



Policy Brief

Role of Patents in Promoting E-commerce Technology Transfer in CAREC FTAs

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This policy brief is grounded in providing an overview of how patentability and disclosure requirements affect e-commerce technology transfer. It aims to explore the *status quo* of CAREC FTAs (the FTAs signed by CAREC countries). Finally, it proposes the way out for CAREC FTA in unleashing the potential of patents to advance the transfer of e-commerce technology.

The research gap, practice challenges, and CAREC Agenda warrant digital cooperation in e-commerce technology transfer and patent protection

Regional digital cooperation, typically FTAs, has recognized the role of "technology transfer" to realize the equitable distribution of the benefits from e-commerce.¹ As the patent makes certain intangible assets tradable, the role of the patent in technology transfer has been increasingly recognized at national and international levels with the proliferation of transnational trade flow.²

Existing studies focus on CAREC members' national policy designs in addressing regulatory issues regarding technology transfer and e-commerce and insufficient infrastructure for e-commerce development. While patents' role in promoting access to technology lacks systematic evidence, the question of how substantive patent rules in TRIPS and FTAs impact e-commerce technology transfer is a shortcoming in available research. While patent, especially rules concerning patentability and disclosure requirements, is already the tool challenging access to e-commerce-related technology, CAREC FTAs show listlessness to feature specific rules accordingly.

Furthermore, FTAs featuring e-commerce or digital trade-related provisions are rising to advance the development of norms and rules for regional digital cooperation.³ The Central Asia Regional Economic Cooperation (CAREC) Digital Strategy 2030 also recognized regional digital cooperation in policy design, capacity building, and digital technologies to accelerate digital transformation.⁴ The recent study by the CAREC Institute⁵ analyzes how CAREC members, based on the pan-CAREC integration, implement the substantive patent rules, patentability and disclosure requirements, to promote e-commerce technology transfer and promote IP and e-commerce cooperation.

CAREC FTAs strengthen e-commerce technology and IP cooperation

With the commitment to digital transformation by reducing the digital divide gap, CAREC members promote e-commerce as a long-standing priority to support their integration into global value chains and adopt economic diversification.⁶ It also highlights the role of e-commerce and technology

¹ Banga K, Gharib M, Mendez-Parra M, and Macleod J, (2021). *E-commerce in preferential trade agreements: Implications for African firms and the AfCFTA*. ODI Report.

² Eisenberg RS, (1996). 'Patents: help or hindrance to technology transfer?' In FB Rudolph and LV McIntire (Eds), *Science, engineering, and ethical challenges for the twenty-first century* (pp161–174). Washington, DC: Joseph Henry Press.

³ Mitchell AD & Chin E, (2023). 'The WTO Joint Statement Initiative on E-commerce: Navigating Digital Trade Rules in a Fragmented World.' *Journal of World Trade*, 57(6).

⁴ CAREC Digital Strategy 2030: 'Accelerating Digital Transformation for Regional Competitiveness and Inclusive Growth' (February 2022), Asian Development Bank <https://www.adb.org/sites/default/files/institutional-document/777876/carec-digital-strategy-2030.pdf>

⁵ Yin, Q, (2024). Role of Patents in Promoting E-commerce Technology Transfer in CAREC FTAs. Visiting Fellow Program, CAREC Institute. URL: https://www.carecinstitute.org/wp-content/uploads/2024/02/CI_VFP_Role-of-Patents-in-Promoting-E-commerce-Technology-Transfer-in-CAREC-FTAs-for-publication.pdf (Accessed on February 14, 2024).

