

FAIR USE IN THE U.S. ECONOMY

Economic Contribution of
Industries Relying on Fair Use



**Computer & Communications
Industry Association**
Tech Advocacy Since 1972

The economic analyses herein were prepared for the Computer & Communications Industry Association (CCIA) by Andrew Szamosszegi and Mary Ann McCleary, economic consultants with Capital Trade, Incorporated. Capital Trade is a Washington, D.C.-based economic consulting firm that specializes in international trade, economic studies, and statistical analysis of large-scale databases.

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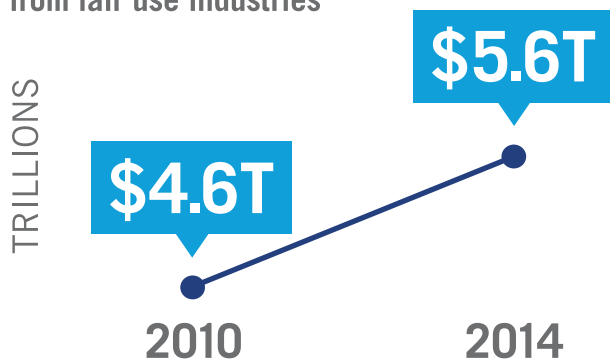
FAIR USE IN THE U.S. ECONOMY

2017 EDITION

Fair use industries have grown dramatically within the past 20 years, and their growth has had a profound impact on the U.S. economy in terms of revenue, value added to the U.S. economy, employment opportunities, and exports. Restrictions on fair use in the United States and unbalanced copyright policies abroad can endanger U.S. jobs, and economic growth and innovation.

REVENUE

from fair use industries



A \$1.0 trillion expansion in four years

VALUE ADDED

to U.S. economy

2014 Data

2.8T

Value added by fair use industries was \$2.8 trillion, approximately 16 percent of total U.S. current dollar GDP

EMPLOYMENT

U.S. jobs in the fair use economy



18 million
(about 1 in 8)
U.S. workers
benefit from
fair use

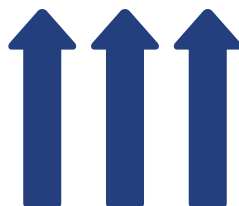
EXPORTS

of goods & services related to fair use industries



PRODUCTIVITY

3.2% annual increase in fair use industries from 2010 to 2014 (to about \$155,000 per worker)



EXECUTIVE SUMMARY

In 2007, CCIA released a report prepared by Capital Trade, Inc. that was the first comprehensive study quantifying the U.S. economic contribution of industries relying on fair use and related legal provisions. The current report is the third update of the size and performance of the fair use economy. This study finds that in 2014, value added by fair use industries was 16 percent of the U.S. economy, employing 1 in 8 U.S. workers, and contributing \$2.8 trillion to U.S. GDP. Meanwhile, the combined value added by industries that are the most reliant on fair use and other limitations and exceptions to copyright protections has more than tripled in size over 2002. From 2012 to 2014, the real output of these primary core industries accounted for 6.7 percent of real GDP growth, six times their current weight in the U.S. economy.

Findings

U.S. fair use industries:

- **Account for 16% of the U.S. economy**
- **Generate \$5.6 trillion in annual revenue**
- **Employ 18 million U.S. workers, up 1 million over a 4-year period**
- **Increased annual productivity by 3.2%**
- **Increased U.S. exports by 21% over 4 years to \$368 billion in 2014**

The U.S. has developed one of the strongest and most innovation-friendly copyright systems in the world — including both strong enforcement mechanisms to prevent infringement, and strong limitations and exceptions to copyright protection that have become a major catalyst of U.S. economic growth and jobs. Specific exceptions to copyright protection under U.S. law, classified here under the broad heading of “fair use,” are vital to many industries and stimulate growth across the economy. Companies benefiting from fair use generate substantial revenue, employ millions of workers, and represent one-sixth of total U.S. GDP.

Box 1: Copyright Fair Use in a Nutshell

The fair use doctrine limits the scope of what copyright regulates, which benefits diverse sectors of the U.S. economy. Fair use permits use of copyrighted material without permission from the copyright holder in certain situations. This right

Everyone who makes culture or participates in the innovation economy relies on fair use routinely — whether they recognize it or not.

is exercised regularly by industry and the public. As fair use expert Prof. Peter Jaszi explained in a Congressional hearing, “Everyone who makes culture or participates in the innovation economy relies on fair use routinely — whether they recognize it or not.”ⁱ

To assess whether a use is fair for purposes of copyright law, courts apply a four-factor test. Rather than subjectively assessing fairness, courts look to: (1) the purpose and character of the use, such as whether it is transformative, or whether the use is necessary for review, commentary, or criticism; (2) the nature of the work copied; (3) the amount and substantiality of what was copied; and, (4) the effect of the use of the work on any existing markets for the copied work.ⁱⁱ

ⁱ *The Scope of Fair Use: Hearing Before the Subcomm. On Courts, Intellectual Property and the Internet of the H. Comm. on the Judiciary*, 113th Cong. 10 (2014) (statement of Prof. Peter Jaszi, Washington College of Law, American Univ.)

ⁱⁱ See 17 U.S.C. § 107.

The beneficiaries of fair use encompass a broad range of companies, particularly as more U.S. businesses rely on activities that involve the Internet to grow and reach their customers. The ubiquity of the Internet and Internet-enabled services means that the economic growth fostered by fair use is widespread and generates significant consumer benefits.

Examples of these industries include:

- manufacturers of consumer devices that allow individual copying and recording;
- educational institutions;
- software developers; and
- Internet search and web hosting providers.

