US, China, Japan, SK & EU: Industrial Strategies and Global Firm Challenges

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Abstract

The lack of a strong global industrial policy, intended to develop European industries, is at the root of many unsolved problems such as the 'traceability' of products, manufacturing abroad, label transparency, etc. These problems essentially highlight the conflicts between those who ask for actions aimed at promoting greater local employment and those who instead want interventions for greater sales support, without having understood the growing role of Asian countries in the world economy. These will see a new, exceptional acceleration of the global integration processes and an additional growth in the 'global network' dimensions in the next three/five years.

Global networking emphasizes the importance of highly competitive corporate policies with tight synergies that have a robust national development policy based on the industrial system's identity, i.e. on specific 'immaterial macro-system factors'.

Keywords: Europe; China; USA; Japan; South Korea; Industrial Strategies; Regional Comprehensive Economic Partnership; Global Competition

1. Global Competition and the European Industrial Decline

Global markets have radically modified the traditional basic principles of industrial output, constituted by: a static localization of manufacturing facilities; workers on the manufacturing site; 'long' organizational structures with a rigid, planned and fragmented division of roles (Coe et al., 2015; Brondoni, 2014; Brondoni, 2008).

Today's competitive environments highlight global scale economies that are associated to the 'intensity of sharing' of the key resources found in a networked system which maintains sophisticated competitive collaborative relationships (2012bHenderson et al., 2002). Many European companies meet significant challenges in establishing themselves in global economies because these dynamic environments are dominated by large-scale companies.

> □ *The European pharmaceutical industry lost competitiveness with its US counterpart and there was a process of concentration of R&D into North America. The European industry's share of the world pharmaceutical market (which tripled over the last 10 years to reach an estimated 392 billion euros in 2000), decreased from 32% to 22%, whereas it increased from 31% to 43% for the USA.*

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While a few of Europe's top drugmakers were performing well, a growing number faced an uncertain future, essentially because they could not earn a good enough return to meet the soaring cost of researching, developing and bringing new products to market. Need for efficient industrial policy to foster innovation (Thepharmaletter, 2001).

□ *Up until 2015, the global agrochemical market was controlled by six multinational corporations. These large multinationals with a position of absolute prominence in the delicate world food market were the American Dow Chemical, DuPont, and Monsanto, the German BASF and Bayer, and Swiss Syngenta. From 2011 to 2016, the mergers between ChemChina-Syngenta, Dow-DuPont, and Bayer-Monsanto highlighted that business development policies assume a simple key focus: continue to grow to remain competitive. The agrochemical sector is kept under close surveillance in the world by about 30 competition authorities, but it is nevertheless now a concrete reality that a very sensitive sector such as the global agrochemical faces quasi-monopolistic corporate policies (often based on tacit or non-formalised agreements). As a result of alliances and agreements, certain firms can become […] mega-organisations that have the potential to change the long-term competitive structure of sectors (oversize economy) (Brondoni, 2018).*

In fact, this new type of competition calls for firm networks with high management skills capable of dominating communication, leading the Research and Development of new products, guiding marketing, management and finance (MacIntosh, et al., 2015). Consequently, many small and medium-sized European enterprises are progressively reducing their production structures to accommodate third parties in order to survive.

Even great historical Italian craftsmanship (the food and industrial design sector for example) is finding its space in the 'golden niche' (limited productions with high prices justified by the creativity and local manufacturing features) progressively diminish along with the opportunities for export facilitated by exchange rates.

□ *In Italy, not too long ago, a 'chorus' of voices (banks, universities, research centers, politicians) boasted about the leadership of small sized enterprises, sustaining that 'small is beautiful'. In reality, the 'historical' "made in Italy" is growing increasingly weaker because it is based on micro enterprises (food chains, textile-clothing, silk, leather, footwear, goldsmiths, mechanics, etc.) lacking a 'global vision' of production and sales. A dust cloud of labor-intense individualistic companies, compelled to imitate their closest competitors ('production-driven furniture, refined management'). In other words, companies with major structural weaknesses, counterbalanced by 'repeated*

devaluations' of the lira until the end of the 1980s which favored the export of vast supply sectors.

