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● JAPAN-KOREA TRADE WAR

History comes back to haunt trade ties

Trade wars appear to be becoming the norm rather than exceptions, and the new conflict between Japan and South Korea is set to worsen the effects of the US-China trade war

(the Democratic People's Republic of Korea) and South (Republic of Korea), that Japan and South Korea connected diplomatically in 1965. Sour ties with the Soviet Union—controlled North Korea, and military alliance with the US, were political glues binding the countries. A more powerful bonding force was robust economic exchanges. Both Japan and South Korea, along with Taiwan and Hong Kong, were shining examples of the 'Flying Geese' economic paradigm of labour-intensive, export-oriented industrialisation. As Asian entrants into the elite group of advanced first-world economies, both have achieved high industrial sophistication and remarkable development of economic, financial and regulatory institutions, while having a large presence in the global lists of top business corporations.

Trade has intricately bound Japanese and South Korean economies. South Korea is one of Japan's main export destinations for goods as well as commercial services. The goods trade relationship is largely inclined towards South Korea being a major importer of Japanese products, while on commercial services the relation is more balanced, with both serving as major sources of export and import for each other. It's on goods trade, though, that both the countries have got into a spat, and that is now assuming alarming proportions.

Following the South Korean Supreme Court's ruling last year directing Japanese companies to pay compensation for forced Korean labour during the Second World War, Japan has begun taking trade actions against the country. The first of these comprised imposition of stricter screening for Japanese export of some chemicals—essential in the production of smartphones and semiconductors—to South Korea. Following these controls, announced on July 4, 2019, earlier this month, the Japanese cabinet approved removal of South Korea from the 'White List' of countries maintained by Japan. The White List includes countries to which Japanese exporters can export items that can also be used in the manufacture of weapons, without rigorous scrutiny. Removing South Korea from the White List implies that Japanese exports of such items to the country will henceforth be subject to case-by-case detailed screening for eliminating possibilities of potential military end-use. Japan has justified the tighter export controls on national security grounds. By doing so, it joins the US and Russia, who, in recent years, have similarly justified unilateral trade actions.

The ruling by the World Trade Organ-

isation (WTO), earlier this year, on the use of national security for trade actions—in the context of the Russia-Ukraine dispute—was somewhat ambiguous. While clarifying that it is empowered to review such actions, it also specified that countries are best judges of circumstances pertaining to national security. Thus, while South Korea may complain against Japan at the WTO, the possibility of obtaining an effective response is limited.

There are further reports of South Korea looking to retaliate by removing Japan from its own 'White List' of trusted trade partners. It might also withdraw from a military intelligence sharing arrangement it has with Japan, in connection with both the countries' maintenance of American military bases.

The Japan-South Korea trade conflict demonstrates the increasing lack of 'trust' amongst countries in world trade. The White Lists maintained by both the countries enable extension of preferences to others primarily on the basis of 'trust' that sensitive exports won't be diverted to un sanctioned uses. Once trust dissolves, and is replaced by cynical scrutiny, trade relations no longer remain the same. For Japan and Korea, trade was a way of overcoming the misgivings and lack of trust produced by history. Unfortunately, the same history has come back to haunt trade relations, and is looking set to create irreparable damage.

There are multiple implications of the Japan-South Korea trade war. The first of these is the inevitable adverse impact on the functioning of global supply chains embedded out of Japan and South Korea. Functioning of several of these would be adversely affected by export controls and tighter retaliation. The second impact is on regional and global trade prospects, which would have to brace for further contraction and slowdown. The third, and probably much less noticed impact, is on the prospects of the ongoing trade negotiations, most notably the Regional Comprehensive Economic Partnership (RCEP). The RCEP is at a greatly advanced stage, and the Japan-South Korea trade spat at this juncture is particularly bad news. Both the countries are important actors in the RCEP process. A trust deficit between the two might have the 'herd' effect of spilling on to the rest of the group. In one respect, though, India should be enjoying a quiet laugh at the development: for once, at least, the region would find it difficult to label it the 'spoiler' at the RCEP. Having said that, it is a clear that trade wars are here to stay, and more such skirmishes might be in the offing. Future trade negotiations need to prepare for such wars.

For both Japan and South Korea, trade was a way of overcoming the misgivings and lack of trust produced by history. But the same history is now leading to an irreparable damage