These industries and others that depend upon fair use and related limitations and exceptions are referred to here as “fair use industries.” As summarized in the following report, core activities to the modern economy rely on fair use in situations that are integral to many industries. Copyright law has established, for example, that fair use permits the main service provided by search engines, that software development depends on making temporary copies to facilitate the programming of interoperability, and that consumers can make copies of television and radio programming for personal use.

Fair use industries have grown dramatically within the past 20 years, and their growth has had a profound impact on the U.S. economy, while opening up new opportunities for creators, see **Boxes 4-6**, and enabling appropriate protection of creative works. This report contains detailed data organized by industry and summarizes economic activity and growth in five areas:

Revenue – The revenues generated by fair use industries expanded by \$1.0 trillion, or 5.2 percent annually, from 2010 to 2014, reaching \$5.6 trillion in 2014. In percentage terms, the most significant growth over this four-year period occurred in Internet publishing and broadcasting and web search portals, electronic shopping, and other financial investment activity. Electronic auctions and Internet service provider revenues also grew sharply.

Value Added – In 2014, value added by fair use industries was \$2.8 trillion, approximately 16 percent of total U.S. current dollar GDP. Value added equals a firm’s total output minus its purchases of intermediate inputs and is the best measurement of an industry’s economic contribution to national GDP.

Fair use industries also grew at a faster pace than the overall economy. The core fair use industries account for approximately 10 percent of the U.S. economy. However, the core of the core – *other information services (including Internet publishing and broadcasting and web search portals); Internet service providers; and data processing, hosting, and related services* combined – contributed 6.7 percent of GDP growth from 2012 to 2014, far beyond their weight in the overall economy.

Employment – Employment in industries benefiting from fair use and related limitations and exceptions reached 18 million workers by 2014, adding one million workers from 2010 to 2014. About one out of every eight workers in the United States is employed in an industry that benefits from these protections.

Further illustrating the rapid growth of fair use industries, total payrolls expanded rapidly, rising from \$1.20 trillion in 2010 to \$1.45 trillion during 2014, an increase of 20 percent.

Productivity – Productivity, the amount of goods and services that can be produced with a given number of inputs, is the foundation for rising living standards. From 2010 to 2014, the labor productivity of U.S. fair use industries increased by 3.2 percent annually to approximately \$155,000 per worker. These returns benefit both labor and capital, demonstrating why employees and investors continue to be attracted to these industries.

Exports – Exports of goods and services related to fair use industries increased by 21 percent from \$304 billion in 2010 to \$368 billion in 2014 driven by increases in service-sector exports. The fair use economy has become a defining aspect of the U.S. trade portfolio. The U.S. economy benefits from a substantial trade surplus attributable to fair use services industries.

In sum, fair use industries have expanded sharply since the Great Recession, driven primarily by the industries that rely most on fair use and other limitations and exceptions to copyright.

PART I: THE SIGNIFICANCE OF BALANCED COPYRIGHT TO THE U.S. ECONOMY

One consequence of the transition to a digital economy is that copyright law now regulates many aspects of daily human activity. Nearly any fixed communication is potentially subject to copyright, and nearly any modern technology is potentially capable of copyright infringement.

As a result, the scope of copyright regulation has grown. Whereas copyright was once thought to be relevant only to a discrete set of “content” publishing industries, it now bears on activities of a substantial part of the U.S. economy, many that are far removed from content production. Business communications, interactions with digital information, and the routine use of personal technology may all be regulated by copyright regardless of the industry in which they occur.

Copyright exceptions like fair use respond to this new reality by ensuring that industrial policy designed to promote commercial content production does not overwhelm other aspects of the economy. Industries which rely on limitations and exceptions to copyright like fair use for freedom to operate have expanded considerably now that digital technology permeates the economy. These industries are referred to as the “fair use economy.” As the following research demonstrates, the fair use economy accounts for 16% of U.S. GDP and employs roughly 1 in 8 Americans. Whereas fair use might once have been regarded as a niche area of law, it is now a defining characteristic of the U.S. economy. The fair use economy is also a defining aspect of the U.S. trade portfolio; exports from industries that rely on fair use increased by 21 percent between 2010 and 2014. The U.S. economy benefits from a substantial trade surplus attributable to fair use services industries.

The roots of the economic importance of fair use can be traced to the famous 1984 Supreme Court decision, *Sony v. Universal Studios, Inc.*, 464 U.S. 417 (1984), regarding the Betamax home videocassette recorder, the precursor to modern DVRs. As described in **Box 2**, the Court held that home recording and library-building by Sony’s consumers, was a fair use, and that copyright should not thwart home recording by members of the public. This laid the foundation for the consumer electronics industry, and later, numerous Internet-related technologies.

Box 2: Consumer Electronics and Fair Use

The Supreme Court’s ruling in the 1984 case *Sony v. Universal City Studios* has been called the “‘Magna Carta’ of the information technology industry.”ⁱⁱⁱ In a legal dispute over the very first videocassette recorder, a precursor to modern DVRs, the Court found that “time-shifting” – recording live programming in order to watch it later – was fair use. This decision was critical to encouraging the nascent consumer electronics industry and has continued to provide businesses confidence to invest in developing innovative new technologies for more than three decades. Additionally, certainty about limitations on secondary liability demonstrably increases venture capital investment in innovation.^{iv}

iii Pam Samuelson, *The Generativity of Sony v. Universal: The Intellectual Property Legacy of Justice Stevens*, 74 *Fordham L. Rev.* 1831, 1850 (2006) (discussing *Sony Corp. of Am. v. Universal City Studios*, 464 U.S. 417 (1984)).

iv Matthew LeMerle et al., *The Impact of Internet Regulation on Early Stage Investment* (Fifth Era 2016).

