

CONTEXT NOTE

Geopolitics and the Economics of Innovation: Different Strategies

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The globalization of the late 1990's changed the scenario for technology policy and the business models for innovation companies. The intensification of trade and investment and more particularly the fragmentation of the electric-electronics industry created a new ecosystem for innovation. The development of electronics value chain encouraged the creation of local supply networks and cross sector innovations helped the development of new service industries. Asia in general and China in particular took enormous advantages of the opportunities opened.

Large science and technology epistemic communities were developed linking researchers and entrepreneurs of mainland China with peers in Hong Kong, Taiwan, the Western Pacific Coast of the United States and Europe. R&D labs were created outside of the parent firm headquarters and the scientific exchanges between universities and research institutions at a global level increased enormously.

The 2008 financial crisis puts a halt to this cycle as it stalled one of the main economic drivers of the globalization of the 1990's: China's immense capacity to invest and export and the US enormous propensity to consume. From 2008 onwards the west engaged in facing the economic scenario of the costs and losses of hyperglobalization. Facing losses also entailed searching for new instruments of growth and striving towards a global scenario

which assisted national policies in this task. Innovation and in particular the innovation economy quickly became the center of attention of policy makers. Technology entered the mainstream consideration of economists. National Plans such as Germany's industry 4.0 and China's 2025 are the products of this new understanding.

The current US-China conflict is part of this scenario of re-directing gains and losses. It is a conflict with multiple fronts: trade, technology and finance. While the conflict has an economic substratum it has been given a political narrative centered on the strategic menace posed by China to the operation of an open system of competition. At stake is also the possibility to redirect globalization and the rules and institutions of the multilateral system.

The cold war, often used as an example, is a poor analogy for the current conflict. The global economy of the 21st century is much more diversified and poly-centered than it was in the late 1970's and 1980's. The US-USSR conflict was a battle for geographical influence, primacy of military might and military technology. Throughout all the conflict, the USSR was outside the western trade, finance and investment system. China on the other hand is at the center of the current world trade system and engaged in all of its governance institutions. It is a first or second trade partner to 2/3 of the world's nations, one of the largest global investors and main sovereign holder of US treasury bonds,

and a hub of global manufacturing value chains. In this context, the prospects of a hegemonic conflict create disruptions for the operation of global trade and investments but also the entire tissue of global value chains of production, suppliers and service networks.

The policy being developed goes in the direction of re-routing economic globalization and reinforcing national spheres of influence. The scope and the spheres of this re-shoring are difficult to assess as is the effect which it will have on value chains, technology standards and the business models of technology firms.

Thus far the US-China conflict has resulted in increase in tariffs on Chinese goods and in an enlarged list of impediments for investment, import/export and trade of technology related goods regulated by the CFIUS. The possibilities for extending the conflict in the financial realm exists - forbidding of trading in the US stock exchange and extending to the technology trade with China the treatment which the US presently has for those that trade with Iran.

The conflict also constitutes a road block for multilateral negotiations on the regulatory intricacies of the innovation economy. Technological innovation has entered the mainstream of economic thought and policy makers but the normative criteria for production and services based on the developments which will emerge from the ample use of 5G and AI are still very much unknown. There is still much work to be done in understanding the regulatory systems which can guide a data based economy. The gravity of the present moment is that the innovation economy which is emerging will require intricate regulations precisely when the international system of multilateral governance is under heavy questioning.

In light of this context a set of issues merit particular consideration:

1 What are the central economic and technological elements of the US-China conflict today and what are the main directions in which the technology policies of the two countries may be likely to move?

2 China has been a keen geopolitical observer and developed its national policies taking into account the opportunities in the global economy. Today it faces a much more competitive and protectionist international environment while still developing many relevant aspects of technology necessary for the innovation economy? How will it balance national objectives with external constraints?

3 China, the US and Europe have, up to now, managed a large degree of collaboration. China has been an efficient ecosystem of production for US, and European firms and R&D facilities. Many of the startups which became successful companies in China have grown from experiences acquired in Google and Microsoft. The interconnection between the epistemic communities in AI in China and the world has been impressive. What lies ahead in the road of science and technology collaboration? Are we moving towards a radical split in technology strategies and models?

4 If we look into the US innovation system today, we see a tendency for the consolidation of very large mega-corporations which can control the direction of most relevant production and service chains and influence the standards of production worldwide. The EU has been striving to develop regulatory norms for the digital economy and the use of data within the EU. Are there prospects for international agreements in the regulation of the digital economy or are we moving into a competition for regional standards?

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