

The Economic Contribution of Copyright-Based Industries in South Korea: Output, Value Added, Employment, and Sectoral Change

La contribution économique des industries fondées sur le droit d'auteur en Corée du Sud : production, valeur ajoutée, emploi et évolution sectorielle

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Abstract:

This article analyzes the economic contribution of copyright-based industries in South Korea using the quantitative evidence contained in the supplied study. The analysis focuses on output, value added, employment, macroeconomic shares, and sectoral changes between 2013 and 2017. In 2017, the copyright-based industries recorded nominal output of KRW 320,322,724 million, nominal value added of KRW 150,739,541 million, and employment of 1,751,385 persons in the source dataset. The core copyright industries accounted for 52% of total copyright-based output, 59% of value added, and 61% of employment. Within the core sector, software and databases represented the largest output and value-added component, while music, theater, and opera recorded particularly strong employment growth. The findings indicate a heterogeneous structure in which digital and software-related activities occupy a central position. The results are descriptive and should not be interpreted as proof that copyright protection alone caused Korea's economic performance.

Keywords: copyright industries; South Korea; economic contribution; value added; employment; software; creative economy.

Résumé:

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Cet article analyse la contribution économique des industries fondées sur le droit d'auteur en Corée du Sud à partir des données quantitatives contenues dans l'étude fournie. L'analyse porte sur la production, la valeur ajoutée, l'emploi, les parts macroéconomiques ainsi que les évolutions sectorielles entre 2013 et 2017. En 2017, les industries fondées sur le droit d'auteur ont enregistré, dans l'ensemble de données de la source, une production nominale de 320 322 724 millions de KRW, une valeur ajoutée nominale de 150 739 541 millions de KRW et un emploi de 1 751 385 personnes. Les industries relevant du noyau central du droit d'auteur représentaient 52 % de la production totale des industries fondées sur le droit d'auteur, 59 % de leur valeur ajoutée et 61 % de leur emploi.

Au sein du secteur central, les logiciels et les bases de données constituaient la composante la plus importante en termes de production et de valeur ajoutée, tandis que la musique, le théâtre et l'opéra enregistraient une croissance particulièrement forte de l'emploi. Les résultats mettent en évidence une structure hétérogène dans laquelle les activités numériques et liées aux logiciels occupent une position centrale. Ces résultats sont de nature descriptive et ne doivent pas être interprétés comme démontrant que la protection du droit d'auteur, à elle seule, serait à l'origine de la performance économique de la Corée du Sud.

Mots-clés : industries du droit d'auteur ; Corée du Sud ; contribution économique ; valeur ajoutée ; emploi ; logiciels ; économie créative.

1. Introduction

The transition from a resource-dependent economy toward a knowledge-based economy is a cumulative process involving institutions, human capital, productive capabilities, technological learning, innovation, and the development of intangible assets. This perspective is particularly relevant to Algeria, where hydrocarbons have historically played a dominant role in economic activity, while knowledge-intensive and copyright-based activities remain comparatively limited. In this context, copyright should be viewed not only as a field of private law but also as an institutional component of economic diversification and structural transformation. Its economic relevance has increased with the growing importance of intangible assets, including software, digital content, audiovisual works, databases, games, designs, and other creative outputs. However, copyright protection alone cannot generate economic development; its contribution depends on institutional quality, technological capabilities, human capital, access to finance, and market conditions.

The relationship between intellectual property and economic development is therefore shaped by broader structural conditions, including the ability of domestic firms to absorb and generate innovation (Gould & Gruben, 1996, pp. 323–350). South Korea provides a relevant comparative case because its development involved successive stages of human-capital formation, export-oriented industrialization, technology transfer, technological learning, industrial upgrading, and expansion into knowledge-intensive activities. Copyright protection evolved alongside this transformation and gained increasing significance with the expansion of technology, cultural production, digital industries, and intangible assets (Lee & Kim, 2010, pp. 115–138). This article consequently does not present South Korea as a model to be directly replicated, but examines the institutional and economic mechanisms that may be relevant to Algeria, with particular attention to legal evolution, enforcement, human capital, technology transfer, innovation, market access, digital piracy, institutional coordination, and statistical measurement.