One of the benefits of the flexible fair use doctrine is its adaptability, which can cover unanticipated new uses and technologies. Whereas narrow exceptions drafted around specific technologies become outdated rapidly, the flexibility of the fair use doctrine has, at different times, enabled both consumer electronics and online services. The breathing space provided by fair use has facilitated a thriving technology industry in the United States. New online products and services almost inevitably involve some transitory copying, if only for technological purposes. This makes the fair use doctrine a necessity, as licensing every time an image is copied into a computer's memory, for example, would be prohibitively expensive and time-consuming.

Fair use has proven to be critical to other industries as well. For example, the varied industries that encompass the entertainment industry all rely on fair use. Fair use is also crucial in the context of education and reporting the news, which depend upon reproducing and disseminating primary sources. This reliance often becomes most apparent in litigation, as all of these industries have defended ordinary business conduct before courts by relying on the fair use doctrine.

In addition to being critical to a vast number of U.S. constituencies, fair use has also gained recognition abroad as a crucial information technology policy. While fair use is a principle of uniquely American origin, nearly 50 other countries have adopted some version of American fair use or its British counterpart, fair dealing, into their domestic copyright law.¹ Perceiving the success that has resulted from the balances in the U.S. copyright system, many countries aspire to emulate the U.S. fair use model. This is the case even in countries with well-developed copyright systems. For example, in 2010, then-Prime Minister David Cameron announced an inquiry into adopting a fair use-type provision in UK law, in order to “encourage the sort of creative innovation that exists in America.”²

Box 3: Fair Use Powers Data Analysis, Driving AI and Machine Learning

New machine learning technologies depend on flexible copyright law. Machine learning by artificial intelligence requires programs ingesting and analyzing data and information, which may include material protected by copyright. Courts have found this type of intermediate copying to be a non-infringing, transformative use. Machine learning helps power innovation in a variety of areas, including autonomous vehicles, medical diagnostics, image recognition, augmented and virtual reality, and drones.

These principles were initially established with respect to Internet search. In order to facilitate modern search engines, search providers must crawl the Web and copy the world's webpages into indexes. These indices allow users to receive instantaneous results from databases created in advance. Obtaining permission for trillions of copies would be prohibitive, however, and so search engines rely upon fair use. In 2003, a photographer named Kelly sued a search engine for indexing pictures he had posted to the Internet, but an appeals court found that a search engine's “use of Kelly's images promotes the goals of the Copyright Act and the fair use exception,” and that it “benefit[s] the public by enhancing information-gathering techniques on the internet.”^v

v *Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 820 (9th Cir. 2003).

1 Jonathan Band & Jonathan Gerafi, *The Fair Use/Fair Dealing Handbook* (policybandwidth 2015), <http://infojustice.org/wp-content/uploads/2015/03/fair-use-handbook-march-2015.pdf>.

2 BBC News, *UK copyright laws to be reviewed, announces Cameron*, Nov. 4, 2010, <http://www.bbc.com/news/uk-politics-11695416>.

PART II. Economic Contribution of Fair Use and Information Technology Dependent Industries to the U.S. Economy

I. Introduction

This report provides updated information on U.S. industries that depend on and/or benefit from limitations and exceptions to copyrights, including the fair use of copyrighted materials. This “fair use” economy has grown in importance since the publication of the original CapTrade study, which was published in 2007 and covered data through 2006.³ Subsequent updates found that the fair use economy continued to grow, even during the Great Recession.⁴

Fair use in the strict sense is an important statutory restriction on the rights conferred on original works by the U.S. Copyright Act of 1976:⁵ According to Sec. 107, “[t]he fair use of a copyrighted work for . . . purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research is not an infringement of copyright.”⁶ The fair use doctrine, and other limitations and exceptions to copyright,⁷ have grown in importance with the rise of the digital economy, as fair use permits a range of activities that are critical to many high technology businesses, including search portals and web hosting.⁸ In the discussion that follows, the term “fair use” sometimes will be used as a shorthand expression referring to the full range of limitations and exceptions in U.S. copyright law.

Industries benefiting from fair use continue to have a profound impact on the U.S. economy, which has been significantly transformed during the past 30 years. Increasing manufactured imports and technological advances have led to a large decline in manufacturing employment in the United States.⁹ Growth in service sector output and employment has been instrumental in creating new U.S. jobs, both directly through the creation of new firms, and indirectly through intermediate demands of these new firms and spending by their employees. For example, according to an analysis of high-tech industries by the U.S. Bureau of Labor Statistics, employment in high-tech services was only slightly larger than in high-tech manufacturing industries in 1994. However, employment in high-tech services industries grew by 3.4 million workers through 2014 while employment in high-tech manufacturing industries declined by one million workers.¹⁰

The growing importance of the fair use economy and the Internet in general has led to a number of studies of the digital economy and digital trade. A study by the United States International Trade Commission published in August 2014 found that domestic commerce and international trade conducted via the Internet in the U.S. and global economies increased U.S. real GDP by 3.4-to-4.8 percent, increased real wages by 4.5-to-5.0 percent, and increased employment by up to 2.4 million full-time equivalent employees.¹¹ According to the Commission, these gains arise due to enhanced productivity and lower trade costs.¹² The Commission’s analysis

³ See Thomas Rogers and Andrew Szamoszegi, *Fair Use in the U.S. Economy: Economic Contribution of Industries Relying on Fair Use* (CCIA-2007).

⁴ Updates of the study were published in 2010 and 2011.

⁵ See Einhorn (2004), especially at page 1.

⁶ 17 U.S.C. § 107. See Einhorn (2004) at 1 and 8, fn. 5.

⁷ The complete set of limitations and exceptions studied herein are listed in Part II and described further in Appendix I.

