

Digital Content Exports and Copyright Protection through FTA

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I. Introduction

As digital transformation accelerates, the ways we engage with content are also evolving. For most types of content—such as music, movies, games, and books—we no longer rely on physical formats. Not only consumption patterns, but also the production and distribution processes themselves are becoming increasingly digital. As content becomes digitized, an environment has emerged where it can be easily delivered across borders. Digital content, being an intangible asset, is free from physical constraints and easily replicable, making it readily distributable around the world. Consequently, trade in digital content is playing an increasingly important role in the global economy, with various forms of creative works and information being supplied transnationally. The total size of digital trade, including digital content, amounted to between USD 800 billion and USD 1.5 trillion in 2019, representing 3.5–6.0% of global trade. It is projected that up to 70% of global trade flows could be influenced by digitalization in the future.

The expansion of digital content trade has brought with it growing concerns over copyright infringement. Due to the inherent characteristics of digital content, unauthorized copying and distribution are relatively easy, and preventing further infringement becomes difficult once it begins. Illegal copying and unauthorized dissemination not only violate the rights of creators but also negatively impact the growth of the content industry. In particular, unauthorized distribution via illegal streaming, file-sharing networks, and various social media platforms undermines the economic value of digital content, discouraging investment in innovation and making it harder for new players to enter the market. Major countries such as the United States regard the unauthorized use and distribution of digital content as a key barrier to digital trade. For example, the U.S. Trade Representative (USTR) identifies intellectual property (IP) infringement as one of the major trade barriers in its annual National

Trade Estimate Report on Foreign Trade Barriers. The report points out that when a country's legal framework provides insufficient protection of IP rights, this can lead to widespread copyright infringement of digital content, thereby limiting the profitability and commercial viability of digital content providers.

Against this backdrop, the protection of intellectual property rights (IPRs) in digital content trade has emerged as a critical issue not only in economic terms but also in social and cultural dimensions. Protecting IPRs is essential for ensuring fair compensation to creators and content producers, thereby fostering creative activity. It also plays a vital role in preserving and promoting cultural diversity and is regarded as a key factor for the sustainable growth of the content industry. In response, many countries are stepping up legal and institutional reforms to strengthen IPR protection in digital content. However, differences in the content and level of national laws and regulations continue to undermine consistent global protection of IPRs in digital content trade. In this context, there is a growing need not only for the improvement of national legal systems but also for the international dissemination and harmonization of IPR protection standards.

II. The Expansion of IPR Protection and Digital Content Trade

From the perspective of promoting trade, it is essential that both exporting and importing countries strengthen intellectual property rights (IPR) protection. International efforts to

strengthen IPR protection primarily take place through multilateral international treaties and agreements, as well as bilateral trade agreements. The World Intellectual Property Organization (WIPO) has launched various initiatives and established treaties such as the WIPO Copyright Treaty (WCT) and WIPO Performances and Phonograms Treaty (WPPT) to protect digital content. It also began addressing copyright issues in the digital environment in earnest through the Standing Committee on Copyright and Related Rights in 2015. However, significant progress has yet to be made. The WTO TRIPS Agreement, a key international agreement for the protection of IPR, provides fundamental principles that can be applied to digital content, but it does not directly address copyright protection in digital and online environments. This has increased the need to address the protection of IPR related to digital content and electronic commerce through bilateral agreements or other alternative frameworks.

To trace the evolution of intellectual property rights (IPR) provisions in bilateral agreements, a survey was conducted on the level of IPR protection related to digital content in FTAs around the world. The IPR provisions concerning digital content in FTAs were examined in three categories: i) compliance with the WTO TRIPS Agreement and accession to or compliance with international IPR treaties administered by WIPO, ii) provisions related to copyright and related rights, and iii) enforcement provisions. FTAs that include IPR provi-

sions related to digital content began to increase in the 2000s, and since the mid-2000s, FTAs that include such provisions have outnumbered those that do not. Before 2000, the number of FTAs containing digital content-related provisions was in the single digits, accounting for only about 10% of all FTAs in force at the time. However, entering the 2000s, more FTAs began to focus on IPR issues concerning digital content, and the proportion of FTAs in force that include such provisions has steadily increased over time.