Global networking emphasizes the importance of highly competitive corporate policies with tight synergies that have a robust national development policy based on the 'industrial system's identity', i.e., on specific 'immaterial macro-system factors'.

The lack of a strong global industrial policy, intended to develop European industries, is at the root of many unsolved problems such as the 'traceability' of products, manufacturing abroad, label transparency, etc. These problems essentially highlight the conflicts between those who ask for actions aimed at promoting greater local employment and those who instead want interventions for greater sales support, without having understood the growing role of Asian countries in the world economy. These will see a new, exceptional acceleration of the global integration processes and an additional growth in the *'global network'* dimensions in the next three/five years.

□ *«During the early 1980s, the absence of important innovations caused the stagnation of Western economies and especially of European industries. Industries in basic needs reached saturation and their growth slowed down. New industries emerged and high-technology sectors have also developed, driving a global economic expansion. At the eve of third millennium, these corporations engaged a worldwide market-pull innovation, that directly meets observed needs, with a traditional or company-push innovation, that results from technological research» (Little, 1998).*

Moreover, the decline of international competitiveness of European companies began in the early 1970s and since then there has been no reversal of the trend.

The continuing weakness of political proposals and the lack of consideration of the socio-economic role of businesses have erased Europe's entire industrial policy, which has ceased to guide and maintain the international development of individual countries.

With the lack of planning and programming for large industrial enterprises, even small and medium-sized enterprises have in fact been abandoned. Furthermore, the targeted industrial development of the countries has been replaced by the relocation of production, by passive support for employment, and by the continuous demand for financial resources from the central European Community bodies, without focusing on concrete medium-term competitive development policies.

2. Market-driven Management, Global Competition & Growth Industrial Policies

Since the early '80s, the global economy has radically changed firms, manufacturing system and products, by creating new forms of network also with competitors (Equity e Non-Equity Alliances), and by developing corporate policies focused on the *market-driven management* (*'Before and Better than Competitors')*.

In particular, market-driven management deeply changed the traditional growth industrial policies, because is a corporate strategy dominated by customer value and by direct, continuous benchmarking with competitors.

The market-driven management philosophy has developed with globalisation since the 1980s, and has been adopted by global companies that compete on open markets. It reformulates the traditional marketing management approach, introduced in the 1950s by Alfred P. Sloan (Brondoni, 2008).

In fact, marketing management presuppose a complete knowledge of demand (and of its segments), in order to offer a product. With marketing management, the operating process starts from demand, and goes on to define the characteristics of a product destined to fill a specific 'supply vacuum' which tends to be stable for longer periods. With market-driven management on the other hand, market orientation identifies a temporary competition space, a 'demand vacuum', which must be maintained highly unstable by constant innovative proposals. In other words, the 'market-driven' management process presupposes that, first of all, the company should focus on the competition (market-space) to create temporary demand opportunities (demand bubbles), then choosing the product characteristics that meet demand expectations, with differential supply advantages *(before and better than competitors)* (Brondoni, 2009).

In other words, firms today tend to be a complex dynamic system, competition driven, with managerial perspectives going beyond the traditional space and time dimensions. The main factors affecting corporate competitiveness in global networks can be attributable to:

- corporate tasks of profit and growth. Over-supplied markets and the oversize management led large corporations to develop expansion plans for broader boundaries of scale economies, in line with the vision of a company based on a global network;
- continuous changes to the competitive base. A competitive edge does not remain for long if the firm does not develop innovation and imitation plans with continued product progress and the relentless search for 'unfilled' demand (Brondoni 2003);
- company policies focused on global competitive imitation.

A corporate policy of global competitive imitation is implemented in networks of companies that invest heavily in R&D, but with the emphasis on costs earmarked to the research and development of products designed and developed in close collaboration with competitors (global cooperative alliances) (Brondoni, 2012).

Global competitive imitation policies based on global cooperative alliances allow global players to share the risks of launching and handling imitative products designed and developed on a vast scale. With competitive imitation policies, development and research are oriented to create products with a high commercial margin (marketing coherence) and with high short-term returns on the invested capital.

