Mediterranean Sea and the Covid pandemic: A turning point for globalisation?
Logistics and Global Value Chains

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In this short note, we investigate the role of international production networks during the COVID-19 pandemic. A debate has recently emerged with respect to the future of global value chains (GVCs), discussing whether excessive globalisation of production has worked as a channel transmitting the shock or as a safety net, and whether this crisis would lead to a process of *de-globalization* or of *slow-balization* (Antras, 2020), with firms reshoring production or at least nearshoring. We maintain that reshoring is not the right solution, while nearshoring could be an opportunity for the Mediterranean area.

What will happen is hard to predict, as we are not over the crisis and indeed we are in the middle of a second wave (at the moment less dramatic for countries in the southern shore of the Mediterranean), but what is sure is that the pandemic outbreak, which led the IMF (April 2020) to forecast an unprecedent -3.0% global growth and then to worsen its predictions to -4.9% in 2020 in the World Economic Outlook Update (October 2020), is likely to bring changes to the international production process.

The UNCTAD report (2020) highlights four possible (not mutually exclusive) trajectories that the international production process might undergo in the next years: reshoring, diversification, replication and regionalisation. The last of these possibilities, regionalisation, implies the re-structuring of production operations by multinational enterprises (MNEs) near-shore. This process might open up key opportunities and partnerships among the Mediterranean countries, as there might be advantages for all in increasing the links between countries on the southern and northern shores of the Mediterranean Sea. It is therefore crucial to identify the comparative advantages of the countries in the southern shore, compare them with those of other developing and emerging countries, check the complementarities with the specialisation of the northern shore and evaluate, for firms in different countries, the pros and cons of possibly switching suppliers or buyers. These pros and cons could be very heterogeneous for different sectors, depending on the complexity and specificity of the intermediate inputs bought or sold (a component of an airplane is possibly more difficult to substitute than a component of a shirt).

Surely the "shortening" of GVCs which is widely discussed in the recent literature can bring several benefits, as the lowering of operational costs, the enhancing of connectivity and the resilience of the region in face of shocks and crises. It could also help to reduce emissions and therefore answer one of the criticisms raised to GVCs of being environmental unfriendly. On the other hand, however, nearshoring may increase

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exposure to local and idiosyncratic risks and decrease the benefits coming from suppliers' and buyers' diversification of GVCs. The issue certainly does not have a unique answer.

The Mediterranean context

In 2020, countries in the southern shore of the Mediterranean were hit hard by a dual shock, the COVID-19 and the concomitant collapse in oil prices, that shaped the region's output forecast to contract to 5.2 in 2020 (Arezki et al., 2020). On the trade side, UNCTAD estimated that only in April there was a 40 % reduction in trade for the region; moreover, mobility and transport restrictions heavily affected logistics, transports and services trade, especially tourism, which is particularly important for several countries of the Area. UNWTO (2020 b) shows that international tourists arrivals plummeted by 57 percent in the first months of 2020, with peaks of over 90 percent between April and July and a dramatic fall in hotel occupancy. Air traffic shrank by almost 100 percent in June and July (see also UNWTO, 2020a). Moreover, the pandemic is having a disproportionate effect on the more vulnerable sectors of population, namely informal workers and unemployed, with the number of poor expected to increase from 178 million to almost 200 million (Arezki, 2020), also because a large share of informal workers is somehow related to services and especially tourism (restaurants, street vendors, retail shops etc.).