Problem Statement:

Which institutional, legal, technological, and economic elements of South Korea's experience with copyright protection and copyright-based industries are potentially relevant to Algeria's transition toward a more diversified knowledge-based economy, and under what conditions could they be adapted to the Algerian context?

This central question is further addressed through the following sub-questions:

1. How did copyright protection evolve within South Korea's broader process of industrial, technological, and knowledge-based transformation?
2. What institutional and economic conditions contributed to the development of copyright-based and knowledge-intensive activities in South Korea?
3. What are the principal institutional, technological, human-capital, and market conditions shaping the development of copyright-based activities in Algeria?
4. Which aspects of the Korean experience may be transferable to Algeria, and which require adaptation to Algeria's specific institutional and economic context?
5. What policy and measurement mechanisms could help Algeria assess and strengthen the economic contribution of copyright-based industries?

Objectives of the Study:

The article pursues four interconnected objectives. First, it seeks to situate copyright protection within South Korea's broader trajectory of economic, technological, and institutional transformation rather than examining it as an isolated legal mechanism. Second, it examines the Algerian economic and institutional context, with particular attention to the conditions affecting the emergence and development of knowledge-intensive and copyright-based activities. Third, it compares the mechanisms through which copyright institutions, human capital, technology transfer, innovation, market access, and enforcement interacted within the Korean experience and considers their potential relevance to Algeria. Fourth, it aims to develop an integrated policy and measurement framework that can assist Algeria in strengthening copyright-based activities as one component of a broader strategy for economic diversification and the development of a knowledge-based economy.

Methodology:

The study adopts a qualitative comparative and institutional approach based on the supplied study and its cited literature. South Korea is examined as a comparative case, while Algeria constitutes the principal context for assessing the relevance and adaptability of the identified mechanisms. The analysis is descriptive, interpretive, and policy-oriented rather than causal. It does not attribute South Korea's economic transformation to copyright reforms alone or estimate causal effects of copyright enforcement on Algerian investment or innovation. Where reliable and comparable quantitative evidence is unavailable, the study avoids unsupported estimates and identifies the need for further empirical measurement of output, value added, employment, trade, investment, and innovation in copyright-based industries.

2. Conceptual Framework

The economic significance of copyright has expanded considerably with the transition from industrial production systems toward increasingly knowledge- and information-intensive economies. In traditional approaches, copyright was primarily understood as a legal mechanism designed to protect authors and other right holders against unauthorized reproduction, distribution, communication, or exploitation of protected works. However, the increasing commercialization of digital content, software, databases, audiovisual productions, music, publishing, advertising, and other creative outputs has progressively transformed copyright into an institution with broader economic implications. The contemporary relevance of copyright therefore extends beyond the protection of individual creative works to include the productive, technological, organizational, and commercial ecosystems surrounding those works.

From an economic perspective, copyright creates a legal framework governing the use and commercialization of intangible outputs. Creative works possess particular economic characteristics because they can often be reproduced and distributed at relatively low marginal cost, while their creation may require substantial investments in skills, time, technology, infrastructure, and organizational

resources. In the absence of appropriate institutional arrangements, unauthorized reproduction and distribution may reduce the expected returns associated with creative investment. Copyright protection can consequently provide a framework within which creators and firms can appropriate at least part of the economic value generated by their intellectual and creative efforts (Towse, 1999).

This economic rationale does not imply, however, that stronger copyright protection automatically produces higher economic growth. The relationship between intellectual property institutions and economic performance is conditional and may vary according to a country's level of development, technological capabilities, market structure, institutional quality, and ability to absorb external knowledge. Empirical studies have therefore emphasized that the effects of intellectual property protection are neither uniform nor independent of the broader economic environment (Gould & Gruben, 1996; Falvey et al., 2006). Copyright should consequently be analyzed as one component of a broader institutional system rather than as an autonomous explanation of economic performance.