Market globalisation and the growth objectives of large corporations accelerate competitive dynamics and step up the complexity of managing them, determining new problems in corporate strategies of imitation and innovation. Market globalisation and the growth objectives of large corporations accelerate competitive dynamics and step up the complexity of managing them, determining new problems in corporate strategies of imitation and innovation (Brondoni, 2012).

Growth objectives and short-term profitability constraints prompt large corporations to favour multipolar development of R&D activities that focus on global imitation and innovation policies. This multipolar development encourages the creation of decentralised technological development structures (Cappellin, 2003), which operate with multi-ethnic personnel and are located in the most important world cities, a centre of gravity that is shifting from Europe to the global cities of Southeast Asia and North and South America (Brondoni, 2011; McGuire, & Lindeque, 2010).

3. Growth Industrial Policies: Demand, Innovation, Imitation. 2013-2020 Trends

Globalisation produced a structural change in business networks. In this sense, one of the most important changes is the transition from multinational corporations (MNCs) to global networks particularly focused on management of innovation and creative imitation. Competitive global networking emphasizes the relation between innovation and imitation (Hewitt-Dundas & Roper, 2018).

The management of global innovation and imitation is driven by competition, through continuous increases in technological advances and accelerating life cycles of customer preferences (Brondoni, 2012). Therefore, the imitation processes are the result of corporate strategies created by largest corporations to compete and to grow on global and over-supplied markets (Nonaka &Takeuchi 1995; Sinclair 1990), in a view of oversize economy (Brondoni, 2019).

The global competitive landscapes of innovation and imitation have significantly changed the relative position of many Nation-States (Brondoni, 2013).

EUROPE. The international decline of Europe, especially of the Southern Eurozone, relate to a high loss of competiveness. This competitiveness problem results from the absence of a common industrial policy and diverging political leadership within the Europe, and, on the other side, from the growth of global firms from emerging markets that have strongly increased global competition for the products of the Southern economies (Welfens, et al., 1998).

> □ *Since the Asian financial crisis took place in 1997, the world economy has continued to stagnate with many uncertainties that have ensued. The financial crisis in Asia was followed by the terrorist attack on America in 2001, and Argentina's financial crisis worsened in 2002. These crises have finally sent the world economy into a global slowdown. Furthermore, the aftermath of the U.S.-led war against Iraq and the mysterious illness, known as severe acute respiratory syndrome (SARS) spreading from China in 2003 continue to curb the weak world economy from recovering (Kotabe & Murray, 2004).*

While still the strongest European patent power, Germany is losing ground worldwide. Although Germany is still showing impressive results across nearly the entire bandwidth of technologies, its status as a leading technology nation is increasingly challenging. Germany lost some of its patent leadership in a global

comparison as the worldwide balance in innovation had shifted towards east Asia between 2000 and 2019 (Mohn, 2020).

> □ *In 2010, Germany had still been among the top three countries worldwide by patent numbers in 47 out of 58 technologies. By 2019, this had more than halved to 22. South Korea and China have developed enormously in terms of patent quality in the last ten years. Especially China's strength in the field of nutrition would not come as a surprise in light of high population numbers in the country (Mohn, 2020).*

In 2019, China was among the three countries with the largest numbers of top patents in 42 of 58 technologies. Almost 20 years ago, Chinese patents did not even reach a top five ranking in a single category.

The United States would remain the greatest patent power, and 27 member states of the European Union (EU) maintain top positions in the categories of wind energy and functional food. Anyway, Europe needs a clear political commitment towards a common initiative, because Eurozone is bound to fall behind in new developments, such as 5G or block chain (Mohn, 2020).