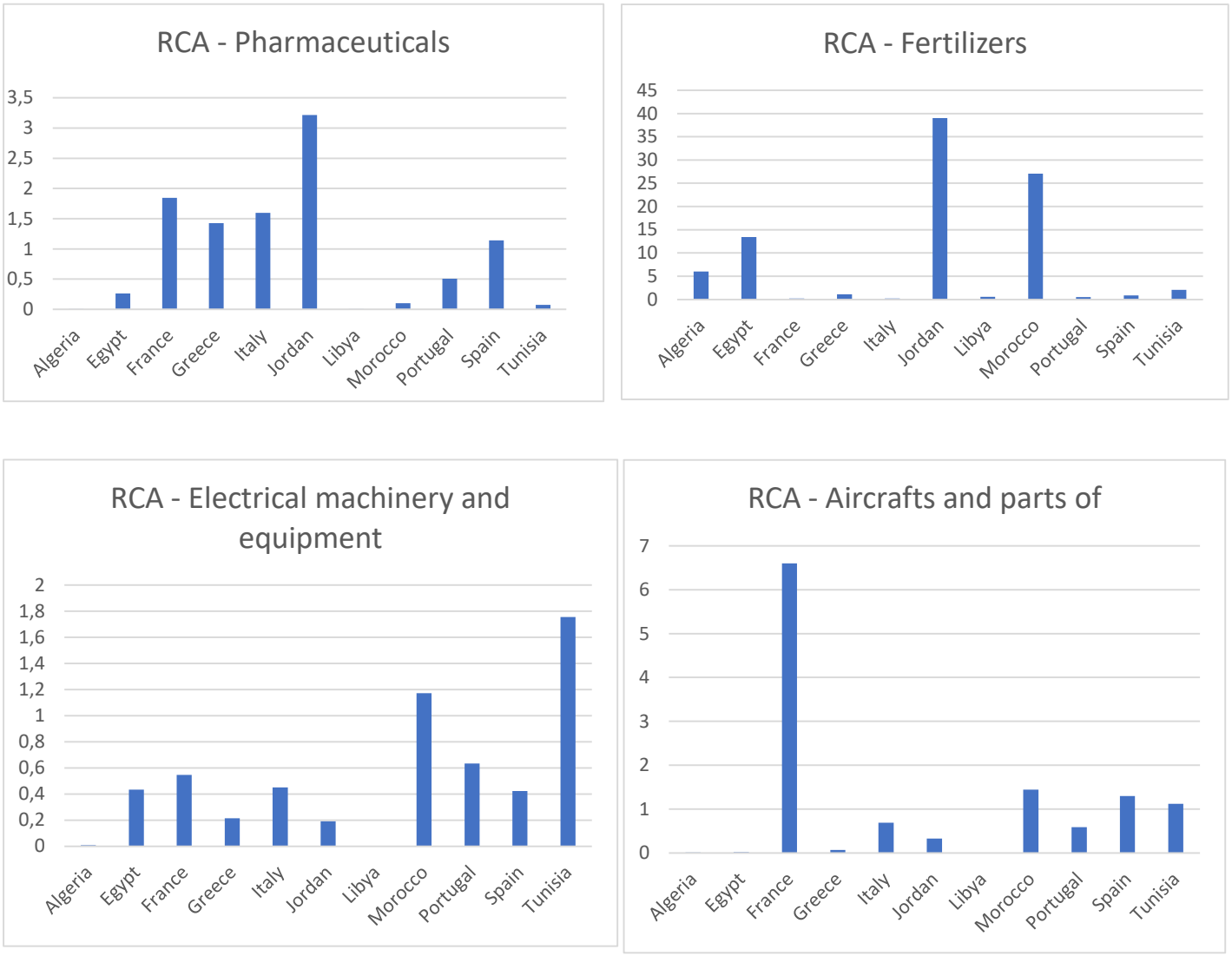
Let us assess the region integration in production networks before the COVID-19 outbreak. Despite the existing trade agreements, especially with the EU, the level of integration into GVCs of the southern Mediterranean countries was modest, significantly below the integration within the EU countries (Riera and Paetzold, 2020) and, excluding few cases, concentrated upstream (Ayadi et al., forthcoming; Del Prete et al, 2017). Also, the sectors involved were limited (aeronautic, automotive, textile, citrus being the main). The apparel and automotive sectors GVCs are discussed in a recent paper by Bernhardt (2020), which evaluates, 20 years after, the consequences for Egypt, Morocco and Tunisia of entering into the trade-liberalising Association Agreements (AAs) with the EU. While all the three countries seem to have upgraded their production in the automotive GVC, in the apparel GVC, Egypt and Morocco experienced an economic downgrading, while Tunisia stands in the middle, with increased export unit values but with a decreased market share (especially after the ending of the multi-fibre agreement)[3]. Moving out from low-skilled textile and apparel GVCs might not be necessarily bad, especially since this sector's demand is declining worldwide and if countries have exploitable comparative advantages in higher-technology GVCs.

