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● **US-CHINA TRADE DEAL**

# Ticking temporary truce

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**C**OMING NEARLY TWO years after the US and China embarked on a trade war, the Economic and Trade Agreement between the countries—popularly referred to as Phase 1 of a bilateral deal—is a welcome development. It is not an indication of the world's two largest economies having erased all differences on trade. Neither is a guarantee that trade tensions won't flare again. Nevertheless, it is a signal that both are willing to engage to identify a possible common ground.

Compared with expectations that the deal would be more of a face-saving, politically symbolic agreement, it certainly turns out to be more substantive. The substance though is not uniform.

The most detailed are Chapters 1 (intellectual property), 3 (trade in food and agricultural products) and 6 (expanding trade). The depth and range of content in these chapters, particularly those on intellectual property, trade in food and agricultural products, and expanding trade, are very much in line with the grievances that the US has aired for a long time. The detailed provisions on safeguarding intellectual property are in line with US findings with respect to China, under the Section 301 of the Omnibus Trade Act of 1988. Intellectual property theft and violations have been major concerns of the US that have been flagged repeatedly for China, year after year, in the Special 301 reports of the USTR. The interesting part of the provisions is the

effort to outline conditions under which wilful theft of trade secrets might invite criminal action. The US has been able to get away with the rather audacious provision that US holders of trade secrets need not 'establish actual losses as a prerequisite to initiation of a criminal investigation for misappropriation of a trade secret'. It remains to be seen how forcefully the conditions are implemented in future.

Similarly, on the short chapter on technology transfer (chapter 2), the emphasis is on non-insistence of transfer of technology by host governments from foreign businesses with respect to licensing arrangements. The interesting part of this chapter is that unlike chapter 1 on intellectual property, which is primarily on what China would, or wouldn't 'do' for safeguarding US intellectual property, the technology transfer chapter doesn't mention China or the US even once. Instead it is confined to the safe reference of 'both parties'. This is clearly an area where much work remains to be done before specificities are reached.

Chapters 3 and 6 are the two most politically important chapters. Chapter 3 aims to address many regulatory issues in the Chinese market, prevalent as sanitary and phytosanitary measures (SPS) that affect access of US food and agricultural products. The key US exports identified by the chapter are dairy, infant formula, poultry, beef, pork, meat, seafood, rice, food additives and pet food. While making efforts to remove qualitative restrictions on US exports of these items to China, Chapter 6 provides targets on how much China should import from the US. It is projected that during the period January 1, 2020 – December 31, 2021, China's imports from the US should be \$200 billion more than what they were in the baseline year 2017. The higher imports are across four broad categories: manufactured goods, agriculture, energy products and services. The maximum imports (\$77.7 billion) are projected for manufactured goods, including industrial machinery, electrical equipment, pharmaceuticals, aircrafts and iron & steel. These are followed by imports of \$52.4 billion of energy products (LNG, crude oil, refined products and coal); \$37.9 billion for services (IP fees, tourism, financial services, cloud services) and \$32 billion for agriculture

(oilseeds, meat, cereals, cotton, seafood). The targets set out in Chapter 6, along with the provisions in Chapter 3, would enable president Trump to reach out to trade-oriented domestic constituencies in the election year. This includes both agricultural farming groups as well as industrial producers, who have been unhappy over the limited access they have been having in the Chinese market.

Chapters 4 and 5, which deal with financial services and macroeconomic policies and exchange rate, are again relatively less in content. On financial services, the emphasis is primarily on China liberalising foreign equity caps and limitations on scope of business operations for US service suppliers in insurance, banking, credit rating, electronic payments and securities services. Interestingly, this is a chapter where China appears to have been successful in pushing through reciprocal measures with the US committing to expeditious processing of pending applications of various Chinese financial service suppliers. Chapter 5, like

Chapter 2 earlier, is largely prescriptive with an eye on avoiding currency manipulations. It is interesting that a couple of days before the deal was announced, China was taken off the list of currency manipulators maintained by the US. Finally, chapter 7, which formalises the arrangements and structure for implementing the deal, puts in place a high-ranking mechanism, comprising the USTR and a Chinese vice-premier, reflecting the importance both sides have attached to the agreement.