> □ *A year ago, the governments of 19 EU countries signed a statement on the adoption of a comprehensive and aggressive industrial strategy, as a response to fierce competition with China and the United States. The proposal was to amend antitrust laws and merge large European companies to create European industrial champions. One of the first such episodes would be the merger of two major railway manufacturers - Alstom and Siemens. This merger would create the world's second-largest producer in this segment, after the Chinese CRRC state giant. However, European competition commissioner blocked the deal, as such a giant could destroy smaller producers, become a monopolist and harm European consumers. The governments of Germany, France, Italy, and Poland have a different opinion. If Europe wants to compete on equal terms with the state-owned industrial champions of China, the creation of such giants is critically necessary. China created international giants at the state level and these giants, due to the scale effect, as well as increased financial support from the government, are destroying European and American companies (Vernivsky, 2020).*

Germany's challenge in 2020 is to define a third space for itself and for Europe in the face of this growing U.S.-China discord. But the Germany government's reluctance to antagonize Beijing risks undermining the EU's push for a common policy toward China and perpetuating a situation where member states look out for their own interests, often to the detriment of a common European front. The European Commission with a strategy paper described China as a 'systemic rival' in certain areas (it also called China a 'partner' and 'competitor' in other domains) and urged a rethink of Europe's industrial, competition, and procurement policies to shield it

from unfair Chinese competition. Europe has defined the relationship with China on three separate levels—partner, competitor, and rival (Barkin, 2020).

USA. USA in the past had ruled the diffusion of innovations and the 'block' of imitations, but now they have lost their historical leadership and are looking for a new role in the control of the innovation and imitation processes (Brondoni, 2013). The US greatest corporations maintain the primacy of innovation in global markets, and US firms are still the undisputed leaders of next-generation technology (from space to IT, to semiconductors and pharma).

In US corporations there are many warning signs, however, across the leadership on industrial innovation. US companies can no longer build products just for the US market and the composition of global demand has dramatically changed over the past few decades (e.g. the worldwide automobile industries) (Manyika et al., 2011).

> □ *In leading industrial technologies (such as hybrid automobiles, high-speed rail, solar modules, and wind turbines) the US-based firms compete against global foreign companies. The new 'global model' of production network changed anyway the rules of corporate innovation management, with a continuous proposal of imitations and incremental innovations.*

In the new competitive contest, US global firms are very prudent to innovate globally, and they prefer to produce and to sell across the globe by parent companies.

> □ *In many product categories, Japanese firms absorbed U.S. product innovations and improved on product quality and the manufacturing process more significantly than did U.S. innovators. Once a product reaches maturity, U.S. firms usually face both price and quality competition from European and Japanese firms (Kotabe, 1990).*

From a general point of view, US-based global production networks are primarily minded on incremental innovation ('creative imitation') and especially on the defence of property rights of basic 'essential patents' (e.g. the pharma industries).

US-based global production networks are primarily focused on incremental innovation ('*creative imitation*'). By consequence, in these last years the US global firms directed their competitive policies to maintain a market-leader position both on economies of scarcity (i.e. petroleum) and on economies with controlled competition (i.e. health products), with a main target focused on produce and sell across the globe by parent companies minded to produce an oversize economy.

JAPAN. Japanese global production networks are focused primarily on innovation and breakthrough, and they compete innovating globally, and producing or selling across the globe by own companies. The policies of business growth show a great use of alliances (equity & non-equity), and a very low use (often non-existent) of mergers and acquisitions neither of local companies, nor of firms with different culture and values. The management of global continuous innovation (breakthrough

or incremental creative imitation) is driven by competition, increases in technological advances and accelerating cycles of customer preferences (Rieple et al., 2012).

The competitive strategy of Japanese networks is based on continuous exports of largest markets, (Kim & Oh, 2002), focusing on fundamental characters of the products, made with very high quality standards and with production processes aimed at minimizing the cost, in a vision of competitive primacy (market-driven management). In fact, the success of Japanese exporting companies is based on a strategic posture dominated by a long-run perspective and a high quality/price ratio in products. In other words, Japanese networks are more interested in sales planning and in sales organisation rather than in customer satisfaction, with a very sophisticated global sales management culture (Beech et al., 2018).

SOUTH KOREA. The South Korea chaebols are similar to Japan's post-war conglomerates (Keiretsu). Chaebols encourage production of consumer goods for export, at the beginning simply based on imitation (international trade), but more recently also based on creative imitation (global markets).

The Chaebols orientation to export mass market is following the government export-oriented policies.

