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Title: COVID-19 and the Changing Perception of Strategic Industries: Implications for International Business

Year: 2021

Version: Accepted manuscript

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Please cite the original version:

Arslan, A., Khan, Z., Kontkanen, M. & Tarba, S. (2021). COVID-19 and the Changing Perception of Strategic Industries: Implications for International Business. In: Marinov, M. A. & Marinova, S. T. (eds.) *Covid-19 and International Business: Change of Era*, 89-102. New York: Routledge. <https://www.taylorfrancis.com/chapters/covid-19-changing-perception-strategic-industries-ahmad-arslan-zaheer-khan-minnie-kontkanen-shlomo-tarba/e/10.4324/9781003108924-8>

COVID-19 AND THE CHANGING PERCEPTION OF STRATEGIC INDUSTRIES: IMPLICATIONS FOR INTERNATIONAL BUSINESS

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This is an authors' accepted manuscript draft of the chapter published by Routledge in the Book *“Covid-19 and International Business: Change of Era”* Edited by M. Marinov and S. Marinova available online at <https://doi.org/10.4324/9781003108924-8>

Kindly cite this chapter as

Arslan, A., Khan, Z., Kontkanen, M., Tarba., S. (2020). “Covid-19 and the Changing Perception of Strategic Industries: Implications for International Business”. In M. Marinov & S. Marinova (Eds) *COVID-19 and International Business: Change of Era*. Routledge.

ABSTRACT

This chapter analyzes the influences and implications of ongoing global pandemic caused by COVID-19 on strategic industries. We offer a conceptual overview of the role of strategic industries and how their role and perceptions change during the time of crises. This is followed by specific discussion on COVID-19, and how it has influenced perception of strategic industries globally. The chapter specifically offers practical examples from industries like agriculture, healthcare equipment manufacturing and pharmaceutical sectors, along with others, in relation to the COVID-19 crisis. We also bring into the discussion of increased restrictiveness and sentiments of nationalism being pushed globally in strategic industries by the governments. We further link this discussion with their potential influences on the operations of firms operating internationally (particularly multinational enterprises and their global value chains). Finally, the chapter draws out key theoretical and practical implications specific to international business scholarship.

Key Words: COVID-19, International Business, Strategic Industries, Protectionism, nationalism

1. INTRODUCTION

COVID-19 pandemic has been referred as one of the most significant health crises in recent memory, which also has significant economic and societal implications (WHO, 2020a). As of May 2020, COVID-19 has spread to almost every country on the planet, and in most cases, the national and local governments have resorted to strategies like social distancing and lockdowns to control its spread (ECDC, 2020; WHO, 2020). At the same time, COVID-19 pandemic has raised challenges and renowned calls to curtail globalization in the form we know it as it forced the countries (nation-states) to think about their own citizens and focus on securing the basic supply of goods and services for them. Moreover, economic consequences of this pandemic are expected to be very significant based on the estimates by the experts (e.g. Atkeson, 2020). Therefore, it is quite logical that many experts are claiming post-COVID-19 world to be less open and inward looking, where operations of non-native firms may face significant hindrances and screening from rising nationalist elements (Garver, 2020; Miller, 2020). Already, some countries have put restrictions on acquisitions during the pandemic, as well as restricting foreign investments in certain sectors (Japan Times, 2020; Singh, 2020). At the same time, the term “*strategic industries*” is again become a key part of the mainstream discourse and gaining local political capital. Recently, some industries have become strategic not due to their strategic value to the local economic development but due to the political interests of powerful stakeholders. Traditionally industries like military, high-tech manufacturing, banking, as well as infrastructure have been referred as strategic industries by the policy makers and scholars. Along with these industries, agriculture has been viewed as important and strategic historically due to its importance in fulfilling the most important human need of food (McNeely & Scherr, 2003). However, since the dawn of globalization in last few decades, agricultural (and processed food) products are increasingly globalized dependent upon long and complex networks of supply chains spanning many countries (Blank, 2014). COVID-19 pandemic has brought agro-food sector back in focus as a strategic industry along with industries like pharmaceuticals, ventilator, personal protective equipment (PPE) manufacturing, finance, credit, insurance and 5G technology in the case of Italy, and biotechnology in the case of France. We have witnessed in the recent months examples of countries stopping the export shipments of pre-paid orders of PPE or ventilators (FT, 2020; Tong, 2020) as well as stopping domestic firms from exporting basic medicines including painkillers (Tripathy, 2020). Other measures include for instance export bans on medical equipment, and in some cases requiring mandatory local production of certain items.