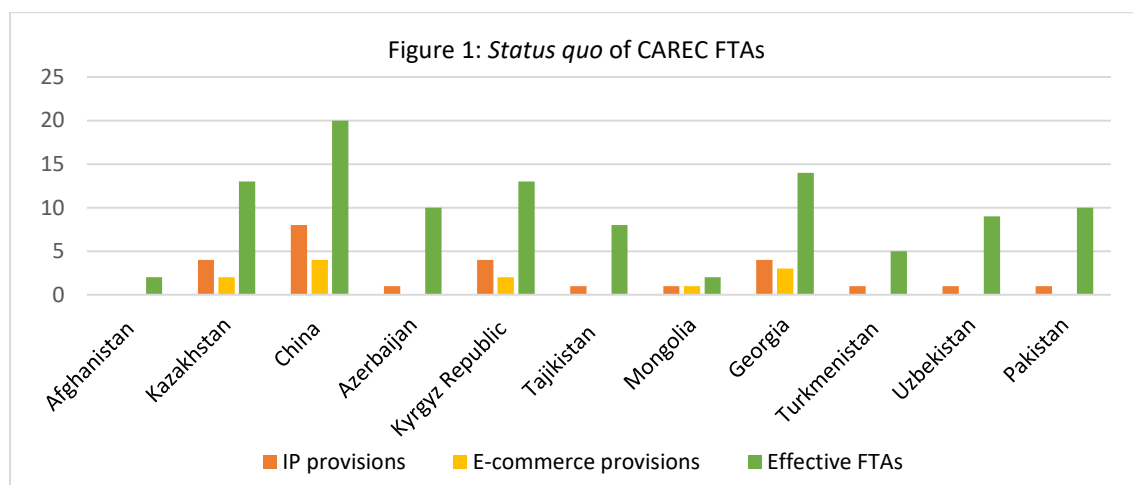
⁶ CAREC Institute, (March 2022). *Digital CAREC: Analysis of the Regional Digital Gap*. <https://www.carecinstitute.org/wp-content/uploads/2022/03/CAREC-Institute-Digital-CAREC-report-March->

transfer in realizing the equitable distribution of the benefits from e-commerce policy design.

The *status quo* of CAREC FTAs is crippled with regulating e-commerce and IP rules. More specifically, out of in-forced CAREC FTAs, 20 incorporate specific e-commerce or IP in a separate chapter or article, occupying a small segment (see figures 1 and 2). On the other hand, 75% of the FTAs with e-commerce or IP provisions were negotiated between developed and developing countries, including CAREC countries, and only 25% between CAREC countries and other developing countries (see Figure 3). This gap demonstrates that developed countries have FTA as a tool to promote developing countries improving policy design on e-commerce.

The Association of Southeast Asian Nations (ASEAN) has taken giant leaps in harnessing technology to deepen economic and technology cooperation in digital trade, presenting numerous policy lessons to CAREC countries. It provides an intra-ASEAN cooperation platform and promotes extra communication between ASEAN members and other countries through regional free trade agreements. FTA could complement the WTO framework on e-commerce with different substantive rules and exceptions to account for particular policy interests.

The significant diversity in economic resources and legal environment challenges crafting an integrated trade policy for the CAREC region. Strengthening CAREC regional economic integration and cooperation requires both intra-CAREC and extra-CAREC cooperation. Accordingly, it proposes a "pan-CAREC" trade agreement, offering a "promising solution for intra-bloc integration, replacing the current complex network of bilateral and multilateral agreements among CAREC members."⁷

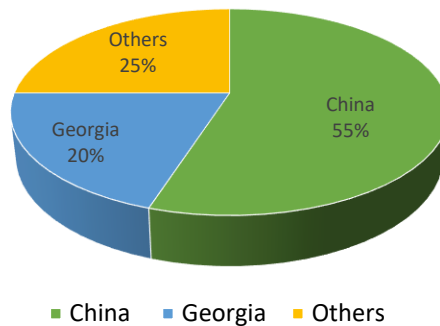


Source: Asia Regional Integration Center, <https://aric.adb.org/fta-country>; WIPO database, <https://www.wipo.int/wipolex/en/text/228813>.

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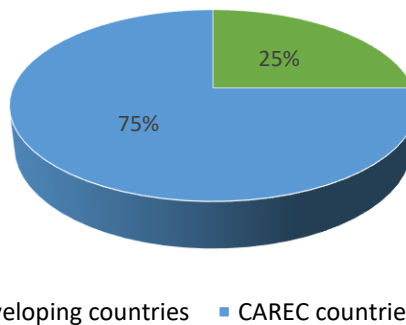
⁷ Samad G, Masood A, and Ahmed J, (August 2023). 'Trade Facilitation in the CAREC Region—some recommendations,' CAREC Institute. Retrieved 12 September 2023, from https://www.carecinstitute.org/wp-content/uploads/2023/08/A-policy-brief-on-CAREC-trade_for-publication.pdf

Figure 2: CAREC countries' share in FTAs with IP or e-commerce provisions



Source: Asia Regional Integration Center, <https://aric.adb.org/fta-country>; WIPO database, <https://www.wipo.int/wipolex/en/text/228813>.