Based on the findings of the aforementioned survey, an empirical analysis was conducted to examine the impact of enhanced intellectual property rights (IPR) protection through FTAs on digital content trade. Among the global FTAs previously analyzed, those containing TRIPS-plus elements related to digital content were labeled as intellectual property agreements (IPAs). The analysis investigated how the conclusion of an IPA affects digital content trade. The study distinguished between countries that had concluded an IPA and those that had not during the period from 2005 to 2019, and analyzed trade differences between the two groups to identify the trade effects of IPAs. In other words, the basic framework of the analysis is centered on the conclusion of an IPA. Countries that signed at least one IPA during the analysis period were designated as the treatment group, while those that did not were designated as the control group. The analysis then compares the global trade performance of digital content-related industries between these two groups. The analysis focused

on industries closely related to digital content, namely telecommunications, computer and information services, royalties and license fees for intellectual property, and personal, cultural, and recreational services.

The model used to analyze the impact of IPA conclusion on a signatory country's global trade is expressed by the following equation:

$$\begin{aligned} \log(TR_{ist}) = & \alpha_1 \log(GDP_{it}) + \beta_1 IPA_{it} \\ & + \beta_2 TRIPS_{it} + \alpha_{gst} + \alpha_{it} \\ & + \varepsilon_{ist} \end{aligned}$$

In this equation, i denotes the exporting or importing country, s refers to the industry, and t represents the year. The analysis covers 153 countries, excluding least-developed countries, over a 15-year period from 2005 to 2019. TR_{ist} indicates the total trade value (exports or imports) of country i in industry s during year t . To control for the correlation between trade and economic size, the model includes GDP_{it} , the GDP of country i in year t . The main variable of interest in this analysis, IPA_{it} , is a binary variable that equals 1 for all years following the entry into force of the first IPA concluded by country i between 2005 and 2019, and 0 otherwise. For example, although Korea concluded multiple IPAs during this period, the first one to enter into force was the Korea-EU FTA. Therefore, the IPA variable for Korea, IPA_{KORt} , takes the value of 0 prior to 2011 and 1 from 2011 onwards. Since the 2000s, countries have increasingly adopted IPR provisions in FTAs that go beyond the TRIPS Agreement, thereby strengthening

their intellectual property protection regimes. Accordingly, this analysis controls for each country's implementation status of the TRIPS Agreement. Additionally, α_{gst} , α_{it} , and ε_{ist} represent fixed effects for country income group–industry–year, country-specific time fixed effects, and the error term, respectively.

According to previous studies, the trade effects of strengthened intellectual property rights (IPR) protection may vary depending on a country's income level. Therefore, this analysis categorizes countries into high-income, upper-middle-income, and lower-middle-income groups and conducts separate analyses for each group. The classification follows the World Bank's income level criteria. Taking into account the income level of each country,

the trade effects of enhanced IPR protection resulting from IPA conclusion are analyzed using the following equation.

$$\begin{aligned} \log(TR_{ist}) = & \alpha_1 \log(GDP_{it}) \\ & + \sum_g \beta_{1g} Group_{ig} \times IPA_{it} \\ & + \sum_g \beta_{2g} Group_{ig} \times TRIPS_{it} \\ & + \alpha_{gst} + \alpha_{it} + \varepsilon_{ist} \end{aligned}$$

$Group_{ig}$ represents country groups classified by income level—high-income countries, upper-middle-income countries, and lower-middle-income countries. The results of the analysis based on the two equations above are summarized separately for import effects and export effects as follows.

