



## Knowledge and diplomacy

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### **(Mains Examination, General Studies Paper 2 - Bilateral, regional and global groupings and agreements involving India and/or affecting the Indian interests)**

#### **Context**

- The launch of Brazil's Amazonia-1 satellite by the Indian Space Research Organisation (ISRO) comes weeks after India allowed the export of COVID-19 vaccine to Brazil, as part of its "vaccine maitri" diplomacy.
- Taken together, these two examples of technological and scientific cooperation draw attention to the diplomatic potential of India's knowledge economy.

#### **Development by subsequent governments**

- India's current global diplomacy in the fields of space and pharmaceuticals, engaging several countries around the world, is the fruit of 50 years of sustained state support for "atmanirbharta" in both fields.
- It was Prime Minister Indira Gandhi who authorised the creation of ISRO in 1972 and it was again her decision to enact the Indian Patents Act, 1970, that triggered the growth of the domestic pharmaceuticals sector.
- Subsequent governments have all contributed to the development of both industries.
- Thanks to these initiatives India is today able to place satellites of several countries into space at globally competitive rates and is able to supply drugs and vaccines at affordable prices to developing countries.

#### **Indigenization of the development**

- The credit for India's competitive pricing of satellite launches and pharmaceuticals exports goes entirely to Indian engineering, scientific and technological talent that has pursued world-class standards at a fraction of the cost incurred in developed economies.

- The willingness of high-quality Indian scientists, engineers, biotechnologists, pharmacologists and such like to work in India at Indian rates of compensation, not tempted by better paying jobs abroad, has allowed organisations like ISRO and Serum Institute of India to do the work they now do.

### **Breaking the barriers**

- India's demonstrated potential to be a low-cost global provider of knowledge-based products had prompted the developed West, especially the US, to deploy policies aimed at curbing the development of Indian capabilities.
- Unilateral sanctions were imposed to deny Indian industry access to technology and markets and a multilateral regime for intellectual property rights (IPRs) protection was created, under the auspices of the World Trade Organisation to thwart indigenous technology development.
- Indian capabilities in space and pharma grew in the face of such constraints.

### **Decrease in capabilities**

- India's more broad-based capability for knowledge-based diplomacy has, however, significantly decreased over the past quarter century rather than increased.
- Consider the fact that as early as in the 1950s, many developing countries looked to India to access development-oriented knowledge.
- Students from across Asia and Africa sought admission to Indian universities for post-graduate courses.
- Indian expertise was sought by global organisations such as the Food and Agriculture Organisation (FAO), the United Nations Industrial Development Organisation (UNIDO) and International Rice Research Institute (IRRI).
- The government of South Korea even sent its economists to the Indian Planning Commission till the early 1960s to be trained in long-term planning.
- By the 1970s, Korea was beginning to overtake India as a modern industrial economy.
- There were many other fields in which Indian expertise was sought in the past and where India lags behind today. Railways is one.
- Rail India Technical and Economic Services (RITES) had acquired a global profile with business in Africa and Asia.
- The development of India's dairy and livestock economy also attracted global interest.
- Indian science and technology had something to offer the developing world that the developed economies of the West were either unwilling to provide or did so at much higher cost.

### **Reasons for the loss of leadership**

- Flight of Indian talent that began in the 1970s has since accelerated. This has sharply increased in recent years leads to 'brain drain'.
- China has emerged as a major competitor offering equally good, if not better quality, S&T products and services at lower cost.
- While India has maintained its lead in IT software, China has developed competitive capabilities in space, pharma, railways and several other knowledge-based industries.
- The biggest setback in the global appeal of India's knowledge economy has been in higher education.
- Overseas students were drawn to Indian universities and institutions because they offered good quality education at a fraction of the cost of developed country institutions.
- The appeal of education in India for overseas students has waned. Even South Asian students, from countries like Nepal, Bhutan and Sri Lanka, who preferred to come to India in the 1960s and 1970s no longer do so.
- Indian institutions attract fewer foreign students not just because the quality of education offered in most institutions is below par, but that the creature comforts provided and the social environment offered here is no longer as cosmopolitan as it used to be.
- The growing assertion of narrow-minded ideologies only makes Indian campuses even less attractive to overseas students and scholars.

### **India's competitiveness**

- Despite the competition from China, the ability of Indian space and pharma to offer much-needed products to other developing countries goes to the credit of the people who serve in these industries.
- The Indian familiarity with the English language and the still good quality of teaching in mathematics and statistics has enabled Indian firms to remain competitive in data processing, business process outsourcing and software services.

### **Conclusion**

- Space and pharma are at the apex of a narrow pyramid of the knowledge economy.
- If ISRO's global competitiveness is a tribute to public policy and government support, the global success of the pharma sector is a tribute to private enterprise and middle-class talent in pharmacology and biotechnology.
- Their global success points to the diplomatic potential of the knowledge industry and to India's "soft power".
- However, the fact that they are the exception rather than the rule points to the lack of political and intellectual support to the development of India's knowledge base and an inadequate commitment to excellence.

- Thus, Indian 'atmanirbharta' in space and pharmaceuticals is an exception. It must be the norm

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