Figure 3: Parties to CAREC FTAs with IP or e-commerce provisions



Source: Asia Regional Integration Center, <https://aric.adb.org/fta-country>; WIPO database, <https://www.wipo.int/wipolex/en/text/228813>.

Role of patent to promote e-commerce technology transfer in CAREC FTAs and national legislations

Furthermore, the added complexity of software and computer-related technology in business models questioned the patentability and the tradeoff between exclusive patent rights and the obligation to disclose the invention as a compelling incentive to boost technology and knowledge sharing. CAREC countries face both opportunities and challenges in tailoring a national and regional patent system in such a way as to respond to technology transfer policy objectives while simultaneously meeting international obligations.

Except for Afghanistan, all CAREC members implement the patent law and have patentability clauses to exclude computer software and business methods from the patentable subjects. However, except for the PRC, none of the others mentioned technical contributions involved. On the one hand, those countries might be accused of insufficient patent protection for e-commerce technology. On the other hand, it might also hinder foreign e-commerce-related companies from transferring related technology to their countries, directly or indirectly. Chinese Patent Law clarifies the examination standards for patent applications involving computer programs and admits the possibility of affording patents for computer programs with technical solutions.

CAREC FTAs should incorporate detailed patent rules regarding particular e-commerce technology.

CAREC countries might propose that a patent license incorporates an ancillary know-how or undisclosed information license to facilitate its subsequent practice of the transferred technology. Furthermore, both FTAs and CAREC member states should specify the patentability and disclosure requirements in patent rules regarding e-commerce technology.

Policy recommendations:

1. Considering ASEAN's practice, a pan-CAREC FTA framework may help integrate into and extra bloc economic and technical cooperation. In addition, CAREC countries should keep their national patent rules consistent with the TRIPS Agreement. Patent protection could make the patented e-commerce technology subject to a patent licensing agreement as a direct source of technology transfer. First, the pan-CAREC FTAs should also include a separate chapter to emphasize technology cooperation in addition to IP and e-commerce provisions. For example, Regional Comprehensive Economic Partnership (RCEP) has an individual Chapter for "Economic and Technical Cooperation", promoting capacity building and technical assistance on IP and e-commerce.
2. The pan-CAREC FTAs should prohibit the IP as a barrier to technology by reserving national policy space for promoting e-commerce technology transfer. Like RCEP, the pan-CAREC FTAs might also assume the provision of TRIPS shall prevail in case of a conflict between the provisions of the IP chapter and TRIPS.
3. More significantly, the proposed FTA negotiation shall recognize the obligation of developed countries to provide technical assistance and capacity building in digital trade or e-commerce infrastructure and services. For example, Article 11 of the Agreement on South Asian Free Trade Area provides special and differential treatment for the least developed contracting states.
4. It further requires a critical consideration of the patent protection for e-commerce-related technology and moves it towards a more balanced set of incentives. While excluding the business method, computer program, and algorithm *per se* from patentability, CAREC countries could render e-commerce business method patents in light of novelty, non-obviousness, and practical contributions. Moreover, much research on software is approached based on relatively routine development of existing technologies. Meanwhile, the technical solution is a supplementary standard to assess the patentability of software-related technology in the e-commerce industry.
5. Furthermore, one of the primary objectives of the patent system is to facilitate the dissemination of technological knowledge by encouraging inventors to disclose new technology rather than keeping it secret. CAREC members should incorporate and detail disclosure requirements in FTA negotiation to facilitate access to information stored and classified in patent documentation. In addition, the regional cooperation might also involve a "communication network" between national, regional and international IP offices. It will facilitate access to valuable and extensive technological information in patent documents and constitutes a comprehensive source of available technology.