All of these recent events form the key basis for this chapter, where it aims to offer a conceptual overview of strategic industries, and then link the discussion to their changing perceptions in the times

of crises, like the current COVID-19 pandemic. We further aim to substantiate the conceptual discussion by presenting a number of relevant practical examples in this chapter. By focusing on changing perceptions of strategic industries due to COVID-19; we contribute to the extant international business (IB) literature in two-ways. Firstly, this is one of the first studies to specifically highlight changing perception of strategic industries from an IB perspective, thereby setting bases for further theorization on this specific topic. Secondly, this chapter is one of the first studies to also link these changing perceptions of strategic industries to the implications for multinational enterprises (MNEs), which have been the key driving force behind globalization. The chapter further highlights that such changing perceptions of strategic industries will have a far-reaching impact on the future collaboration and coordination of global value chains activities across developed and developing economies. Many countries have cut down (or restricted) important supplies, including food exports, which will have significant consequences the ways global value chains are governed and control. In the same vein, the reinvigoration of the debate around strategic industries have created long-term consequences for sustainable international trade and foreign direct investment across different locations and sectors, so the locational advantage of countries and the widespread of global value chains is expected to come under a greater scrutiny.

The rest of the chapter is organized as follows. The next section offers a conceptual discussion on strategic industries and the changing perception of such strategic industries at the time of crises, where we offer some historical examples as well. After that, COVID-19 crisis and its influences on strategic industries as well as for related international business dynamics are discussed in-depth. The last section of the chapter presents conclusions, limitations and future research directions.

2. STRATEGIC INDUSTRIES AND CRISES: AN OVERVIEW

Scholars suggest that defining strategic industries is rather difficult due to fluidity of the criteria which can be used to define them, as it tends to change (Stevens, 1991; Los, 2004). One of the broadest criteria used to classify such industries is the long-term access or availability of products / services in a particular sector, which is considered to be vital for a country's economic interest and local development (cf. Soete, 1991; Stevens, 1991). Being crucial to a country's economy can be further perceived in a variety of ways, ranging from fulfilling specific needs to employment dependence to long-term economic competitiveness and security aspects (e.g. Rabe & Gippner, 2017). Another criterion for defining strategic industries emphasizes the interdependence of activities of the industry through forward and backward linkages with the national economy. Industry, which acts as supporting infrastructure to other related industries and thus create positive external economies of scale can also be regarded as a strategic one (Teece, 1991; Narula, 2014). Di Tommaso *et al.* (2017)

refer that most of the economics literature argues that strategic industries or sectors are those which *promote economic growth*, mostly requiring that the sectors are competitive over time. Thus, high-tech industries with high value added and capabilities of developing economies of scale, achieving highest profits and export performance have been considered part of strategic industries by many scholars (Narula, 2014; Di Tommaso *et al.* 2017). Sector's weight in economy such as based on their share of employment level and implications on economic growth, is an additional criterion often linked to strategic sectors. Another distinct area of literature, however, emphasizes the *benefits which the sector brings to the society as a whole*, as a key determinant for that industry being strategic. From this perspective implications of those industries for national security and social well-being are important, and thus this view goes beyond narrow focus on only economic importance and growth. Prior literature has referred to health, agriculture, education and cultural sectors as being examples of such industries (Di Tommaso *et al.*, 2017; Dodgson, 2018). Moreover, in the service sector, telecommunications, information technology, banking, and infrastructure provision have also been viewed as strategic (Golub, 2009; Dodgson, 2018).