Using the BACI-CEPII Dataset, we compute the Revealed Comparative Advantages (RCA) in products at 2-digit (following the Harmonized System 92 international nomenclature) across (selected) countries on the northern and southern shores of the Mediterranean Sea[4].

[3] Moreover, even though the automotive sector made incredible progresses for all the three countries, none of them has become a key player in the EU-bound GVC, that instead saw the countries like Czech Republic, Poland, Hungary and Slovakia gaining more importance (Bernhardt, 2020).

[4] RCA are computed with the Balassa Index, that looks at the share of country i's exports of product k with respect to the world export share of product k and that can range from 0 to $+\infty$. A country i is said to have a revealed comparative advantage if the Balassa Index is greater than one.

Figure 1 – Revealed Comparative Advantages in selected countries in the two shores of the Mediterranean



Source: Authors' elaboration on BACI-CEPII dataset

As we can see from the graphs in Figure 1, some countries on the southern shore display a comparative advantage in some products with a high technological content; for instance, Jordan has a comparative advantage in the pharmaceutical sector, Jordan and Morocco in fertilizers, Tunisia and Morocco in electrical machinery and equipment, and Morocco and Tunisia in the production of aircrafts and their components. This

last sector is particularly important since, in the northern shore, France has a strong comparative advantage and several multinationals have moved their production to Morocco and Tunisia. These descriptive statistics seem to suggest that there are sectors that might turn out to be attractive for possible relocations, with a potential to further integrate countries of the southern Mediterranean shore into regional or global value chains with European countries, an argument also put forward by Javorcik, (2020) and Ayadi et al, (2020). More importantly, these are sectors that could unlock and push out Arab countries from low-value segments of the GVCs, thereby reaching broader social outcomes, such as poverty reduction or social inclusion[5].

An interesting example is the aerospace industry in Tunisia and Morocco. According to Zaki (2019), in Tunisia there are 81 multinationals (e.g. Latécoère Group, Sabena Technics, Zodiac Aerospace) employing more than 17.000 people and specialising in activities with high value added, ranging from software/hardware engineering to the production of aircraft systems. Nearly 70% of total production is exported to the EU. To exploit the benefits of the Tangier freezone, many aeronautic and aerospace multinationals have also shifted their production to Morocco (e.g. Safran, Airbus/ Stelia, Boeing, Bombardier Aerospace, Eaton, UTC and Thales, see Del Prete et al, 2017). As of 2019, Morocco counted over 140 firms operating in aeronautics and aerospace, sustaining almost 20.000 jobs with a 38% local integration rate[6]. Morocco exports aeronautic components to Europe, mainly to France and a popular say maintains that "there is no single airplane in the world that flies without at least a component made in Morocco".

To evaluate the consequences of the pandemic and the likelihood of enhancing regional value chains, it is also important to look at the actual trade partners. Some countries in the South shore already trade more, especially intermediates, with EU countries more than with other countries in the area, while others seem to be more integrated among themselves than with Europe. The different mix impacts on the demand for specific goods and on the transmission of the shocks. For instance, from the World Integrated Trade Solution (WITS) of the World Bank, we see that Algeria's top exporting partners in 2017 were Italy (16,3% of total country's export), France (12,59%) and Spain (11,66%); for Morocco (2018) the partners were Spain (23,68%) and France (22,90) and for Tunisia (2017), France (30,58%), Italy (16,47%) and Germany (11, 59%).

