

Technology Transfer and Regional Trade Agreements

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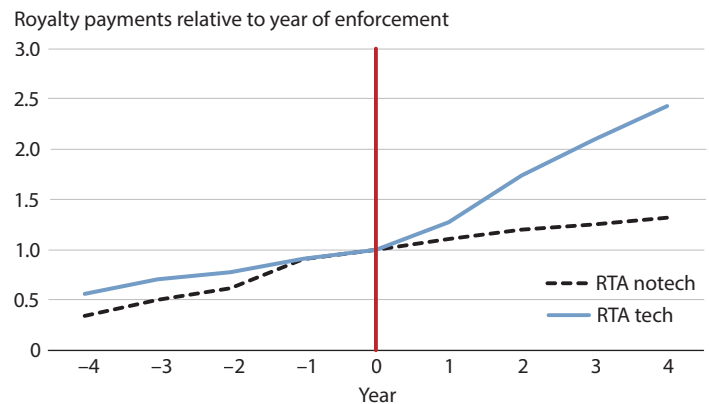
Prior to the formation of the World Trade Organization (WTO) in 1995, regional trade agreements (RTAs) sought mainly to reduce tariffs. Following the WTO's formation, the RTAs evolved to include additional provisions, such as the protection of intellectual property rights (IPR). LaBelle and Santacreu (2021) document this swift evolution in a blog post. Prior to the WTO, 78 percent of RTAs either did not mention IPR or did so very superficially and contained no actual protections. In stark contrast, from 2015 to 2020, 94 percent of RTAs contained strict IPR protections.

The growing importance of intellectual property rights in regional trade agreements has been associated with increased technology transfer.

Protecting IPR is especially important for innovative countries, which have the most to lose from IP theft. Less-innovative countries may also benefit from IPR to the extent that it encourages the transfer of technology from one country to another (technology transfer). Innovation leaders such as the United States have led the effort for stronger IPR provisions in RTAs. A 2019 study by the European Union Intellectual Property Office¹ estimated that IPR infringement totaled 3.3 percent of world trade, or \$509 billion, in 2016. Because developing countries have weaker IPR protection than developed countries, 60 percent of RTAs with IPR provisions between 2015 and 2020 were between developed and developing countries.

Theoretically, these arrangements benefit both developed and developing economies. First, IPR provisions spur innovation. When IPR are enforced adequately, innovators benefit more from their effort, which in turn increases investment in innovation. If IPR are not enforced properly, or innovators do not believe they will be, there is far less incentive to innovate. Second, IPR protection may increase technology transfer. Innovators may only be willing to send their technology abroad when they have assurances that they will receive the full benefit of their innovation. This essay explains the findings of Santacreu (2021a) about the

The Evolution of Technology Transfer Following Regional Trade Agreements



NOTE: RTA notech, RTAs without IP provisions; RTA tech, RTAs with IP provisions.
SOURCE: Santacreu (2021a).

dynamics of technology transfer after RTAs with IPR provisions have entered into force.

Although technology transfer can take many forms, such as through international trade or foreign direct investment, here we focus on international technology licensing.² With technology licensing, the owner of a patent transfers the right to use the protected technology as well as the know-how to produce a good in exchange for a royalty payment.

The figure shows the evolution of royalty payments following the dates of enforcement of RTAs.³ The figure depicts technology licensing between developed and developing countries, before and after signing RTAs. The solid line shows royalty payments—normalized to equal 1 on the date of enforcement—for RTAs that include substantial IPR provisions, while the dashed line shows royalty payments for RTAs that do not. Royalty payments converge, trending upward in the periods before the RTAs are enforced—with or without IP provisions. This finding likely reflects the growing ties between two countries in the lead up to an official RTA. However, once the RTAs are enforced, the slopes of these trends diverge significantly. Countries that include IPR provisions in an RTA see a sharp increase in royalty payments, while others just con-

tinue to see the same trend as before the agreement was enforced.⁴

Conclusion

The nature of RTAs is changing. While in the past they had been an important tool for increasing trade between member countries, now they have become an important tool for protecting IPR. These trade agreements directly benefit innovative countries but also are associated with more technology transfer from developed to developing economies. And technology transfer is an important source of economic growth in developing countries, which tend to be less innovative. While there are some concerns, such as the welfare of developing countries that now must pay higher prices for new technology (see Santacreu, 2021a), the underlying reasons for including IPR provisions in RTAs are clear. ■

Notes

¹ European Union Intellectual Property Office (2019).

² International technology licensing has been discussed in the literature as a more direct form of technology transfer (see Maskus, 2004, and Santacreu, 2021b).

³ The classification of RTAs into those with IPR provisions and those without are from Martinez-Zarzoso and Chelala (2021).

⁴ Note that the increase in royalties may reflect both royalty payments for technology that was previously imitated and those for new technology transferred after IPR protection improved.

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