It is clear from the above discussion that criteria used to define strategic industries can vary significantly from country to country (see the earlier examples related to Italy and France). Still most scholars argue that governments are able to identify which industries they perceive strategic ones in their specific countries' contexts (Stevens, 1991; Los, 2004). Hence, differences in the perceptions of strategic industries clearly exist across countries. For instance, in some developed economies, strategic industries tend to be mostly high-tech, advanced manufacturing and defense-related industries. In developing or emerging economies, which suffer from infrastructure problems in many cases; the focus of strategic industries has been on the basic infrastructure such as power, transportation and telecommunications in Nigeria (Chete *et al.*, 2016). Similarly, logistics has been referred as a strategic industry in case of Cambodia because of its national and regional connectivity, socio-economic development and poverty reduction (Chheang 2017:268). Thus, the development level of a country is linked to what is considered a strategic sector in that context (Narula, 2014; Dodgson, 2018). Still, Yoshitoni (1991) argues that there are industries, which are regarded as strategic ones by all governments when they have dynamic potential for future growth and technological change. *This aspect becomes visible at a time of crisis where certain products or services may simultaneously become high in demand globally.* Crisis results in strong local sentiments in many cases due to fear and uncertainty. Hence, gaining political capital in the home markets becomes important for many decision makers. We see these changes taking place now as an immediate consequence and against the backdrop of global pandemic caused by the COVID-19.

Based on the statements and actions of national governments, regional intergovernmental organizations such as EU, ASEAN, the emphases on what constitute as strategic industries has changed into industries with critical inputs in health and food sector and through that having implications on the national security. However, such situations are not new. Similar changes were visible in global economy as an outcome of other crises in the past as well.

During the 20th century, the most significant crises globally have been the world War I and world War II, as well as multiple influenza pandemics, of which the Spanish flu (1918-1920) being the most severe one (Reiter, 1996; Killingray & Phillips, 2003). The period before WWI has been described as the first era of globalization, where global trade in agricultural as well as industrial products became very visible (Clark, 1997). Britain, which was the largest trading nation in the world before 1914, depended on imports for 80 percent of its food (grain) consumption. As a consequence of war, the trade routes were cut resulting in huge demand for food escalating to near starvation across Britain and Germany (e.g. Simmonds, 2013). The challenges experienced during the war, promoted agriculture to become the strategic industry after the war. This change in perception was seen in almost every country when domestic agriculture was protected through different protectionist activities such as tariffs and subsidies. (Strikwerda, 2016). In addition to the influence of wars, previous studies have found that even mild pandemics have significant consequences for global economic output (McKibbin & Sidorenko, 2006). Besides of having severe economic consequences, epidemic diseases represent also direct threats to national security (Jonung & Roeger, 2006; Price-Smith, 2009; Atkeson, 2020), and thus also have implications on the perceptions of strategic industries. This argumentation is very much relevant to the current situation related to COVID-19 pandemic, whose influences on the strategic industries as link to international business dynamics are discussed in the next section.

3. COVID-19, STRATEGIC INDUSTRIES AND INTERNATIONAL BUSINESS DYNAMICS

The COVID-19 global pandemic has brought a renewed focus on strategic sectors, which can have far reaching implications for international business activities. During the recent decades the food production and consumption have been driven by globalization (Blank, 2014). As an outcome, majority of the countries are at least partly dependent on imported food (Southy 2020). According to Kinnunen *et al.* (2020), the local food crop production can fulfil demand for less than one-third of the population in general. An extreme example of the dependence of food imports is Singapore, which imports 90% of its food supplies from 170 countries (Neo, 2020c). Food and Agriculture Organization

(FAO) has raised the concern of disruption in food supply chain and the increased threat of hunger and poverty because of the reduced access to markets and deteriorating purchasing power as a consequence of COVID-19 (Muhammad-Bande 2020). Due to its obvious role as an industry with critical inputs and thus a sector having implications for national security; food industry has emerged as industry with increased strategic importance as a consequence of COVID-19. Food sector has been highlighted as a critical sector in developed countries and regions such as in EU (EU 2020b) and Japan (Neo 2020d) in response to COVID-19 crisis. However, its importance as a strategic industry is emphasized even more in emerging economies (such as Malaysia) and countries with high dependence on imports like Singapore (Neo 2020c). The rising cost of food and shortage of food due to several countries halting food exports have resulted in UN warning of extreme shortage of food supplies in certain parts of the world.

The most visible danger for national security and social well-being caused by COVID-19 pandemic has been the lack of access to vitally important medical products, for which the demand has increased exponentially. As an outcome, WTO (2020a) has reported increasing number of export prohibitions and restrictions (by 80 countries and custom territories) to mitigate the shortages at the national level. The products covered by these new export prohibitions and restrictions vary considerably; most have focused on medical supplies (e.g. facemasks and shields), pharmaceuticals and medical equipment (e.g. ventilators). As the huge number of countries reporting additional restrictions for exporting or FDI procedures indicate, the emphasizes on health technology related sectors such as medical supplies, pharmacy and biotechnology, as a strategic sector has emerged all over the world. This is visible in developed markets such as in EU, USA and in emerging markets such as in India and China (BDI 2020a).