⁸ See testimony by Jonathan Band on “Fair Use: Its Effects on Consumers and Industry,” before the Committee on Energy and Commerce, Subcommittee on Commerce, Trade, and Consumer Protection (November 16, 2005).

⁹ See Autor, Dorn, Hanson, (2013), especially pages 2121-2168.

¹⁰ See Wolf and Terrell (2014) for more insight.

¹¹ See U.S. International Trade Commission, *Digital Trade in the U.S. and Global Economies, Part 2* (August 2014) at 13.

¹² *Id.* at 17.

includes a comprehensive explanation of how the gains from digitally intensive industries, which rely on fair use, translate into gains for the broader U.S. economy:

Higher productivity in certain digitally intensive industries due to the Internet increases output in these industries while lowering costs of producers and therefore prices to consumers. These gains in digitally intensive industries spill over to the rest of the economy and lead to economy-wide effects. Higher demand for workers in the digitally intensive industries drives up wages in the labor market, draws workers from other sectors of the economy, and can also increase aggregate employment as more workers are brought into the labor force. The productivity-based reductions in costs translate into lower prices for consumers, and this increases the purchasing power of their wages.¹³

New firms have played a central role in the fair use economy. Startups in the core fair use space have generated new jobs while sometimes disrupting established industries and underperforming firms.¹⁴ While some companies such as Google, Amazon, and Facebook have grown rapidly in a short period of time, there are numerous under-the-radar firms that are benefiting from the business opportunities provided by fair use.¹⁵ Though the net job creation of disruptive startups is not always positive in the short run, their productivity-enhancing innovations are indisputably beneficial. The creation of new businesses and business activities has in turn fueled demand from other sectors of the U.S. economy, transformed a host of business processes, and opened up new avenues

Box 4: Fair Use in the Film Industry

Whether making documentaries or summer blockbusters, filmmakers routinely rely on fair use. As a senior Hollywood executive explained to a National Academies review in 2010, “the beauty of fair use is that it is a living thing that . . . can adapt to new circumstances, to technology. It doesn’t provide the certainty that some people would like . . . but in this case the uncertainty is a good thing because it can change over time.”^{vi}

For example, fair use was critical in protecting the distributor of the 2011 movie *Midnight In Paris* from copyright infringement for quoting nine words from a Faulkner novel. “Fair use is an integral part of the Copyright Act,” Sony Pictures told the court in its legal battle against the Faulkner Estate, and the court agreed.^{vii}

The movie industry’s trade association expressed a similar view in a 2013 when endorsing fair use in a dispute over images in sports documentary content, listing cases where its “members rely on the fair use doctrine every day when producing their movies and television shows – especially those that involve parody and news and documentary programs. And it’s routine for our members to raise fair use – successfully – in court.”^{viii}

vi Remarks by Fritz Attaway, MPAA, National Academies Project on the Impact of Copyright Policy on Innovation in the Digital Era, National Academies of Science, Oct. 15, 2010, available at http://sites.nationalacademies.org/PGA/step/PGA_066845.htm.

vii *Faulkner Literary Rights, LLC v. Sony Pictures Classics*, 953 F. Supp. 2d 701 (N.D. Miss. 2013).

viii Ben Sheffner, *MPAA and Fair Use: A Quick History*, MPAA Blog, Oct. 22, 2013, <http://www.mpa.org/mpaa-and-fair-use-a-quick-history/>.

13 *Id.* at 16.

14 See Forrest (2015) for more insight on how tech startups impact the economy, particularly in terms of job creation.

15 See Weinberger (2015) on successful tech startups that help run the internet, behind the scenes.

for accessing entertainment and information. For example, the so-called App Economy supported an estimated 1.66 million U.S. jobs in December 2015, up from 466,000 in the Fall of 2011.¹⁶

As explained in the previous studies of the fair use economy, the fair use of copyrighted material and other limitations and exceptions are an important foundation of the Internet economy. For example, one force driving the expansion of the Internet as a tool for commerce and education is the user's ability to locate useful information with widely available search engines.¹⁷ The courts have held that the main service provided by search engines is fair use.¹⁸ Absent the exceptions to copyright law provided by the fair use doctrine, search engine firms and others would face uncertain liability for infringement, a significant deterrent to providing this valuable service. Such an outcome would thwart the educational purposes and growing commerce facilitated by Internet search engines, thereby reducing the economic contribution of the Internet.

Other important activities made possible by fair use include software development, which in many cases requires the making of temporary copies of existing programs to facilitate software interoperability,¹⁹ and web hosting, which could be liable for any infringement by users but for limitations and exceptions.²⁰ The fair use doctrine also permits end users of copyrighted material to make digital copies of programming for personal use. Thus, because of fair use, consumers can enjoy copyrighted programming at a later time ("time shifting"),²¹ transfer the material from one device to another ("space shifting"),²² and make temporary cache copies of websites on the random access memory (RAM) of their computers.²³ The utility derived from these activities has spawned consumer purchases of a broad range of products such as digital video recorders and smart phones, stimulating additional economic activity in the United States and in all of the countries where the machines used for these activities are manufactured.

Copyright protection, which provides an incentive for the production of creative works, also has a positive and quantifiable impact on the U.S. economy. The positive aspects of copyright protection should not, however, obscure or diminish the important role of fair use as an economic driver in the digital age.

This report presents a comprehensive quantification of the growing economic significance of industries benefiting from fair use. The methodology used in the report defines a set of "core industries" that either would not exist, or would be much smaller, but for the limitations and exceptions to copyright law. It also evaluates the secondary sectors or non-core industries that benefit from fair use.