Table 1. Effect of IPA on Trade

	Import			Export		
	Royalties and license fees for IPR	Telecommunications, computer and information services	Personal, cultural, and recreational services	Royalties and license fees for IPR	Telecommunications, computer and information services	Personal, cultural, and recreational services
log(GDP)	1.538*** (0.461)	1.275*** (0.235)	1.928*** (0.623)	1.004 (0.659)	0.970*** (0.368)	1.863*** (0.689)
HI x IPA	-0.389*** (0.141)	0.158 (0.158)	0.134 (0.259)	-0.387 (0.431)	0.441*** (0.182)	-0.163 (0.315)
UMI x IPA	0.041 (0.159)	-0.020 (0.110)	0.243 (0.257)	-0.544* (0.280)	0.021 (0.143)	0.631* (0.332)
LMI x IPA	0.119 (0.321)	0.603*** (0.213)	0.579 (0.593)	0.258 (0.323)	-0.417* (0.243)	0.155 (0.371)
HI x TRIPS	0.048 (0.131)	-0.265 (0.260)	-0.026 (0.105)	0.532 (0.428)	0.241 (0.229)	-0.215 (0.143)
UMI x TRIPS	-0.217 (0.380)	0.004 (0.173)	0.704* (0.414)	0.145 (0.545)	0.101 (0.393)	0.049 (0.224)
LMI x TRIPS	0.273 (0.895)	-0.135 (0.415)	-1.810*** (0.432)	-0.208 (0.729)	-0.421 (0.324)	0.184 (0.387)
Number of observations	1,798	2,057	1,684	1,480	2,021	1,547
Group-industry-year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effect	Yes	Yes	Yes	Yes	Yes	Yes

Source: By author

The relative increase in imports of telecommunications, computer, and information services following the conclusion of IPAs was largely driven by lower-middle-income countries. Considering that the relative increase in exports in this sector was significant among high-income countries, it is likely that the conclusion of IPAs has led to more active cross-border supply from high-income to lower-income countries in telecommunications, computer, and information services. At the same time, however, the data indicate that exports from lower-middle-income countries in this sector have relatively declined following IPA conclusion. In the personal, cultural, and recreational services sector, both imports and exports relatively increased after IPA conclusion. However, when analyzed by income group, no particular group showed a statistically significant increase in imports. All income groups showed slightly positive coefficients, but they were not statistically significant. In terms of exports, a relative increase was observed primarily among upper-middle-income countries. Overall, both the telecommunications, computer, and information services sector and the personal, cultural, and recreational services sector exhibited some relative trade increases following IPA conclusion. However, the income groups in which these increases were significant differed by sector. In particular, for telecommunications, computer, and information services, the results aligned clearly with intuitive and theoretical expectations regarding changes in cross-border supply driven

by enhanced intellectual property rights protection.

III. Policy Implications Regarding IPR Protection of Digital Contents

Korea has continuously made efforts to secure overseas markets and enhance industrial competitiveness. As a result, it has concluded 21 FTAs with 59 countries, opening markets and committing to the improvement of intellectual property rights (IPR) protection systems with most of its major trading partners, including the United States, China, and the European Union. In addition, the government is actively pursuing trade agreements with around 10 more countries, including those in Africa where FTAs have yet to be established, thereby continuing its FTA policy. The preceding analysis confirms that the growing market for digital content and trade volume are accompanied by the international spread of IPR protection for digital content, and that one of the main channels driving this spread is FTAs. Strong IPR provisions for digital content in FTAs are no longer limited to agreements among high-income countries. FTAs with middle- and lower-income countries are also increasingly including more robust IPR protection measures. Moreover, the strengthening of IPR protection through FTAs has been shown to have a positive effect on digital content trade. Given the rapid expansion of Korea's digital content market and trade, such

trade policy tools—including FTAs—can play a valuable role in sustaining this upward trend.

Countries with which Korea is currently pursuing Economic Partnership Agreements (EPAs) can be broadly categorized into three groups based on the level of intellectual property rights (IPR) protection in their existing FTAs and their current domestic IPR legal frameworks. The first group includes countries such as the Dominican Republic and Morocco, which have already concluded FTAs containing relatively high-level IPR protection provisions and whose domestic legal systems also provide comparatively strong protection for IPR. The second group includes countries like Thailand, which have signed FTAs that broadly cover various aspects of IPR protection, but whose domestic legal frameworks remain insufficient for effectively protecting digital content copyright. The third group consists of countries such as Pakistan, Egypt, and Kenya, which have not previously concluded FTAs that contain substantial IPR protection provisions and whose domestic legal systems are currently inadequate for the practical enforcement of digital content copyright. This classification allows Korea to calibrate the direction of its FTA policies with each partner and assess the appropriate level of IPR protection that should be pursued in the EPA negotiations. Based on the earlier analysis, promoting digital content copyright protection—regardless of the partner country’s classification—has a positive effect on the trade of digital content-related services. Therefore, it would be desirable to include high-standard

IPR protection provisions in EPAs. However, as noted above, it would be more realistic to adopt differentiated approaches that take into account each EPA partner’s policy direction in existing FTAs and their current level of IPR protection.