Notwithstanding the agreement, tariffs imposed by both sides on each other's products during the last two years, continue. To that extent, the maximum comfort that can be derived from the deal is the signal that while the damage done won't be undone, further damage is being avoided. The possibility of the deal falling through, though, remains. While the import targets might be fulfilled, the crucial test of the deal will be on the success achieved by Chapter 1. US satisfaction over the improvement of the quality of protection for the IP held by its businesses would mean much in progressing on the next stages of the deal. In the meantime, truce might hold, given the 'substantive' achievements of the deal that can be showcased for US domestic constituencies.

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● **SUSTAINABLE GROWTH**

## Farming for digital solutions

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Sustainable agriculture needs a collaborative approach

**T**HE NEED TO scale up agriculture is getting more acute with rising global population. As per UN, by 2050, the world will have 10 billion people, with India accounting for 1.73 billion. While the population is increasing, arable land is decreasing, and farmers are grappling with limited natural resources and climate change. Extreme weather conditions such as floods, droughts and poor rainfall are lowering crop productivity and farmer incomes.

To ensure safe, affordable & enough food and overcome farmers' challenges around low productivity & income, it is critical to transform Indian agriculture. There is a need to enable farmers to earn sustainable farm incomes and be globally competitive. Creating a transformational agricultural policy roadmap requires a collaborative approach between the government, industry, farmers and the society. It also needs enabling policies and timebound targets focused on technological innovation, capacity building, market access and risk mitigation.

For instance, a new governance model could be considered to create crop focused ministries for cotton, horticulture, rice, corn, etc, with end-to-end visibility of crop competitiveness, both in India and globally. This will bring in policy clarity, consistency and help us shift towards a more targeted fiscal incentive regime. Additionally, incentives should be targeted towards sustainable farm income and agriculture. This could be in the form of farmer incentives for efficient use of water used for cultivation, cover cost of hedging against commodity price fluctuations, GHG reduction, etc.

Small land holding farmers play a key role in ensuring India's food security. One of the key priorities of the government is doubling farmers' incomes. Several industry players have introduced targeted programs to help farmers progress from subsistence farming to commercial farming. This is crucial for Indian agriculture. This in turn will make farming an attractive profession for future generations and bring more investment.

Digital tools in agriculture can help farmers produce with less resources and make data-driven decisions in real-time. New technologies like drones are revolutionising the world of smallholder farming. Drones can help identify weeds, pests and diseases and localise application of agrochemicals. Farmers in China & South East Asia have already started using drones. Once drones are approved for use in Indian farms, it can provide farmers significant benefits.

Along with new technological innovations to support sustainable agriculture, we also need a greater thrust on capacity building to make existing technologies available to subsistence farming communities. One good example is hybrid seeds. Hybrid seeds use lesser water for cultivation compared to traditional varieties, can better withstand diseases, insect pests and increased levels of water salinity. They also offer increased yield potential, hence, higher farm incomes. But the rate of hybridisation in India is quite low compared to other large agricultural nations in Asia. Public-private partnerships, collaborative business models and CSR initiatives can greatly accelerate hybridisation in crops such as rice, corn, horticulture etc.

The industry and the government are already supporting the shift to sustainable agriculture by popularising the use of science-based good agronomic practices (GAP) that are climate-smart and financially viable. Enhanced collaboration will be a critical imperative to transform Indian agriculture. The government could identify specific areas along the agri value chain where public-private partnership (PPP) will benefit farmers. This will encourage the private sector to come forward with higher investments for innovation.

As we move into a new year and a new decade, I am convinced and extremely hopeful that with the right thought leadership and government support, the agriculture sector can rewrite India's growth story and place our country in the league of the top five global agricultural markets.

**COP 26**

**A**FTER A LACKLUSTRE COP 25 in Madrid, the expectations from COP 26 in Glasgow (November 2020) are high, on an agreement on the carbon markets promised in Paris, on the recommendations of the report on the landmark Koronivia Joint Work on Agriculture (KJWA). Topics critical to agriculture are expected to be addressed by KJWA.