□ *Actually, the largest chaebols are focusing their enterprises on the following global businesses:*

- *Hyundai: construction, automobiles, heavy industry, electronics and finance;*
- *LG Group: information technology and telecommunications, electronics, biotechnology;*
- *Daewoo: automobiles, electronics, construction, information technology, telecommunications;*
- *SK Group: energy, finance, information technology and telecommunications.*
- *Samsung: electronics, engineering, heavy industries, petrochemicals, securities, investment trust management, venture investment, engineering & construction, healthcare, medical, Renault Samsung motors, Sungkyunkwan University (Brondoni, 2013).*

South Korean corporations make no secret of their aggressive marketing and promotion strategies. The marketing strategy of South Korean chaebols is targeted on projecting a simple image they aspire to: being innovative. At the same time, the sale strategy of making their products available at every useful point of sale has proven to be quite accurate and very aggressive (Brondoni, 2013).

In these last years, chaebols continued to expand their global business through the incremental innovation strategy (creative imitation) and the historical imitation policy. The shift from international markets to global competition forced the South Korean global chaebols to invest massively on R&D, and cooperate with some public R&D institutions established by the government then, with the task of pursuing corporate strategies of mass-market productions.

South Korean global networks are actually focused primarily on creative imitation of mass-market established products, but their competitive policies are directed more

and more to innovative production, characterised by high R&D investments and hard global selling.

South Korea is now playing an important role in the actual global competition, by challenging the country intermediate position between its main export-competitors, China and Japan.

Figure 1 summarizes the relative position of the main Nation-States with respect to the competitive dimensions of innovation, imitation and creative imitation, and with reference to the competitive landscape of domestic demand, exports (by corporations having sales on international markets but without having a direct presence on that market themselves), and of global demand (which postulates the presence - and therefore direct responsibility and continuity of relationship with the markets - of multinational companies). Figure 1 indicates the leadership of US corporations on global markets, while other important economies were aimed largely at satisfying national demands or international demands.

Figure 1: *Demand, Innovation, Imitation in Global Competition (2013)*

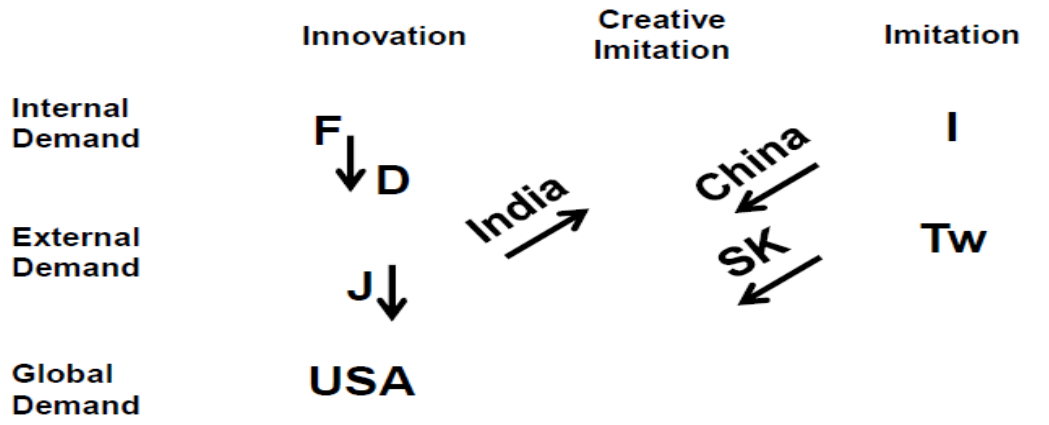
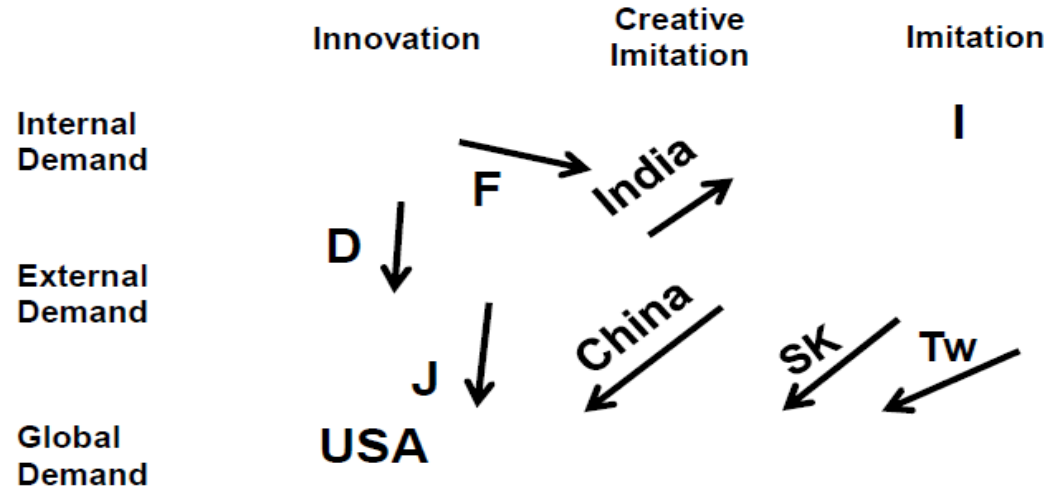