Strategic industries are often promoted by governments (Teece, 1991; Selen, 2020) making their importance very high for MNEs' global operations, as well as their impact on local economic development. Michalski (1991) identified the following four types of support policies in strategic industries: 1. trade-related measures (e.g. tariffs, export restrictions across different sectors such as automotive, defense and energy), 2. investment-related policies (e.g. selective acceptance of FDIs; domestic content requirement and foreign equity restrictions), 3. industrial and technology policies (e.g. strategic support to crucial foreign acquisitions), 4. fiscal and financial market policies (e.g. favorable tax treatment) and 5. competition policies. From MNEs' point of view, these policies create either opportunities or threats for their operations in those countries especially in relation to controlling rights over their operations and repatriation of profits back to their headquarters. International business-related measures linked to COVID-19 pandemic are visible in the strategic

industries of food, PPE, pharmaceutical and IT sectors. Different governments have introduced a range of measures to restrict exports of critical products. In some cases, such as in India for food and agricultural products, import tariffs have been announced to support further the local trade (Singh, 2020). These policies influence negatively the possibilities of both local and foreign firms to export their products manufactured in the local markets, and on the other hand weakens the competitive position of importing firms. In general, the disruptions in food supply chains have caused problems for food manufacturing firms because of the lack of raw materials, requiring the firms to make adjustments to their production processes (Neo, 2020d). Also, the large MNEs operating in food sector such as Nestle, and Unilever have experienced challenges in production and supply chains (IE 2020; Sarkar 2020). Still some countries like Indonesia emphasized the importance of continuing exports due to its importance for the local economy and jobs (Rahman, 2020).

It should be further noted that restrictive investments policies have been set up by many governments to minimize the risk of attempts to acquire local firms operating in the critical sectors of production of medical or protective equipment or related industries (EU, 2020b; Investment Policy Monitor, 2020b). These policies can potentially have negative implications for the MNE's opportunities to acquire and share knowledge and ultimately to innovate across their network of subsidiaries. However, at the same time, the support measures for FDI have also been introduced in some cases which resulted in speeding up of investment approval procedures (Investment Policy Monitor, 2020b). National investment promotion agencies, like Invest India, APEX Brazil and Germany Trade & Invest, have put emphasizes on attracting companies and facilitating foreign investors (Investment Policy Monitor, 2020a) in critical sectors. At the same time, the global needs for developing COVID-19 vaccines as well as developing digital solutions like contact tracking COVID-19 infected persons brings opportunities for MNEs (Aaltonen, 2020; Bremmer, 2020) both in developed and emerging/developing markets to develop digital business models and related capabilities. IBM for instance is involved in several projects globally to use their technology and expertise through supercomputers and machine learning to speed up the process of discovery and development of treatments for a cure of deadly complications of COVID 19 (Gill 2020; Martineau 2020). Microsoft, on the other hand, has enabled through their Start-up Accelerator Programs new innovations in bio-IT such as a cloud-based genome analysis computing platform accelerating the development of COVID-19 vaccine (Microsoft Asia News Center, 2020). It has further been argued that COVID-19 pandemic can potentially trigger a competition between countries for attracting investments in critical sectors of biotechnology and pharmaceutical research (Investment Policy Monitor, 2020a; Bennhold & Sanger, 2020).

Despite all restrictive policies discussed above; it is well known fact based on the outcomes of prior crises (Davis & Pelck, 2017; Gawande *et al.*, 2014) that in order to limit the negative outcomes of the pandemic, international co-operation and collaborations are fundamentals between private sector firms, including MNEs, global institutions and policy makers (ASEAN, 2020; Glauber *et al.*, 2020; Muhammad-Bande, 2020; WHO, 2020a,c; WTO 2020a). Thus, even though restrictions may cause some challenges in knowledge transfer in the form of acquisitions and other entry modes; it is expected that such co-operation via alliances will lead to the development of innovative products and services, especially in health technology (GSK 2020a). At the same time, corporate social responsibility (CSR) will also be important in such endeavors especially when collaboration to address COVID-19 pandemic's challenges is between entities representing private, public and NGO sectors (GSK, 2020b; Opiyo, 2020). Based on this discussion, it is logical to expect that in future post COVID-19 world, CSR will play even a more important and critical role for MNEs and their global operations especially in the strategic industries of food, PPE, pharmaceuticals and high-tech.