II. Description of Fair-Use Benefits and Industries

A. The Benefits of Fair Use and Other Limitations and Exceptions to Copyright Law

Many industries benefit from provisions of U.S. copyright law that fall under the broad heading of fair use.²⁴ For example, the Other

¹⁶ See Mandel (2016) for more information on the app economy in the U.S., and its job creation.

¹⁷ Search engine software copies vast quantities of information from publicly accessible websites onto the search engine's database. Users then access the search engine's database for relevant information, retrieving links to the original site as well as to the "cache" copy of the website stored in the database.

¹⁸ The Ninth Circuit in *Kelly v. Arriba Soft* (9th Cir. 2003), found that the caching of reduced-sized images copied from websites, and the display of these images in response to search queries, constituted a fair use. It reaffirmed that proposition in *Perfect 10, Inc. v. Amazon.com* (9th Cir. 2007). Similarly, the district court in *Field v. Google* (D. Nev. 2006), excused Google's display of text cached in its search database as a fair use.

¹⁹ Fair use permits the copying that occurs during the course of software reverse engineering. See *Sega v. Accolade* (9th Cir. 1992); *Atari v. Nintendo* (Fed. Cir. 1992); *Sony v. Connectix* (9th Cir. 2000).

²⁰ See Section 512(c) of the Digital Millennium Copyright Act (DMCA) provides safe harbors for the entities hosting user content.

²¹ See *Sony Corp. v. Universal City Studios, Inc.* (1984).

²² See *Recording Industry Ass'n of America v. Diamond Multimedia Sys. Inc.* (9th Cir. 1999).

²³ See *Perfect 10, Inc. v. Amazon.com, Inc.* (9th Cir. 2007).

²⁴ This section of the report was prepared with the assistance of Professor Peter Jaszi of American University Washington College of Law.

Information Services industry (NAICS 519),²⁵ which includes the subset industry, “Internet Publishing and Broadcasting and Web Search Portals,” relies on the following fair use-related provisions:

| Statutory Provision | Description |
|---------------------|--|
| 102(a) | non-copyrightability of facts |
| 102(b) | idea/expression dichotomy |
| 107 | fair use: criticism; comment; news reporting; browser, cache copies; teaching; scholarship; research |
| 108 | library uses |
| 109 | first-sale doctrine |
| 512 | ISP safe harbors |
| 302-304 | copyright term |
| 105 | no copyright in U.S. government works |

Appendix I explains how individual provisions apply to and benefit core and non-core industries.²⁶ The table represents, by 2012 NAICS category and description, those industries that depend on fair use.²⁷ Each NAICS code is followed by citations to statutory provisions and principles of law embodying the limitations and exceptions upon which the described industry depends.

The fourth column in the Appendix I table also summarizes and highlights the extended impact of fair use across numerous sectors as the cross-references to other NAICS codes identify interdependent industries. For example, for the Other Information Services industry, the table lists five interdependent industries: 3341 (computer and peripheral equipment manufacturing); 5112 (software publishers); 5415 (computer system design and related services); 334413 (semiconductors and related device manufacturing); and 3346 (manufacturing and reproducing magnetic and optical media).

B. Fair Use Industries: Core and Non-Core

This study adopts the guidelines and economic indicators suggested by the World Intellectual Property Organization (WIPO), and used in the prior fair use studies, to evaluate the economic contribution of fair use. The latest guidelines appear in WIPO’s *Guide on Surveying the Economic Contribution of the Copyright Industries 2015 Revised Edition*. The guide continues to support the use of four categories: core, interdependent, partial, and non-dedicated support.²⁸

Like its predecessors, this study employs a more streamlined classification into core and non-core industries that depend on or benefit from fair use. Core industries are defined as industries that produce goods and services whose activities depend in large

25 NAICS refers to the North American Industry Classification System, the standard used by Federal statistical agencies for classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy.

26 The data appendixes for this report are available online at <http://www.cciainet.org/fairusestudy>.

27 Several indicators in this report are based on data in the 2012 Economic Census published by the U.S. Bureau of the Census. That report uses the 2012 version of the North American Industrial Classification System (NAICS 2012). The prior fair use study was based on the 2007 version of the North American Industrial Classification System (2007 NAICS). The vast majority of fair use codes have not changed but some have. Because this report provides estimates for 2010 and 2011 that were necessarily based on the 2007 NAICS, data for those years were based on the 2007 NAICS. In the NAICS convention, a two-digit number refers to an industry sector. For example, code 51 refers to the Information sector. Three, four and five-digit codes refer to an industry subsector, an industry group, and industry, respectively. Codes of six or more digits are also considered industries in their own right even though they are part of a larger industry. This study incorporates data mostly at the three and four-digit industry group level, and, as appropriate, at the five-or-more-digit industry level, without double counting. For ease of reference, the Appendix I attached to this report lists the NAICS 2007 codes and official descriptions of the industries and industry groups considered.

28 See WIPO Guide (2015), Chapter 4.

measure on the existence of limitations and exceptions provided in U.S. copyright law. As shown in Appendix I, the core covers a broad range of industries whose output is driven increasingly by activities made possible by fair use, including many that depend extensively on the Internet.²⁹ Due to the nature of the Internet – in particular the intensive use of temporary copies – all of the Internet-based industry groups and industries are classified in the fair use core.