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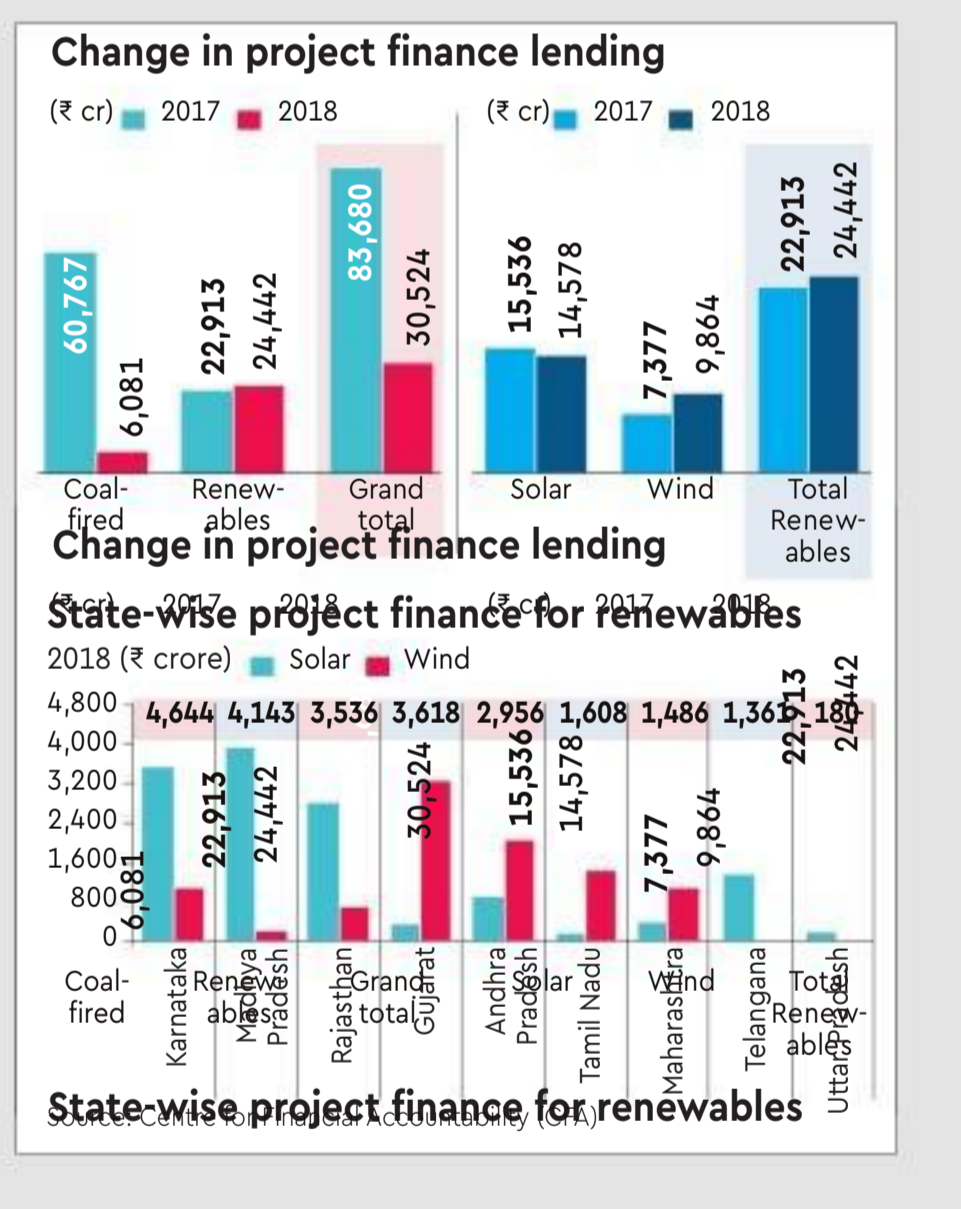
Investing in a greener future

Investments in coal-fired projects declined by 90% in 2018, and in renewable energy projects rose 10%

INDIA IS TAKING strong steps towards realising its commitments made at the Paris climate summit. A recent report from the Centre for Financial Accountability (CFA), *Coal vs Renewables Finance Analysis*, shows coal-fired projects have seen a decline of 90% in investments from 2017 to 2018. The report highlights the incredible transition of energy investment in India, towards renewable projects from coal projects, by analysing 54 energy projects—comprising both renewable and coal-fired projects—that reached their financial closure in 2018. The report finds that the projects attracted a total funding of ₹30,524 crore, 80% of which went to renewable energy projects and 20% to coal power projects. The high-scale investment in renewable energy in India has been noted by the International Energy Agency (IEA), according to which India is the largest growing market for renewables in the world and the country's investment in the renewable energy sector grew at a rate of 12% in 2018.

The report shows that, in 2018, five coal-fired projects having a combined capacity of 3.8GW received investments worth ₹6,081 crore, as opposed to 12 such projects—with a combined capacity of 17GW—getting a financing of ₹60,767 crore in 2017. As far as the renewable energy sector is concerned, it saw an increase in investments of ₹1,529 crore in 2018 over 2017. Of the 54 projects assessed, 49 were renewable energy projects, having a combined capacity of 4.7GW, and received loans of ₹24,442 crore in 2018—60% were for solar PVs and 40% for wind projects. The CFA also noted that primary financing for coal-fired power projects shrank by 93%, whereas for renewable projects it increased by 10% in 2018.