4. CONCLUSIONS, LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

A key conclusion which can be drawn from the current chapter is about the increased importance of industries like agriculture (including the food sector), healthcare equipment manufacturing and pharmaceutical sectors for IB research. In the past, these industries have not received significant attention from the IB scholars, but keeping in mind their importance, specific research into operations, dynamics and strategies in these industries, including FDI and the organizations of their global and regional value chains is needed from the IB perspectives. It is further important to mention that significant prior IB research has focused on FDI strategies at aggregate level, where specificities of industries (and especially strategic industries) are not always visible. IB literature will also benefit from FDI strategies', including entry modes related research by deeper examination of firms originating from strategic industries, as well as FDI into strategic industries across developed and emerging/developing markets. In some cases, host governments might restrict FDI into strategic industries whereas other might require more FDI in order to facilitate local economic development. Thus, it also is important to enrich our understanding of issues such as how entry mode choice or mergers and acquisitions strategies differ in strategic vs. non-strategic industries in a particular country. Another conclusion is related to MNEs' operations in an increasingly restrictive and changing global world, which is dominated by inward looking nationalism sentiments. This can have far reaching impact on the outsourcing, offshoring and recent trends towards re-shoring strategies

adopted by MNEs across different sectors. Also, there are important implications for MNEs operating across different sectors whether strategic and non-strategic and how will MNEs navigate the rising private power brokers and domestic political interests and create value for range of stakeholders remain an important issue for the long-term sustainability of MNEs.

Our chapter has limitations as well. Firstly, it is a conceptual piece, thereby lacking empirical analysis of data. This can make generalization based on it difficult. However, the purpose of the chapter was not to present specific findings which can be generalized but offer an assessment of one of the biggest events of current times in specific relation to IB field. Moreover, as we are trying to conceptually analyze an ongoing pandemic of COVID-19, it is possible that some aspects being discussed change over time. However, despite this limitation, our chapter discusses an important and relevant topic of strategic industries and their changing perceptions due to the global crisis of COVID-19, which is highly relevant for IB. We believe that it sets bases for the future studies to further delve into specificities of strategic industries and analyze them in relation to different IB strategies of both MNEs and SMEs, including the nature and scope of future collaborations and alliances between MNEs and local firms. Moreover, there is a lack of global crisis or pandemic specific theorization (availability of applicable theories or paradigms). We believe that risk specific research and theories used in IB studies cannot appropriately address the dynamics of global risks like COVID-19. Hence, future researchers can also focus on this specific aspect to enrich the extant literature and examine the resilience strategies adopted by MNEs across their value chains.

The social distancing measures and classifications of key workers can also have long-term consequences for MNEs in terms of managing their workforce across global value chains. How social distancing measures influences the sharing of knowledge across the MNEs' subsidiaries networks and resultant innovations will be an important issue for future research, given the long-term implications of these measures for global talent management, global R&D, and global mobility of expatriates. Additionally, the FDI screening related measures adopted by certain countries need to be studied to see how such measures will influence the development of local level capabilities and MNEs' strategies both in the home and host markets. There is also a scope to study how the virus outbreaks and global pandemic will alter the location strategies of MNEs across strategic and non-strategic industries. Recently, countries have used trade sanctions as a way to protect their national interests, thus future studies could examine how such sanctions will change the structure, patterns and behavior of firms and their global value chains.

The global pandemic has also altered the nature of the way business activities are performed, therefore future research needs to study the effects of the pandemic on MNEs' behaviors, systems and structures. Global value chains of MNEs have also come under the radar due to the rising level of incidents of modern slavery (cf. Burmester *et al.*, 2019; Stringer & Michailova, 2018), thus studies are needed that can examine the effect of pandemic on modern slavery across the strategic and non-strategic industries' value chains. The current crisis will also alter the geographic scope and governance of global value chains, therefore there is a need to examine how MNEs originating from developed and emerging markets will coordinate and control strategic value logic global networks of supply chains. Lastly, the nationalism and protectionist policies pursued by various countries need to be examined in the context of the changing geography of MNEs value chains activities.

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