Other information industries depend on fair use exceptions for their ability to engage in basic activities. Additional core sectors, such as the education industry, benefit from the non-copyrightability of facts and other fair use freedoms.³⁰

Box 5: Television and Fair Use: News Reporting, History, and Parody

Television programming depends upon balanced copyright. Comedy programs regularly utilize parody, and have frequently given rise to copyright litigation. Popular television program producer Viacom has emphasized how “doctrines of parody, political commentary and criticism” in the use of copyrighted material are essential to television content, saying, “Viacom relies upon the law in these areas regularly. Watch nearly any episode of *South Park*, *The Daily Show with Jon Stewart* or the *Colbert Report* and you will see how our artists draw from copyrighted works in legitimate ways for legitimate purposes.”^{ix} Similarly, Twentieth Century Fox has relied on fair use in defense of parody-oriented programs like *Family Guy*. This has won support from federal courts, who have held that even “[d]estructive parodies play an important role in social and literary criticism and thus merit protection even though they may discourage or discredit an original author.”^x

Television producers also rely on fair use when copyrighted material is used incidentally. For example, in litigation involving incidental appearances of an unlicensed logo in historical video and photographs, the National Football League invoked the fair use defense.^{xi} The movie industry supported the NFL, citing “a keen interest in ensuring its members’ fair use protections remain robust and intact.”^{xii} Joining documentary makers, the Motion Picture Association of America pointed out that fair use served important First Amendment goals. It also remarked that “[m]uch creative culture is iterative; new works often do not arise in a vacuum, but rather are influenced by and draw upon the creative works that came before.” An appeals court agreed, and in finding that the fleeting uses of unlicensed logos in historical films was clearly a fair use, held that “creation itself is a cumulative process; those who come after will inevitably make some modest use of the good labors of those who came before.” Fair use, the court explained, “is crucial to the exchange of opinions and ideas.”^{xiii}

ix Letter from Michael D. Fricklas, Executive Vice President, General Counsel and Secretary of Viacom Inc., to ACLU, Feb. 6, 2007, <http://www.liberalviewer.com/ViacomDocs/Letter2.pdf>.

x *Burnett v. Twentieth Century Fox Film Corp.*, 491 F. Supp. 2d 962, 971 (C.D. Cal. 2007) (citations omitted).

xi *Bouchat v. Baltimore Ravens Ltd.*, 737 F.3d 932 (4th Cir. 2013).

xii Brief for International Documentary Association, Motion Picture Association of America, Inc., and Film Independent as Amici Curiae Supporting Defendants-Appellees at 1, *Bouchat v. Baltimore Ravens Ltd.*, 737 F.3d 932 (4th Cir. 2013) (No. 12-2543).

xiii *Id.* at 944.

29 For example, recent advances in processing speed and software functionality are being used to take advantage of the richer multi-media experience now available from the web. Thus, purchases of new computers, software, smart phones, e-readers, and mobile applications increasingly are driven by the desire to maximize the Internet experience, rather than to increase word processing and spreadsheet performance.

30 See Larsen and Vincent-Larsen (2005) for arguments that e-learning can expand and widen access to tertiary education and training, improve the quality of education and reduce its cost; see also, Kahin and Foray (2006) at pages 151-168.

In addition to these core industries, non-core sectors also benefit significantly from fair use. Non-core industries included in this study consist of industries whose activities or output facilitates the output of the fair use core. Companies in these sectors derive a significant amount of their current business from the demand generated by fair use and the Internet, and are interdependent with the core industries.

The Internet economy is dynamic and, as it expands, influences a growing range of sectors.³¹ The industry classification scheme used for this study follows a conservative approach and limits the core and non-core industries to the sectors listed in Appendix I. These are the same sectors measured in the original fair use study, though reclassifications in the NAICS codes have resulted in some sectors being merged into others. Subsequent studies, benefiting from additional data sources, revised official classifications, and available information, may show a greater scope of core and non-core activity derived from fair use.

III. Methodology and Data Sources

This study quantifies the economic contribution of U.S. core and non-core industries from 2010 to 2014. Consistent with WIPO's guide, this report considers both the size and performance of the fair use industries.³² The size of the fair use economy is illustrated by five economic measures: revenue, value added, employment, payroll, and exports.³³ The performance of the fair use economy is examined through the compensation per employee, value added per employee, and the contribution to GDP growth of core fair use industries.

The original report presented data for 2002 and 2006. The first update, released in 2010, relied largely on data in the 2007 Economic Census. The second update was also based on the 2007 Economic Census, and covered 2008 and 2009, years significantly influenced by the Great Recession. Issued every five years, the Economic Census provides a detailed portrait of the U.S. economy from the national to the local level, and these results are used to refine and revise the U.S. Government's existing data collection programs.³⁴ The updates in this report are based on the Economic Census for 2012, but necessarily must incorporate information from other government publications that cover years that the Economic Census does not.

A detailed discussion of the methodology and sources used to compile the data presented in this update is provided in Appendix II. Data for the key economic measures listed below – revenue, value added, payroll and employment – are compiled separately for core and non-core industries according to the structure developed with the assistance of Professor Peter Jaszi, as described above and detailed in Appendix I.³⁵ Summary tables are provided in Appendices III through VIII. Data for these industries were compiled by NAICS code and organized in a database. When data from the primary source was unavailable, either due to publication lags or disclosure constraints, the missing data points were estimated based on the growth rate of the next largest and available classification grouping.

IV. Economic Contribution of Fair Use Industries

This section presents estimates of the revenues, value added, payroll, employment levels, productivity, and trade of the core and non-core industries benefiting from fair use.

³¹ See McKinsey Global Institute (2011, May); according to this study the Internet accounted for approximately 3.8 percent of the U.S. economy in 2009.

³² See WIPO Guide (2015), Chapter 5.

³³ This approach is consistent with the WIPO Guide which suggests measuring the size of the industries through their value added, employment, labor compensation, and trade, and their contribution to economic growth. WIPO Guide (2015) at page 36.

³⁴ See U.S. Census Bureau 2007 Economic Census User Guide (2009) at pages 4 and 14.