2.1. The WIPO Classification of Copyright-Based Industries

A particularly useful framework for measuring the economic contribution of copyright is provided by the World Intellectual Property Organization (WIPO). Its methodology distinguishes between four broad categories: core copyright industries, interdependent copyright industries, partial copyright industries, and non-dedicated support industries. This classification is important because the economic effects of copyright extend beyond organizations directly producing protected works.

According to WIPO, core copyright industries consist of activities directly engaged in the creation, production, performance, communication, distribution, or sale of protected works (WIPO, 2006, p. 29). These activities include publishing and literature, music, theatre and opera, film and video, radio and television, photography, software and databases, visual and graphic arts, advertising services, and copyright-related collective organizations. The core category therefore represents the most direct relationship between copyright and economic activity.

Interdependent copyright industries constitute a second category. These industries produce goods and services that are directly connected to the creation, distribution, or consumption of copyrighted works. Their economic activity may depend significantly on the existence of copyright-based products, even though their principal outputs are not necessarily protected works themselves. This category demonstrates why the economic footprint of copyright cannot be measured exclusively by examining authors, artists, publishers, or software developers.

Partial copyright industries form a third category. Copyright contributes significantly to some activities within these sectors, but it does not necessarily constitute the principal basis of all production. Their inclusion is important because many modern industries combine protected and non-protected elements. The economic contribution associated with copyright is therefore embedded within wider production processes.

Finally, non-dedicated support industries provide services that facilitate the production, distribution, communication, or consumption of copyrighted goods and services. These activities may include sectors such as transportation, telecommunications, wholesale and retail, and other supporting services. Their inclusion reflects the indirect economic linkages generated by copyright-based production.

The WIPO framework therefore allows the economic contribution of copyright to be examined at the level of an interconnected production ecosystem rather than at the level of individual creative activities. It also facilitates international comparison, provided that differences in national classification systems, data availability, and statistical methodologies are taken into consideration.

2.2. Copyright, Innovation, and Technological Change

The relationship between intellectual property and innovation has been extensively discussed in the economic literature. Intellectual property rights can potentially affect innovation by creating mechanisms through which innovators and creators obtain economic returns from their investments. At the same time, excessive protection or inappropriate enforcement may create market restrictions or increase the cost of accessing existing knowledge. The economic effect therefore depends on the balance between incentives for creation and the diffusion and subsequent use of knowledge.

Gould and Gruben (Gould & Gruben, 1996, pp. 323–350) emphasize the relationship between intellectual property protection and economic growth while recognizing that the effects may differ according to institutional and economic conditions. Similarly, Falvey et al. (2006) demonstrate that the relationship between intellectual property protection and economic development varies across countries and levels of development. These findings are particularly relevant when interpreting the Korean experience. The Korean economy did not transform simply because intellectual property rights existed. Rather, copyright and other intellectual property institutions developed alongside education, technological learning, industrial policy, export expansion, infrastructure development, and firm-level capabilities.

Copyright may therefore contribute to innovation through several mechanisms. First, it can provide creators and firms with greater certainty concerning the ownership and commercial exploitation of intangible outputs. Second, it may facilitate licensing and contractual arrangements. Third, it can support investment in creative industries by establishing recognizable rights over digital and non-digital products. Fourth, it may contribute to the development of specialized markets for content, software, entertainment, publishing, and other copyright-intensive products.

These potential effects must nevertheless be interpreted cautiously. Copyright protection cannot compensate for inadequate infrastructure, limited skills, weak access to finance, insufficient market demand, or low technological capability. A legal framework may establish rights, but the capacity to transform those rights into productive economic activity depends on complementary institutions and capabilities.

2.3. Copyright-Based Industries as an Economic Ecosystem

The concept of copyright-based industries is particularly useful because it shifts attention from individual works toward economic ecosystems. A successful software industry, for example, requires not only programmers and copyright protection but also universities, digital infrastructure, investment, venture financing, skilled labor, distribution platforms, domestic and international markets, cybersecurity, and effective enforcement mechanisms. Similarly, the audiovisual sector depends on creative talent, production facilities, financing, distribution networks, digital platforms, marketing, and international market access.