Figure 2: *Demand, Innovation, Imitation in Global Competition (2020)*



The development of global competition in recent years, the saturation of numerous demands that have led many markets to a planned over-supply (with the disappearance of weaker competitors) and lastly, more recently, the exasperated aim of oversized management in the biggest corporations (oblivious to social and economic macro-problems, such as climate change, social class squeezing, etc.) have generated rapid changes in the global competitive landscape. However, these changes are still evolving and have developments that are not entirely unpredictable. In particular, the variation of the competitive position of Chinese corporations is quite apparent, indicating new dimensions of competition specifically aimed at innovation and creative imitation, to meet new needs of global demands, especially high-quality needs (Figure 2).

CHINA. The Chinese economy has grown at an extraordinary rate in the last decades, modifying its role and competitive position on the world markets (Li & Zhou, 2010). Even in Europe (albeit rather late) firms are coming to recognise the importance of the new China in the global economy and there are worried opinions regarding the implications for domestic economies, which highlight the competitive threat. (Brondoni, 2005). And so anyone who fears the Chinese threat observes that European companies (particularly the smaller and medium sized ones) are at an all-time low, because they are overcome by the tremendously low cost of labour and the enormous capacity for imitation; but also, by the tax reductions and incentives to delocalisation, which are irresistible for Western multinationals (Brondoni, 2005).

□ *In the period 1996-2001, many Chinese firms were at an early stage of development and hence their key skills lay in taking a given technology and producing low-cost products using low technologies. Exports by these firms, though they yielded great volumes, were likely to be of low-end products often sold under another brand name (OEM arrangements). For instance, TCL, a large volume producer of TVs based on the Cathode Ray Tube (or CRT) technology within China, was virtually unknown to customers outside China since its TVs were supplied to foreign TV firms under OEM arrangements. Dependence on OEM exports might also limit the learning opportunities since the exporting Chinese firm typically focuses on manufacturing to exploit the comparative advantage, but is distant from marketing and business development (Pangarkar & Wu, 2012).*

□ *From the last 30 years to now, China raised as the third largest electronics producer in the world after the United States and Japan (Huang & Qiao, 2005). At the beginning of 1980, when China's economic reforms started, only 3,900 electronics enterprises were recorded to be in operation; however, by 2003, the number of enterprises almost tripled to 10,600, and China's total annual output increased to 1.7-trillion RMB (Huang & Qiao, 2005). During this time, leaders of China's electronics industry established trade partnerships with the United States and Japan (Rashidin et al., 2020). These developments led to the creation of*

many large firms and multinational enterprises that facilitate the growth of China's economy (Zou et al., 2018).

4. China 2020-2025. The Challenge of High-Quality Growth in Global Competition

Global Chinese companies have now sophisticated competitive skills, particularly in terms of hard selling, typically for their peculiar and widespread capacity for time-based imitation.

China's new position in the global economy modifies the worldwide equilibrium between the demand and supply of products and services. China's growth is now stopping to increase the number of over-supplied markets, which hold to develop a large global oversize economy.