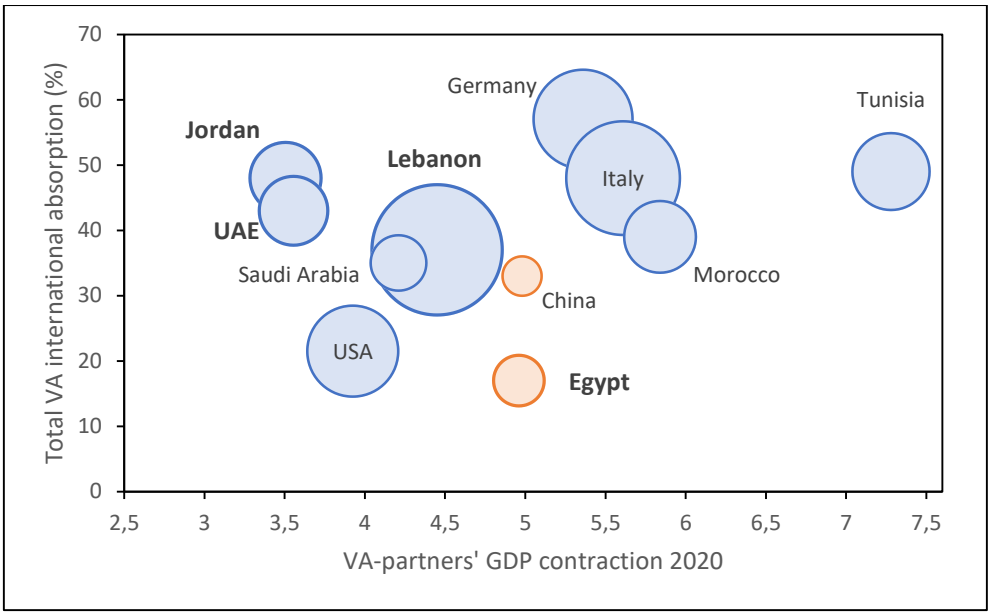
Let us now consider the ten main trading partners for each country and compute their GDP contraction in 2020 (due to the COVID-19 pandemic) to evaluate if having different trade partners can penalize the trade performance of some countries with respect to others. We also consider the total value-added absorption (both the domestic and foreign) as a measure of how countries are exposed to risks. We report our calculations in Figure 2. On the one hand, higher shares of value added originated and/or absorbed abroad (on the vertical axes), imply higher exposure to foreign shocks, given the size of the partners' shocks. On the other hand, larger

[5] Reaching higher-value segments of GVCs (where usually formal firms are more present) would be key for the region given also the dualistic nature of the its labour market (divided between formal and informal); it would help the already vulnerable (and more affected by the COVID-19) informal workers with little job security and no social protection to recover from the projected 3.7/6.0 percentage points increase in poverty incidence due to the pandemic outbreak (Arezki et al., 2020).

[6] See also https://www.tradecommissioner.gc.ca/morocco-maroc/market-reports-etudes-de-marches/0005073.aspx?lang=eng.

shocks to the trade partners (on the x axes) may affect the country more severely, given the importance of the value-added linkages.

Figure 2 - The economic shocks from partners' GDP contraction, selected countries



Notes: Bubble size denotes own GDP contraction. Bubble colours denote sign of GDP change: red denotes GDP growth, blue denotes GDP contraction. On the horizontal axis average partners' GDP contraction for origin and destination. On vertical axis the sum of the share of VA used and produced respectively originated and absorbed in foreign countries. Data are from Eora Input Output tables for the Value-Added computations and from IMF (2020) for GDP contraction of trade partners. We included USA, UAE, China, Germany, Lebanon for comparison.

We can easily detect two different groups of countries. The most exposed countries out of the ones we analysed are located at the top right of the chart: Italy, Morocco, and Tunisia. Tunisia is the most exposed, both as far as the GDP contraction of trading partners is concerned as well as the total Value Added used and produced abroad. The less exposed countries are placed at the bottom left. Egypt for instance, is expected to suffer mainly from partners' GDP contraction, but has a very low share of foreign VA absorption and a positive GDP growth as well. On the contrary, the main threat for Jordan comes from a large stake of international VA absorption.

Beside comparative advantages and trade partners, another important issue in the discussion about the likelihood of enhancing regional value chains concerns the business environment that each country can offer to potential foreign investors and trade partners. This implies that it is crucial for countries of the southern shore of the Mediterranean, that today rank low in the Doing Business indicator (especially if compared to their Asian competitors), to implement policies to attract foreign capital, ameliorating data transparency, increasing state credibility, granting a sound political atmosphere and a conducive environment for new firms to start producing. Against this background, a particularly important feature is the question of logistics, which includes transport time, costs, quality (of road, rail, maritime or air infrastructure) and concerns both domestic and cross-border trade logistics.