Consequently, copyright-based industries should be understood as part of a wider knowledge-production and commercialization ecosystem. Within this ecosystem, legal institutions interact with economic incentives, technological capabilities, education, entrepreneurship, investment, and market structures.

This conceptualization is particularly relevant to Algeria because the development of copyright-based activities cannot be separated from the broader objective of economic diversification. If Algeria seeks to reduce its structural dependence on hydrocarbons, it must develop productive activities capable of generating value from knowledge, creativity, technology, and human capital. Copyright-based industries constitute one possible component of such diversification, although their contribution must be assessed empirically rather than assumed.

3. Aggregate Economic Contribution in 2017

The 2017 data provide an important snapshot of the scale and structure of copyright-based economic activity in South Korea. According to the supplied dataset, total nominal output generated by copyright-

based industries reached **KRW 320,322,724 million**, while total nominal value added amounted to **KRW 150,739,541 million**. Total employment reached **1,751,385 persons**.

These figures demonstrate that copyright-based activities constituted a substantial economic complex involving production, value creation, and employment. More importantly, the distribution among the four WIPO categories demonstrates that the economic contribution of copyright was not evenly distributed across sectors.

The core copyright industries generated **KRW 166,773,307 million** in output, equivalent to **52.06%** of total copyright-based output. Interdependent copyright industries generated **KRW 110,633,397 million**, corresponding to **34.54%**. Partial copyright industries contributed **KRW 18,866,097 million**, or **5.89%**, while copyright-support industries generated **KRW 24,049,923 million**, representing approximately **7.50%**.

Table 1. Structure of Copyright-Based Industries in South Korea, 2017

Industry category	Output (KRW million)	Share of total output
Core copyright industries	166,773,307	52.06%
Interdependent copyright industries	110,633,397	34.54%
Partial copyright industries	18,866,097	5.89%
Copyright-support industries	24,049,923	7.50%
Total	320,322,724	100%

Source: Author's compilation based on the supplied 2017 copyright-industry dataset and WIPO classification.

The distribution reveals two important characteristics. First, core copyright industries constituted the largest component of total output. This indicates that activities directly connected to the creation, production, distribution, and commercialization of protected works represented more than half of total copyright-based output. Second, the substantial share of interdependent industries demonstrates the importance of indirect linkages. Approximately one-third of total output originated in activities connected to copyright production and consumption but not necessarily classified as core creative activities.

This distinction is analytically significant. If copyright-based activity were measured exclusively through core industries, a substantial part of its broader economic footprint would remain invisible. The Korean data therefore support the use of an ecosystem-based approach to measuring the economic contribution of copyright.

3.1. Value Added

The value-added distribution provides another perspective on the structure of the sector. Core copyright activities generated **KRW 88,416,174 million**, accounting for approximately **59%** of total copyright-based value added. Interdependent copyright industries represented **27%**, partial copyright industries **7%**, and supporting industries **9%**.

The higher share of core industries in value added compared with their 52.06% share of output suggests that core activities generated a relatively substantial proportion of the value created within the copyright-based economy. This may reflect the knowledge-intensive nature of several core activities, particularly software, databases, creative content, and other sectors where intellectual and organizational inputs constitute a significant component of production.

Value added is particularly useful because output alone does not distinguish between gross production and the value generated through the production process. Two sectors may generate similar levels of gross

output while contributing different amounts of value added. Consequently, the Korean case demonstrates the importance of combining output and value-added indicators when assessing copyright-based economic activity.

3.2. Employment

Employment presents a third dimension of the economic contribution. Core copyright activities accounted for approximately **61%** of copyright-based employment, while interdependent industries represented **20%**, partial copyright industries **9%**, and supporting industries **11%**.

The concentration of employment in core industries is consistent with their central position in the copyright ecosystem. However, the employment distribution differs from the output and value-added distributions. This divergence demonstrates that the economic structure of copyright-based industries cannot be adequately captured by a single indicator.

A sector may generate high output with relatively fewer employees because of technological intensity and capital investment, whereas another sector may employ large numbers of workers while generating lower output per worker. Such differences become particularly relevant when examining software and databases alongside cultural and performing-arts activities.