For countries such as the Dominican Republic and Morocco, which have experience concluding FTAs with high-standard intellectual property rights (IPR) provisions and maintain relatively well-developed IPR protection systems, ensuring that copyright laws are effectively enforced is a major challenge. In reality, despite the formal strength of their legal frameworks, these countries often exhibit weak enforcement, resulting in widespread online piracy and the use of unlicensed software. For such countries, it is necessary to include provisions specifically addressing IPR enforcement—particularly in the digital environment. In this regard, recent enforcement provisions in the United Kingdom’s FTAs may serve as useful references. The UK inserted a dedicated “Enforcement in the Digital Environment” sub-section in the IPR chapters of its FTAs with Australia and New Zealand, both concluded in 2023. One of the most noteworthy elements in these sub-sections is the inclusion of a provision requiring the blocking of access to websites that infringe copyright or other IPRs. For example, Article 15.89 of the UK–Australia FTA authorizes each Party’s regulatory authorities to order Internet Service Providers (ISPs) to block access to websites that provide services infringing copyright. Ar-

article 15.90 requires each Party's domain registration authority to take action to temporarily suspend country code top-level domains (ccTLDs) used for IPR infringement. Article 15.91 allows authorities to order ISPs to disclose identifying information about infringers when a rights holder reasonably alleges a rights violation. With the introduction of such provisions in the UK–Australia and UK–New Zealand FTAs, the possibility has opened for similar clauses to be included in future FTAs. In Korea's case, even when negotiating with countries that have relatively robust IPR provisions but suffer from widespread online piracy, it would be prudent to consider measures that can effectively protect copyrights—such as the blocking of streaming and file-sharing websites that play a major role in spreading illegal content online.

For countries like Thailand—which have concluded FTAs that broadly include provisions for IPR protection, but whose domestic legal systems remain inadequate for the effective protection of digital content copyright—it may be appropriate to consider adding protection provisions that were not included in their existing FTAs. Many countries in this group have not yet acceded to the WIPO Internet Treaties. Therefore, requiring accession to the WIPO Copyright Treaty (WCT) and WIPO Performances and Phonograms Treaty (WPPT) should be a priority. In the case of Thailand, while the ASEAN–Australia–New Zealand FTA includes provisions related to the WIPO Internet Treaties, it does not obligate acces-

sion or compliance. Instead, it merely stipulates that member countries should support accession if a Party expresses interest. Thailand has recently acceded to the WCT but has not yet joined the WPPT. As such, it may be helpful to explicitly recommend that Thailand move toward WPPT accession.

For countries that are not yet parties to the WIPO Internet Treaties, the primary goal should be to encourage accession. However, if accession and domestic legal reform are expected to take a significant amount of time, it may be practical to directly incorporate selected provisions of the WCT or WPPT into the IPR chapter of the EPA.

For countries such as Pakistan, Egypt, and Kenya—which have not yet concluded any FTAs containing a meaningful level of intellectual property rights (IPR) protection, and whose domestic legal systems are not well-equipped to effectively protect digital content copyright—it would be unrealistic to aim for high-standard IPR provisions in the short term. In EPAs with Korea, including an IPR chapter may prove difficult, and even if one is included, it is unlikely to contain strong protection measures. Therefore, it is necessary to help these countries build and grow their content markets so that the need for IPR protection can gradually emerge and expand from within. As part of this effort, incorporating provisions such as joint production agreements in the content sector or protocols on cultural cooperation into the EPA could greatly

assist in developing the foundation of the content industry in the partner country—through the acquisition of know-how, capacity-building, and human resource development via international co-productions. In addition, Korea's own experience in fostering its content industry through enhanced IPR protection can be shared with partner countries through initiatives like the Knowledge Sharing Program (KSP), thereby increasing their interest and engagement in the EPA. Furthermore, by

drawing on Korea's past IPR cooperation experiences with countries like Saudi Arabia and the UAE—led by the Ministry of Culture, Sports and Tourism and the Korean Intellectual Property Office—it would be possible to promote IPR cooperation with EPA partner countries. Such efforts would not only reinforce the strategic goals of the EPA but also contribute to the long-term expansion of global markets for K-content. **KIEP**