In coal projects, investment amounting to ₹3,938 crore came from majority government and majority government-owned financial institutions in 2018, while for renewable energy projects majority investments came from privately-owned commercial banks, who contributed three-quarters of the funding, i.e. ₹18,263 crore. However, there is a disparity when it comes to region-wise investments. States such as Karnataka, Madhya Pradesh and Gujarat attracted around half of the entire country's renewable projects—23 such projects, both for solar PVs and wind energy—and others like West Bengal and Chhattisgarh didn't get any (the CFA report only studies solar PV and wind energy projects, and not the entire renewable energy ecosystem). The trend reflects India's ongoing efforts towards enhancing green energy, and reducing pollution caused by fossil fuels. Even as some developed countries such as the US have backed out from the Paris agreement, India is setting the tone for a development model that is needed to tackle climate change.



DESPITE BEING NEIGHBOURS and military allies of the US, Japan and South Korea—Asia's economic powerhouse with strong export-oriented and globally-integrated economies—have had rocky bilateral ties. The strains are inherited from the uncomfortable history of the region during the early decades of the previous cen-

tury, leading up to the Second World War. The Japanese control of the Korean peninsula, the subsequent 'forced' Korean contribution to the Japanese Imperial Army and its pursuits during the Second World War have left indelible impressions on both the countries. It was several years after the Korean independence in 1945, and the separation of the Korean peninsula into North

GLOBALLY, ELECTRIC VEHICLES (EVs) continue to gain in popularity. As of 2018, according to the International Energy Agency (IEA), over 50 lakh electric passenger cars were in operation, with approximately 52 lakh charging points worldwide.

Charging up for electric mobility

For EVs, there is no 'one-size-fits-all' charging solution, and different options must be weighed carefully

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For large-scale adoption of EVs, a hassle-free charging experience is crucial. With EVs suffering from high upfront costs and an inability to travel over a long distance on a single charge, buying them remains an unattractive proposition at present. In India, since 2015, the Faster Adoption and Manufacturing of (Hybrid and) Electric Vehicles (FAME) scheme has introduced subsidisation of EVs. However, four years hence, only 2.8 lakh EVs have been introduced under FAME. In comparison, automobile sales in India crossed 2.67 crore in 2018. It is clear that the subsidies on EV sales alone will not be sufficient to meet the ambitious target set by the government. This is essentially so because of the inconvenience caused to EV adopters due to a shortage of charging stations, hindering grid-friendliness. The installation of a reliable, EV-friendly, and accessible network of public chargers is, therefore, a necessary prerequisite for the success of EVs.

Energy Efficiency Services Ltd has led the way by commissioning 300 AC and 170 DC chargers across India. The government has installed 51 public charging points that are operational in Delhi NCR. While a promising start has been made, a few key factors must be considered to develop a large-scale EV charging network. Currently, multiple charging standards are being adopted. The Department of Heavy Industries has introduced the Bharat AC-001 and DC-001 standards for EV chargers. The DC-001 standard relies on Chinese GB/T connector standards.

There are two other major standards—CCS and CHAdeMO. Guidelines from the ministry of power indicate that a public charging station must be able to cater to EVs that adhere to any of the above standards. However, the development of a national standard for chargers and connectors will be more beneficial; it will also provide more clarity to the manufacturers, buyers and service providers. As the current Bharat standards are limited by a maximum power rating of 15kW, EVs with larger batteries that need to be charged at higher power levels, such as electric buses, will



require different standards. The Bureau of Indian Standards is currently developing comprehensive standards for EV charging. The choice of charging method and technology is another key consideration. Different categories of EVs have different operational constraints. Generally, commercial vehicles cover longer distances than personal vehicles in a day. They also require frequent and fast recharging, for which low-powered AC- and DC-based charging systems are not suitable. While larger on-board batteries may reduce the need for frequent recharge, they will add

significantly to the upfront costs of EVs, and additional weight. Given this, the role of alternate charging solutions must be explored. These can be grouped into three categories—opportunity charging, battery swapping, and hybrid trolleybus systems. In 'opportunity charging', EVs top-up their batteries during very short stops, through high power DC-based charging. A high amount of energy can be transferred to the battery in a very short span of time. This can be beneficial for electric buses with smaller battery packs. However, frequent fast charging can degrade batteries

rather than usual. 'Battery swapping' involves the removal and replacement of the on-board battery. This allows the EV to replace a discharged battery in a few minutes, by visiting a swapping station, where batteries are charged and stored. While this has been demonstrated to work across different vehicle categories, issues pertaining to the interoperability of batteries and related connectors need to be addressed.

'Hybrid trolleybus systems' are buses that draw power from overhead lines during operations. They have small on-board batteries that enable operation even when disconnected from overhead power lines. Each of these solutions has unique advantages, making them better suited to certain categories of EVs more than others. For instance, battery swapping-based electric two-wheeler have been successful in Taiwan, whereas a large number of electric bus projects in Europe utilise opportunity charging and hybrid trolleybus systems. It is also important to note that these solutions need significant capital investment to build the required infrastructure. However, once built, the return on investment will increase with usage. Thus, for EVs, there is no 'one-size-fits-all' charging solution, and different options must be weighed carefully. That said, the future of EVs looks bright in India. As the technology matures, India must prepare itself to make the most of this opportunity to move towards a cleaner and greener future.