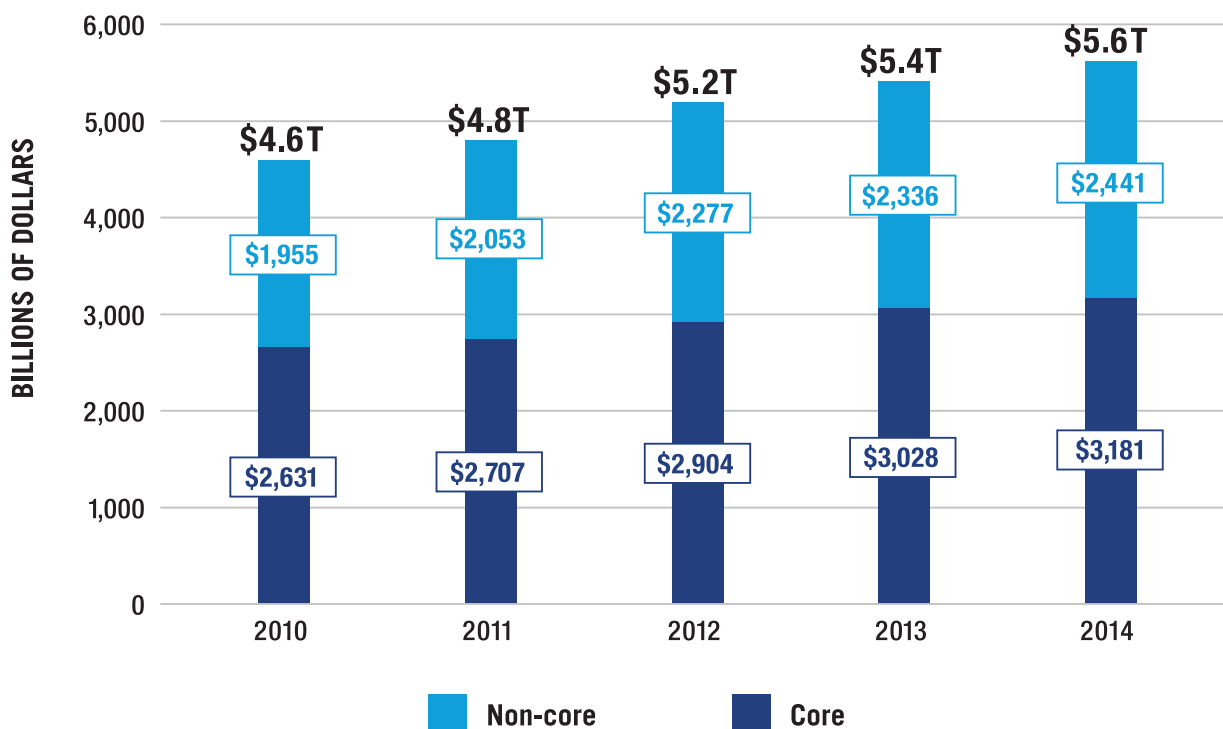
³⁵ Data for exports of goods and services are too aggregated to be broken down into core and non-core components, and are presented with the two components combined.

A. Revenue

Chart 1 illustrates the estimated revenues for the fair use core and non-core industries from 2010 to 2014. Total revenue of fair use industries increased from \$4.6 trillion in 2010 to \$5.6 trillion in 2014, or by approximately \$1.0 trillion dollars. Since 2002, fair use revenues have expanded by \$2.2 trillion. Since 2010, the core industry revenues expanded by 4.9 percent on average while non-core industries grew 5.7 percent on average.³⁶ Overall, fair use revenues expanded 5.2 percent annually. As a result, core industries' share of fair use revenues declined from 57.4 percent to 56.6 percent.³⁷

Chart 1: Revenues of Fair Use Industries

Total Revenue = \$5.6 Trillion in 2014



Sources: U.S. Census Bureau and Bureau of Economic Analysis

Though strong, the growth in the core industry revenues was suppressed by a relatively poor performance of core manufacturing industries. In contrast, most service industries expanded. For example, revenues earned by *other information industries* (which include internet publishing and broadcasting and web search portals) expanded 30 percent annually, *electronic shopping revenues* expanded 19 percent annually, and ISP revenues expanded 9 percent annually. Among non-core industries, strong growth rates were

³⁶ Growth rates are reported as compound average growth rates (CAGR).

³⁷ Appendix III contains tables detailing revenue for each core and non-core industry.

achieved by agencies, brokerages, and other insurance related activities; management, scientific and technical consulting services; and agents and managers for artists, athletes, entertainers, and other public figures.