3.3. Multidimensional Measurement

The Korean data consequently indicate that copyright-based industries should be evaluated using a multidimensional framework incorporating at least output, value added, and employment. These indicators measure different dimensions of economic contribution and should not be treated as interchangeable.

Output captures the scale of production. Value added captures the contribution of the sector to economic value creation. Employment captures the sector's contribution to labor-market activity. Together, these indicators provide a more comprehensive picture of the economic significance of copyright-based industries.

This multidimensional approach is also relevant for Algeria. If Algeria were to develop a national statistical framework for copyright-based industries, relying exclusively on the number of registered works, copyright registrations, or enforcement cases would provide an incomplete picture. Economic indicators should be integrated with legal and institutional indicators to determine the actual contribution of copyright-intensive activities to diversification.

4. Macroeconomic Trend, 2013–2017

The 2013–2017 period provides a longer-term perspective on the position of copyright-based industries within the Korean economy. According to the supplied source, the entire copyright industry accounted for **8.44% of GDP in 2013**, increasing to **8.67% in 2014**, before declining to **8.09% in 2015**, increasing again to **8.30% in 2016**, and reaching **8.21% in 2017**.

The figures demonstrate relative stability over the five-year period. Rather than exhibiting a continuous upward or downward trajectory, the overall contribution fluctuated within a relatively narrow range. This suggests that copyright-based industries maintained a substantial and persistent position within the Korean economy during the period under consideration.

By contrast, the core copyright industry's share of GDP increased from **3.71% in 2013 to 4.82% in 2017**. This increase is important because it indicates that the direct component of copyright-based production expanded its relative contribution during the period even though the overall copyright industry's share remained comparatively stable.

The difference between the two indicators may reflect structural changes within the broader copyright ecosystem. Some interdependent, partial, or supporting activities may have experienced slower growth or changes in their relative contribution, while core copyright activities expanded.

4.1. Employment Contribution

Employment followed a comparatively stable but gradually increasing trajectory. The entire copyright-based industry accounted for **6.29% of national employment in 2013, 6.15% in 2014, 6.45% in 2015, 6.26% in 2016, and 6.55% in 2017.**

The core copyright industry's employment share increased from **3.25% in 2013 to 3.97% in 2017.** Although the annual movements were not linear, the overall direction indicates an increase in the employment significance of core copyright activities.

The coexistence of relatively stable total copyright-industry employment shares and an increasing core-industry share suggests that structural reallocation may have occurred within the copyright ecosystem. This interpretation is consistent with the sectoral evidence presented below, particularly the expansion of software and databases and other creative activities.

4.2. Value Added and Employment Dynamics

The source's core-industry series indicates that real value added increased by approximately **21% between 2013 and 2017**, whereas employment increased by approximately **7%.**

One possible interpretation is an increase in labor productivity or technological intensity within certain core copyright activities. This interpretation is consistent with the broader economic literature linking accumulated knowledge and technological assets to productivity performance at the industry level (Lach, 1995. P. 101–108). However, this should be treated as an analytical interpretation rather than definitive evidence of a specific causal mechanism.

The supplied data do not provide sufficient evidence to attribute the divergence to copyright protection alone. Changes in technology, organizational efficiency, market expansion, investment, workforce skills, digitalization, and sectoral composition may all have contributed.

The relationship between value added and employment also illustrates why copyright-based industries should be examined within the context of technological transformation. Digital industries can generate substantial economic value without proportional increases in employment because software, databases, digital platforms, and other intangible-intensive activities may benefit from scalability and relatively low marginal distribution costs.

Table 2. Selected Macroeconomic Indicators of Copyright-Based Industries, 2013–2017

Indicator	2013	2014	2015	2016	2017
Total copyright industry – GDP share	8.44%	8.67%	8.09%	8.30%	8.21%
Core copyright industry – GDP share	3.71%	—	—	—	4.82%
Total copyright industry – employment share	6.29%	6.15%	6.45%	6.26%	6.55%
Core copyright industry – employment share	3.25%	—	—	—	3.97%

Source: Author's compilation based on the supplied copyright-industry dataset for South Korea, 2013–2017.