□ *In the last several months, public officials have talked up a new phrase that is expected to underpin the plan for the next five years, a concept they refer to as 'dual circulation'. It is broadly split into two parts: 'internal circulation' focused on growing China's domestic market, and 'external circulation' – or trade with other countries. President Xi Jinping has also stated that opening the Chinese market further to foreigners and improving the local operating environment remain national goals, even if critics say the pace is too slow. The latest five-year plan will cover topics such as expanding the growth of existing urban centers and other goals aimed at keeping a population of 1.4 billion largely content with their quality of life under the current government (Cheng, 2020).*

In the next five years, China will probably boost its economy to a new level, and emphasize high-quality growth.

□ *The leaders of China and another 14 countries in the Asia-Pacific region have signed one of the biggest free trade deals in history, covering 2.2 billion people and 30% of the world's economic output (RCEP-Regional Comprehensive Economic Partnership).*

Australia, Japan, New Zealand and South Korea signed the deal, alongside members of the 10-nations ASEAN (Association of Southeast Asian Nations), including Indonesia, Malaysia, the Philippines and Thailand. While not offering the same level of integration as the EU or the US-Mexico-Canada Agreement, the deal has been seen as a significant step towards removing trade barriers, as well as extending the influence of China.

The deal sets the terms of trade in goods and services, cross-border investment and new rules for increasingly important areas such as electronic commerce and intellectual property. The effect on the trade of finished goods between Asian nations will be particularly marked. The deal will cover nearly 28% of global

> *trade. It would have covered another 1.4 billion people had India not pulled out of negotiations last year because of concerns it would not be able to protect domestic industry as well as its agricultural sector. However, the statement from the signatories left the door open for India to join the trading bloc (Jolly, 2020).*

In these last periods, China is on a multi-year mission to reduce its reliance on foreign technology and as a result, Beijing is investing heavily in its own technological developments. The Made in China 2025 (MIC 2025) initiative in 2015 is a bid to significantly advance the country's economy and industrial base with a goal of achieving manufacturing dominance by 2025. MIC 2025 would move China from a low-cost manufacturer to a direct added-value global competitor (ISDP, 2018).

Made in China 2025 is a chance to integrate into the global manufacturing chain and more effectively cooperate with industrialized economies. The aim is to reduce China's reliance on foreign technology imports and invest heavily in its own innovations in order to create Chinese international companies that can compete both domestically and globally. While China is aiming to move up the value-added chain, it also sees MIC 2025 as a chance to integrate into the global manufacturing chain and more effectively cooperate with industrialized economies. Even if key targets are not achieved, the initiative will improve China's overall economic governance and strengthen its financial, education, healthcare, and manufacturing sectors.

MIC 2025 is inspired by Germany's 'Industry 4.0' and is in line with the German and Japanese objectives to economic development and innovation. Reducing reliance on foreign technologies involves creating and developing companies that can innovate through research and development, dominate domestically, and produce competitive exports (ISDP, 2018).

MIC 2025 is centered on upgrading advanced technologies to secure the position of strategic emerging industries such as renewable and alternative fuels. Made in China 2025 is focused on some strategic industries. Those industries include advanced information technology (AI, ML Smart appliances); automated machine tools and robotics; aerospace and aeronautical equipment; ocean engineering equipment and high-tech shipping; modern rail transport equipment; energy saving and new energy vehicles; power equipment (fossil fuel, electrical, nuclear, and renewable); new materials; agricultural equipment; pharmaceuticals and medical devices (ISDP, 2018).

Made in China 2025 will be achieved by implementing regulatory changes and introducing standards for key industries while setting a policy direction to pursue innovation and development. These standards potentially restrict foreign competition in China and provide access to technology from abroad. State-owned banks are offering subsidies and low-interest loans, especially for small and medium-sized enterprises. Leading companies are interested to those offers, focusing on technologies of the future. The government is also encouraging global companies to develop their international brand awareness and become more familiar with overseas cultures and markets and strengthen investment operation risk management, with the task of pursuing international investments and acquisitions (ISDP, 2018).

Made in China 2025, mixed with international companies already implementing the government's development strategy, will create national firms that can effectively compete with the greatest global multinationals.

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