



# Cooperation On Technology and Digital Transformation through the Establishment of Science and Technology Parks under the BRI

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- Technological progress through innovation has taken central stage of modern economic growth. Future growth is increasingly dependent on the speed of innovation
- The outbreak of the COVID-19 pandemic has catalyzed or even forced companies/countries to adopt (novel) digital technologies to cope with and weather through the pandemic
- There is an urgent need for countries in the global South to strengthen technology cooperation both with countries in the global North and among themselves. **The latter** is arguably even **more important**, as the absorptive capacity of less developed countries may not allow them to successfully assimilate (frontier) technologies from advanced countries



- This is a **timely** study that aims to explore avenues of cooperation between China and other countries in the global South in setting up STPs under the BRI, which could serve as the cornerstone for contemporary SSC in scaling up technological transfers and innovation as well as bridging digital divides with advanced countries and accelerating digital transformation in the global South
  
- This research draws on the theory of New Structural Economics and combines **desk research** with **field research** (i.e. interviews with representatives from the Ministry of Science and Technology of China) for analysis



### Why is BRI (the focus of this research) particularly relevant for contemporary SSC on technology and digital transformation?

- BRI was launched in 2013 and is an ambitious development strategy that seeks to connect Asia with Africa and Europe via land and maritime networks to improve regional integration, strengthen trade ties and stimulate economic growth
- While infrastructure connectivity remains at the heart of the BRI, it has evolved over time into “a road of science and technology” that places innovation high on the agenda

BRI could play a pivotal role in promoting SSC on technology and digital transformation (the majority are developing countries)

Figure 2: Mapping the distribution of BRI-participating countries (as of Dec. 2021)<sup>3</sup>

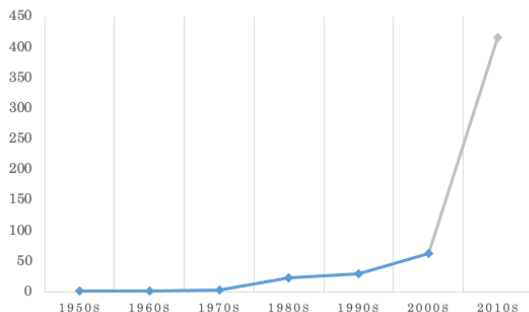


Source: The list of BRI-participating countries is obtained from the BRI Portal.

- By clustering high-tech companies and (basic) research institutes together, the establishment of STPs can be dated back to the 1950s (Silicon Valley), and the pace has accelerated ever since

Figure 1: The number of STPs established in each decade

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Source: Data derived from a United Nations (2019) report.



- Most STPs are located in advanced countries, but developing countries emerged as key players as well
- Making STPs work is a daunting challenge. According to a report by UNCTD (2015), only 25% of the STPs in the U.S. can be regarded as successful in terms of fostering innovation and contributing to economic growth, while the rest either failed or contribute little to the economy
- As a result, rather than developing it independently, Southern countries need to cooperate with successful partners on the development and management of STP



- This report provided three examples on SSC/TrC on STI
- Two country case studies: Egypt and South Africa

### **Five key avenues for science and technology park cooperation between China and Belt and Road Initiative countries**

- E-commerce
- E-manufacturing
- Public health in the post COVID-19 era
- Green growth
- Agricultural development





- Model 1: Develop STPs from scratch and engage triangular cooperation with developed countries or multilateral organizations
- Model 2: Triangular cooperation with multinational companies
- The potential and necessity of involving Development Financing Institutions (DFIs)



- Host governments should give priority to foreign investments in sectors that support the development/use of digital technologies.
- Alternative or complementary sources of funds to the BRI, such as the involvement of DFIs, is highly recommended to further advance South-South cooperation
- To strengthen cooperation on STPs under the BRI, policymakers from China and the BRI-participating countries could consider upgrading the existing STP/industrial parks with a special focus on STI cooperation
- While SSC on technology is the central focus of this research and BRI could play a pivotal role in this regard, it is also highly important to have countries from the global North and/or international organizations (e.g. IASP) involved in diffusing technologies and reducing digital divides.

Thank you for your attention!