The data indicate a relatively stable macroeconomic contribution of the overall copyright industry, accompanied by an increase in the relative importance of core copyright activities. The comparison between GDP and employment shares also suggests that copyright-based activities constitute an important component of both economic production and labor-market activity. However, the data are descriptive and do not establish a causal relationship between copyright protection and macroeconomic performance.

5. Sectoral Structure of Core Copyright Industries

The composition of core copyright industries provides further insight into the transformation of the Korean creative economy. The core sector comprises publishing and literature; music, theatre and opera; film and video; radio and television; photography; software and databases; visual and graphic arts; advertising services; and copyright associations.

The distribution of output demonstrates a particularly strong role for software and databases. In 2017, this sector accounted for **48.48% of core copyright output** and **62.7% of core copyright value added** according to the supplied dataset. These figures indicate the increasing economic weight of digital and knowledge-intensive activities within the core copyright sector.

Radio and television represented **14.58% of core copyright output** and **12.1% of value added**. Publishing and literature accounted for **11.86% of output**, while music, theatre and opera represented **8.40%**. Advertising services accounted for **7.22% of output**.

The distribution suggests that the economic structure of the copyright sector had moved considerably beyond traditional publishing and cultural production. Software and databases had become the dominant component of core copyright output and value added.

5.1. Software and Databases

The prominence of software and databases is particularly significant from the perspective of knowledge-based economic transformation. Software is simultaneously a creative product, a technological input, and an enabling infrastructure for other sectors. Its economic significance therefore extends beyond the boundaries of the copyright industry itself.

The high share of software and databases may reflect the broader technological transformation of the Korean economy. As firms increasingly adopted digital technologies, demand for software, databases, digital services, and related intellectual assets increased. The sector's position also illustrates how copyright protection can intersect with technological capability and industrial upgrading.

Nevertheless, the data should not be interpreted as evidence that copyright protection independently generated the expansion of software and databases. Korea's technological infrastructure, education system, industrial capabilities, research capacity, export orientation, and firm-level investment also played important roles in creating the environment in which software-related activities could expand.

5.2. Traditional and Cultural Activities

Traditional cultural activities remained economically significant despite the increasing dominance of software. Music, theatre and opera accounted for **8.40% of core copyright output**, while publishing and literature represented **11.86%**.

These sectors are important because they demonstrate that digital transformation does not eliminate traditional creative activities. Instead, it can alter their production, distribution, and commercialization models. Publishing, music, and performing arts can increasingly rely on digital platforms, streaming technologies, online distribution, and new forms of audience engagement.

The economic contribution of these sectors should therefore be assessed not only through conventional production channels but also through their interaction with digital technologies.

5.3. Employment Structure

Employment reveals a different sectoral pattern. Software and databases employed **367,055 persons**, representing **34.62% of core copyright employment**. Music, theatre and opera employed **268,662 persons**, representing **25.34%**. Publishing and literature employed **164,893 persons**, corresponding to **15.55%** of core copyright employment.

The differences between employment and output shares are particularly informative. Software and databases accounted for almost half of output and more than three-fifths of value added, but approximately one-third of employment. This indicates that the sector generated substantial economic value relative to its employment share.

Music, theatre and opera provide the opposite type of pattern: their employment share was considerably larger relative to their output contribution. This reflects the labor-intensive character of many performing and cultural activities. The characteristics of employment and earnings in artistic occupations have also been examined in the cultural-economics literature, which highlights the distinctive labor-market conditions affecting artists and creative workers (Wassall & Alper, 1992).

6. Sectoral Change from 2013 to 2017

The evolution of individual sectors between 2013 and 2017 provides evidence of significant structural change within Korea's copyright economy. The supplied dataset records heterogeneous growth patterns, with some sectors expanding strongly while others contracted.

Publishing and literature increased by **20.83%**, while music, theatre and opera recorded a much larger increase of **165.72%**. Film and video increased by **32.35%**, software and databases by **40.60%**, visual and graphic arts by **87.53%**, advertising services by **36.85%**, and copyright associations by **86.60%**.