While agriculture remains vulnerable to climate change effects—low productivity and food production are areas of concern—it also contributes 23% to global GHG emissions. Economic development, growing population and poverty reduction will lead to a higher demand for cereals, proteinaceous food items, fruits and vegetables, triggering more intensive use of water and other natural resources. This will cause GHG emissions to spike. It needs to be understood that KJWA has the potential to transform agricultural and food systems, while enabling the overall achievement of Sustainable Development Goals (SDGs) by 2030. Bold action is called for at COP 26.

According to the UN's Emissions Gap Report 2019, India, along with Russia and Turkey, is projected to surpass its NDC target emission levels by 15%, and has room to raise its NDC ambition significantly. Whether it engages fruitfully with the KJWA proposals remains to be seen. FAO estimates that, while agriculture

# Work on climate-smart agriculture

India must commit to the landmark Koronivia Joint Work on Agriculture

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accounts for 70% of total global freshwater withdrawals, food production and supply chain consumes about 30% of global energy consumption. India has been witnessing fast depleting groundwater resources, resulting from widespread use of pump-sets for irrigation, powered by heavily subsidised electricity, and highly polluting diesel. Groundwater Year Book 2017-18 had estimated that almost the entire country is experiencing depletion in groundwater level, with the maximum decline in parts of Rajasthan, Haryana, Punjab, Gujarat, Telangana, and Maharashtra. A World Bank report had predicted that ~60% of aquifers in India will be in a critical state by 2032.

Perverse subsidies on farm power supply in India over the last four decades, have not only made irrigation by deep tube-well profitable for farmers, but have, in fact, incentivised wastage of energy, too. This has also been exacerbated by the skewed procurement policies in favour of rice and wheat in Punjab and Haryana. However, while this had led to significant increase in production and productivity of paddy and wheat in Punjab, Haryana and western Uttar Pradesh during the Green Revolution period, there is evidence of stagnation in productivity.

The Nabard-Icrier report, Water Productivity Mapping of Major Indian Crops, argues that Punjab and Haryana, which



require more irrigation water input to produce unit output of paddy, are less suited for rice production, as compared to the eastern region. Therefore, the report has recommended re-aligning cropping pattern with available water resource endowments across states. One of the fallouts of the paddy-wheat cycle in Punjab and Haryana is the problem of paddy stubble burning and its toxic air pollution effect.

Watershed development is of critical importance, as is evident from the participatory watershed development programme being implemented by Nabard since 1992. Further, ITC's Integrated Watershed Development showcases the role corporate sector

can play in soil and moisture conservation. Sustainable solutions for water use efficiency like System of Rice Intensification, Sustainable Sugarcane Initiative, Better Cotton Initiative with drip irrigation need to be mainstreamed. Further, precision agriculture through AI and IoT can contribute to meet the challenges to food security.

Electricity subsidy for irrigation needs to be phased out. A sustainable alternative is the use of solar energy for irrigation. A viable model of 'solar trees' in farms where farmer producer organisations (FPOs) can own solar panels as source of irrigation and also income for farmers by selling power to the grid, needs to be promoted. This could neces-

sitate tripartite agreements between FPOs, discoms (for power purchase) and banks (for financing FPOs). This model, along with ministry of non-renewable energy's KUSUM scheme, Gujarat government's Suryashakti Kisan Yojana, and other projects, would help achieve the target of 175 GW renewable energy by 2022. Experiments on solar-wind hybrid energy pump-sets also should be implemented on the ground and scaled up. However, there needs to be self-regulation through AI-based sensors in drawing of groundwater.

The Stern Review Report (2006) had called for urgent and transformative actions for addressing the challenges of adaptation and mitigation of climate change faced by agriculture. The Water-Energy-Food nexus approach of FAO envisions a balance between different goals, interests and needs of people and the environment in a sustainable manner. This approach enables demystification of the complex and dynamic inter-relationships between water, energy and food, so that limited resources can be managed sustainably. Therefore, the Central and state governments in India, along with financial institutions, research agencies and corporate entities, need to provide adequate resources towards research and adoption of climate smart agriculture and WEF nexus approach, to enable the country to achieve SDGs by 2030. This should be at the top of India's agenda at COP 26.