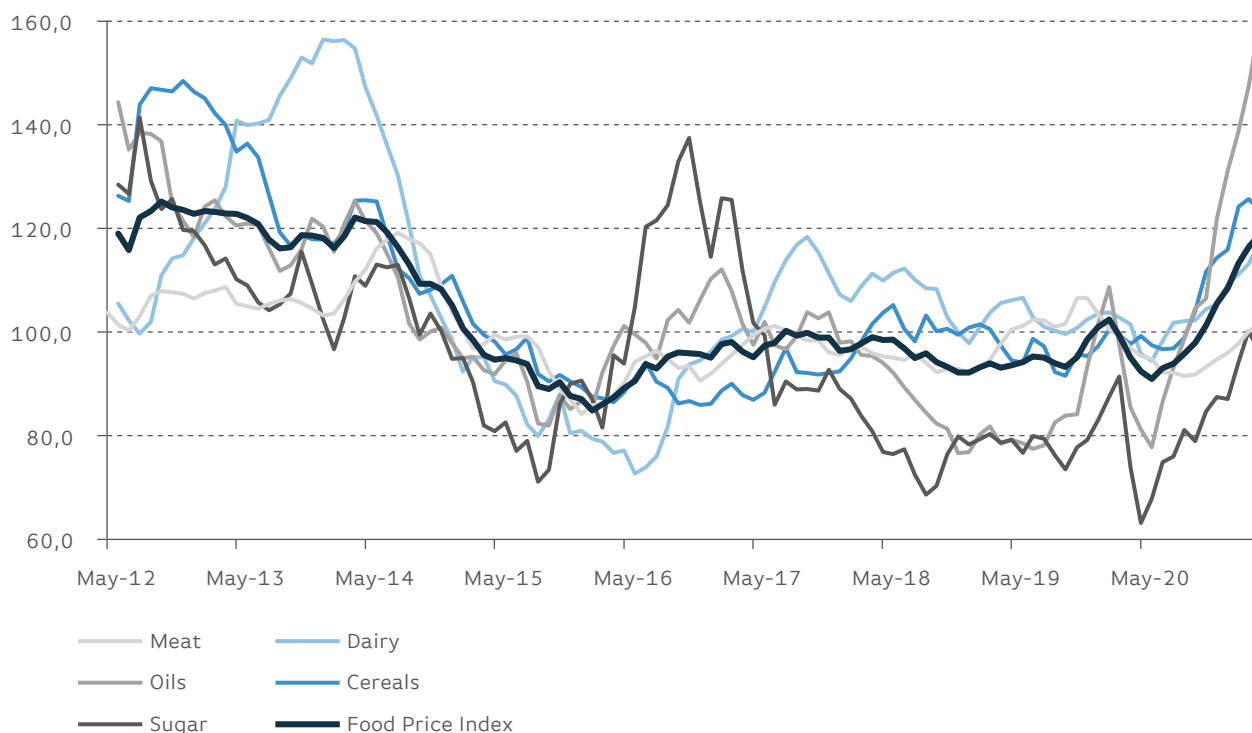
Surging food prices

In addition to prices for construction and industrial raw materials, increases can also be observed for food commodities. The monthly Food Price Index published by the FAO has recorded an eleven-month continuous increase since May 2020. The index now stands 27 percent above its 2019 average, reaching price ranges last observed in 2014 (Figure 2). Price increases occurred in all subgroups except meat products. Vegetable oils and cereals show the largest jumps compared to 2019, rising 95 percent and 30 percent, respectively.

² The newly constructed Kiel Trade Indicator also depicts changes in maritime trade flows in real time using ship movement data (Stamer, 2021).

³ The BDI is considered an indicator for global production cycles. As the global vessel supply is fixed in the short-term, movements in the BDI largely result from changes in the demand for raw materials.

Figure 2: FAO Food Price Index, 2014–2021
Source: FAO (2021).



One main reason for the rise in grain prices is China's increased import of animal feed over the past year. Concerns about the condition of corn harvests in South America and the USA, as well as renewed grain export restrictions imposed by Russia, the world's largest wheat exporter, are further driving factors. Record prices for vegetable and seed oils prompted the Ukrainian government to propose an export ban on sunflower seeds starting mid-May 2021. Bolivia further decided to completely ban beef exports in late April 2021. Such policy decisions pose a high risk to global food security (Falkendal et al., 2021), as they can result in follow-up restrictions by other exporters and increased panic buying.

agricultural production, as partly demanded within the EU, endanger food security, particularly in import-dependent regions. Because freight costs play a significant role in seaborne food trade, research in agricultural economics should increasingly focus on seaborne freight markets, paying particular attention to function, structure and price formation.

Preventing a food crisis

An historic increase in global poverty is expected for 2020. While aggregated global agricultural trade appears to be little affected so far, decreases in dairy and meat imports in sub-Saharan Africa indicate deteriorating food supply conditions. The current phase of globally uneven economic recovery has led to distortions in global maritime trade and a jump in seaborne freight rates, which constitute a significant cost factor in international agricultural trade. In addition, constantly increasing food prices have led individual countries to consider trade restrictions in response to accelerating exports.

The developments outlined above mean additional risk to global food security. Functioning interregional trade and stronger international cooperation is the best response to the ongoing global crisis. Increased regional self-sufficiency, or a transition towards principles of a planned economy in

Further Information

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