In contrast, radio and television declined by **21.05%**, while photography declined by **37.45%**. These differences suggest that the Korean copyright economy was not simply expanding uniformly. Instead, economic activity was being redistributed among sectors as technologies, consumer behavior, distribution channels, and market structures changed.

6.1. Expansion of Digital and Creative Activities

The **40.60% increase in software and databases** is particularly important because it corresponds to the increasing importance of digital production. Software has become a central component of almost every modern economic activity, including manufacturing, finance, education, communication, entertainment, and public administration.

The expansion of software and databases may therefore have generated spillover effects beyond the boundaries of the copyright sector itself. The availability of software and digital technologies can improve productivity in other industries, facilitate new business models, and reduce transaction and distribution costs.

Similarly, the **87.53% increase in visual and graphic arts** and the **36.85% increase in advertising services** indicates the growing economic importance of creative and communication-intensive activities.

The particularly strong growth of music, theatre and opera, at **165.72%**, suggests that cultural production can also experience significant expansion under changing market conditions. However, this increase should not automatically be interpreted as the result of copyright reform. Changes in consumer demand, cultural markets, technology, investment, and international exposure may also have contributed.

6.2. Contraction of Traditional Media Activities

The decline in radio and television of **21.05%** and photography of **37.45%** demonstrates that technological transformation produces both expanding and contracting activities. The decline of

traditional media-related activities may be associated with changes in distribution technologies, consumer behavior, and the emergence of digital alternatives. Nevertheless, the dataset itself does not establish the precise causes of these declines.

This distinction is important because structural change should not automatically be interpreted as sectoral failure. A decline in traditional forms of production may coincide with the emergence of new business models within the same broader creative ecosystem. For example, traditional audiovisual production may migrate toward digital platforms, while conventional photography may increasingly interact with digital design, online advertising, and multimedia production.

6.3. Employment Transformation

Employment changes also demonstrate substantial heterogeneity. Music, theatre and opera experienced a **170.77% increase in employment**, while visual and graphic arts increased by **50.87%**. Software and databases increased by **17.05%**, film and video by **20.99%**, and advertising services by **12.86%**. Publishing and literature changed comparatively little, whereas radio and television and photography experienced employment declines.

The comparison between output and employment changes is particularly valuable. Software and databases experienced output growth of 40.60% but employment growth of 17.05%. This suggests that the sector's expansion was not based exclusively on increasing the number of employees. Technological investment, productivity, organizational change, and increased value creation per worker may have contributed. By contrast, music, theatre and opera experienced very strong increases in both output and employment. This indicates a different development pattern characterized by significant labor-market expansion alongside economic growth.

6.4. Structural Reallocation

The overall pattern can therefore be described as **structural reallocation within the copyright economy**. Digital and software-related activities expanded, several creative industries experienced strong growth, while some traditional media activities contracted.

Such reallocation is consistent with broader technological transformation. However, it is essential not to attribute the entire process to copyright policy. Copyright institutions form part of a much larger system that includes technological development, consumer demand, education, infrastructure, firm capabilities, international markets, and investment.

For Algeria, this distinction is particularly important. The objective should not simply be to reproduce the sectoral composition of South Korea. Rather, policymakers should identify the mechanisms that facilitated the emergence and scaling of knowledge-intensive activities and determine which mechanisms correspond to Algeria's own capabilities and market conditions.

7. Discussion

The Korean evidence demonstrates that copyright-based activities constitute a substantial and internally differentiated economic complex rather than a narrow cultural niche. The scale of output, value added, and employment indicates that copyright-intensive activities can occupy a meaningful position within a national economy. At the same time, the sectoral structure reveals that economic contribution is distributed unevenly across industries and that digital and knowledge-intensive activities can become particularly significant. This broader transformation should also be considered alongside the evolution of technological capabilities and the changing performance of Korean business groups over time (Choo et al., 2009).