Prospects for the logistics and transportation sectors

Complex systems as GVCs and production networks are heavily dependent on efficient logistics and transportation, since the coordination of activities along the GVC as well as the exchanges of products depend so much on transports and logistics, so that according to some studies (e.g. Economic and Social Commission for Western Asia, 2017) improving logistics performance would on average reduce trade costs 10 times more than an equivalent reduction in tariffs. The definition of GVC itself implies that intermediate products cross the borders at least twice. Hence, countries trying to benefit from GVCs participation need to address fragilities and key underlying factors of their logistics sectors. Countries ofthe southern shore of the Mediterranean vary substantially in terms of logistic performance; indeed, the World Bank's Logistic Performance Index (LPI) for 2018 ranks Egypt, Jordan, Morocco, Tunisia and Algeria respectively 60th, 76th, 87th,104th and 107th out of 167 countries.

Some countries made big improvements in the recent past, such as Egypt, that exhibits high shipping connectivity, also due to the construction of the second Suez Canal line, and Morocco, with the creation of the AMDL (Moroccan Logistics Development Agency) and with the increase in the logistics training offer (from 2.500 places in 2010 to more than 7.200 in 2014-15 (Augier et al., 2019)). Morocco also improved considerably its port infrastructure capacities: the Tangier Free Zone, connected to the Tangier Med port, has grown significantly, now covering 400 hectares. The industrial accelerating zone of aeronautic, located in the Greater Casablanca area, is, on the other hand, close to Mohammed V International Airport, Morocco's main airport, which has also developed and is now serving over 70 destinations worldwide. Other countries are facing more challenges, for instance Tunisia, where port traffic has not increased since 2008 (Riera and Paetzold, 2020).

When the pandemic started, it not only hit hard almost every country in the world, with lockdowns and border closures that heavily restricted the movement of good and people, but given the abovementioned endemic fragilities, it affected the southern shore of the Mediterranean even more. Ameliorating the logistics sector, in order to become more integrated in region value chains, would be vital for the region to fully exploit its position as crossroads for all European, Asian, and African trade routes.

Conclusions

The COVID-19 crisis is unprecedented. The interconnected nature of international trade implies a high level of exposure to foreign shocks that is likely to have contributed to the fast propagation of the economic downturn. Labour intensive sectors, where workers mobility is important, have suffered more than others (Smith et al., 2020), both in manufacturing and services. Services, which were partially sheltered in previous economic crises, have been badly hit, particularly tourism and transport, more exposed to health risks and lockdown measures. Services, however, are less involved in GVCs and to a certain extent, this could explain why, in some cases, GVCs may have helped mitigate the negative effects on national economies while for manufacturing, the main mitigation channel could be the possibility of relying on foreign demand or foreign suppliers (Antras, 2020).

We highlighted that GVCs imply complex relations between firms operating in different countries. The related international activities, mainly offshoring and trade in intermediate goods, bring about efficiency gains by means of division of labour and increased specialisation, but they also mean higher interconnectedness and possibly higher exposure to risks. This is why many policy makers have started speaking about reshoring offshore facilities. Regional value chains are "geographically closer" than Global Value Chains. This could mean that the risks are reduced, as is the pollution related to the fragmentation of production. We believe that regionalisation of supply chains, where by regional we mean the Mediterranean region, can be an efficient solution for both the southern and the northern shores of the Mediterranean. The economic cycles of countries in the two shores are not very correlated (given different endowments and specialisation), labour costs are still lower in the southern shore, even though there could be a need for skill upgrading of workers in the South to fully exploit the opportunities. A careful analysis of revealed comparative advantages could highlight which sectors could be the basis to enhance the regional links with mutual benefits for the two shores. Regional GVCs are closer to consumer markets and more consolidated in terms of activities. They could be a solution to surf the COVID-19 crisis, without destroying the international production network, which is a vital force for the world economy.

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