One of the most important findings concerns the dominance of software and databases within the core copyright sector. Their contribution of **48.48% of core output** and **62.7% of core value added** in 2017 indicates the growing importance of digitally mediated intangible production. This is relevant to the

broader transformation toward a knowledge-based economy because software and databases function not only as commercial products but also as inputs into production across numerous other sectors.

The Korean case therefore illustrates the importance of considering copyright within an innovation ecosystem. Legal protection provides an institutional framework for ownership and commercialization, but productive outcomes depend on complementary capabilities. Studies examining technological catch-up in Korea emphasize the importance of learning, technology acquisition, institutional development, and firm capabilities (Lee et al., 2003). Similarly, research on intellectual property and economic performance indicates that the relationship between intellectual property protection and growth depends on development conditions and institutional capacity (Kanwar & Evenson, 2003; Falvey et al., 2006).

7.1. Technological Capability, Human Capital, and Technology Transfer

The Korean experience demonstrates that copyright-based industries depend on digital technologies, specialized skills, technology acquisition, and continuous learning. Digital platforms facilitate the production, distribution, and commercialization of creative products, while education, professional training, university–industry cooperation, research, entrepreneurship, and investment provide the capabilities required for their development. For Algeria, copyright policy should therefore be connected to human-capital development, technological infrastructure, technology transfer, innovation, and entrepreneurship.

7.2. Market Access, Enforcement, and Institutional Coordination

Copyright protection establishes legal rights, but economic value also depends on market access, financing, digital distribution, and effective enforcement. The issue of unauthorized online trade in cultural contents is particularly relevant in the Korean context, where illegal digital distribution has been examined in relation to cultural products and online markets (Park et al., 2004. P. 3–20). Addressing digital piracy should therefore be accompanied by legal digital markets, consumer awareness, and accessible distribution channels. At the institutional level, stronger coordination among intellectual-property authorities, universities, research centers, technology firms, creative industries, and public institutions is necessary to support commercialization and improve the effectiveness of copyright policy.

7.3. Implications, Limitations, and Economic Measurement for Algeria

The Korean evidence is descriptive and does not establish that copyright protection alone caused economic growth; outcomes reflect interactions among education, technology, investment, infrastructure, trade, institutional capacity, and market conditions. Given the differences between Korea and Algeria, the relevant lesson is to adapt mechanisms rather than reproduce the Korean model. Algeria could integrate copyright into economic-diversification and digital-transformation strategies while establishing a statistical framework to measure output, value added, employment, trade, investment, productivity, and innovation across copyright-based industries.

8. Conclusion

Between 2013 and 2017, copyright-based industries represented a substantial share of Korean economic activity according to the supplied dataset. The sector generated large amounts of output and value added and supported more than 1.75 million jobs in 2017. The core copyright industries were the largest component, while software and databases emerged as the dominant core sector in output and value added.

The principal implication is that copyright-based industries can be measured as an economic system comprising diverse activities rather than as a cultural sub-sector alone. For comparative policy research, systematic measurement of output, value added, employment, and sectoral composition is therefore necessary.

Findings:

1. Total copyright-based output in 2017 was reported at KRW 320,322,724 million, with core copyright industries accounting for 52.06%.
2. Total copyright-based value added was reported at KRW 150,739,541 million, with core industries accounting for 59%.
3. Total copyright-based employment was 1,751,385 persons, of which 61% was in core copyright activities.
4. Software and databases were the dominant core sector in output and value added, while sectoral growth varied substantially across creative activities.

Recommendations:

1. National statistical systems should separately measure copyright-based output, value added, employment, and sectoral productivity.
2. Policy support should recognize the growing importance of software, databases, and other digitally intensive copyright activities.
3. Creative-sector policy should combine intellectual-property protection with skills, technology, market access, and entrepreneurship measures.
4. Comparative studies should avoid treating aggregate copyright-sector statistics as evidence of a single causal effect of copyright law.

Future Research:

Future studies should construct comparable copyright-industry accounts for Algeria and Korea, using consistent WIPO classifications. Panel-data analysis could then examine relationships among copyright enforcement, creative-sector entry, investment, productivity, employment quality, exports, and innovation outcomes.

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