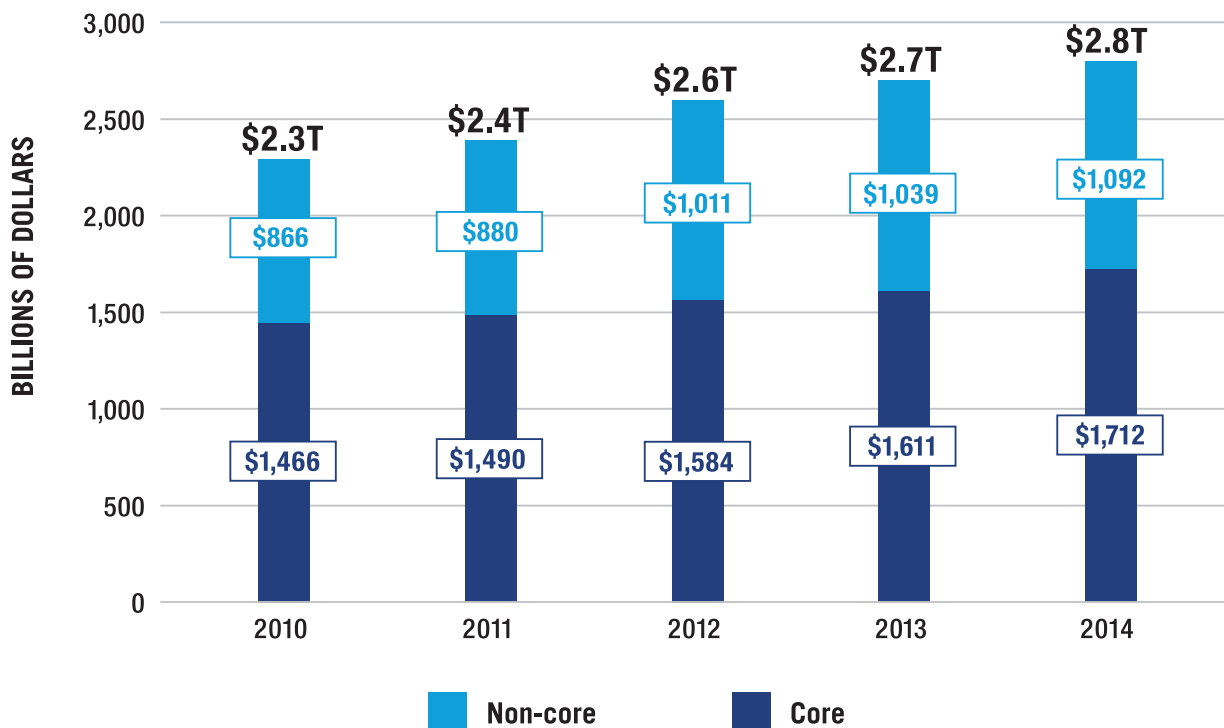
B. Value Added

Value added measures the contribution of each industry’s labor and capital to its gross output and to GDP. Industry value added equals an industry’s gross output minus its purchased intermediate inputs. Value added is an important tool to measure economic growth because it does not include value added by another industry or double count own-industry value added.

As shown in Chart 2, the value added for the fair use industries defined in this report increased significantly from \$2.3 trillion in 2010 to \$2.8 trillion in 2014. Value added by fair use industries was \$1.7 trillion in 2002. The core industries have continued to account for more than 60 percent of fair use value added, though the value added of the non-core industries grew at a faster rate

Chart 2: Value Added of Fair Use Industries

Total Value Added = \$2.8 Trillion in 2014



Sources: U.S. Census Bureau and Bureau of Economic Analysis

during the 2010-to-2014 period. During this period, the fair use share of national GDP expanded by approximately half a percentage point. As with the prior study, core and non-core fair use industries represent approximately one-sixth of current dollar U.S. GDP.³⁸

The value added by the fair use industries increased by \$472 billion from 2010 to 2014, while U.S. current dollar GDP expanded by \$2,429 billion. Thus, the increase in fair use value added accounted for 19.4 percent of the increase in U.S. current dollar GDP during this period.

In contrast to current dollar or *nominal* GDP, *real* GDP controls for inflation, and is therefore a better indicator of a country's true economic growth. Consistent with prior reports, the estimate covers only the contribution of the core industries to real GDP growth. Because the years covered in this report include years before and after the 2012 Economic Census, the comparison with overall real GDP is confined to the 2012 to 2014 period.³⁹

As reported in the 2011 report, the fair use core contributed 19.7 percent to U.S. real GDP growth from 2006 to 2009.⁴⁰ From 2012 to 2014, the core fair use industries contributed 6.3 percent to U.S. real GDP growth. The reduced amount is due to conflicting trends among the various core industries. On the one hand, there was strong growth in *other information industries* (which includes Internet publishing and broadcasting and web search portals);⁴¹ the *data processing, hosting, and related services industry*; and the *software publishing industry*. In fact, growth in *other information industries*, *Internet service providers*; and *data processing, hosting, and related services* alone contributed 6.7 percent to real GDP growth from 2012 to 2014, six times their current weight in the U.S. economy. On the other hand, there were declines in the real output of core industries that had previously experienced strong growth, such as the *securities and commodity contracts intermediation and brokerage industry*; the *other financial investment activities industry*; and the *legal services industry*.

C. Employment and Payroll

The fair use-related industries in this study continue to be major employers in the U.S. economy. Chart 3 below shows the number of employees from 2010 to 2014. Employment related to fair use increased from 17.0 million workers in 2010 to 18.0 million workers in 2014. In 2002, there were 16.9 million workers in fair use industries.

Employment in the core industries increased from 10.1 million employees in 2010 to 10.5 million in 2014. Employment in the non-core industries expanded from 7.0 million employees in 2010 to 7.5 million workers in 2014.⁴² In 2014, core industries accounted for approximately 58.3 percent of total employment by fair use industries.

As explained in the last fair use study, total employment in core and non-core industries alike receded close to their 2002 levels in 2009 due to the Great Recession.⁴³ Total employment in the United States and in fair use industries expanded smartly since then. In 2014, employment in fair use industries accounted for 13 percent of total U.S. non-farm employment.⁴⁴ That is, about one out of every eight workers in the United States is employed in an industry that benefits from the protection afforded by fair use.

38 See Bureau of Economic Analysis (2016) National Economic Accounts and (2016) GDP by Industry Data: U.S. GDP in current dollars was \$10.6 trillion in 2002, \$14.4 trillion in 2008, and \$14.1 trillion in 2009.

39 The estimation procedure for the core contribution to real GDP growth is shown in Appendix V.

40 See Rogers and Szamoszegi (2011) at page 20.

41 The ISP value added was added to this industry for purposes of calculating the contribution to growth.

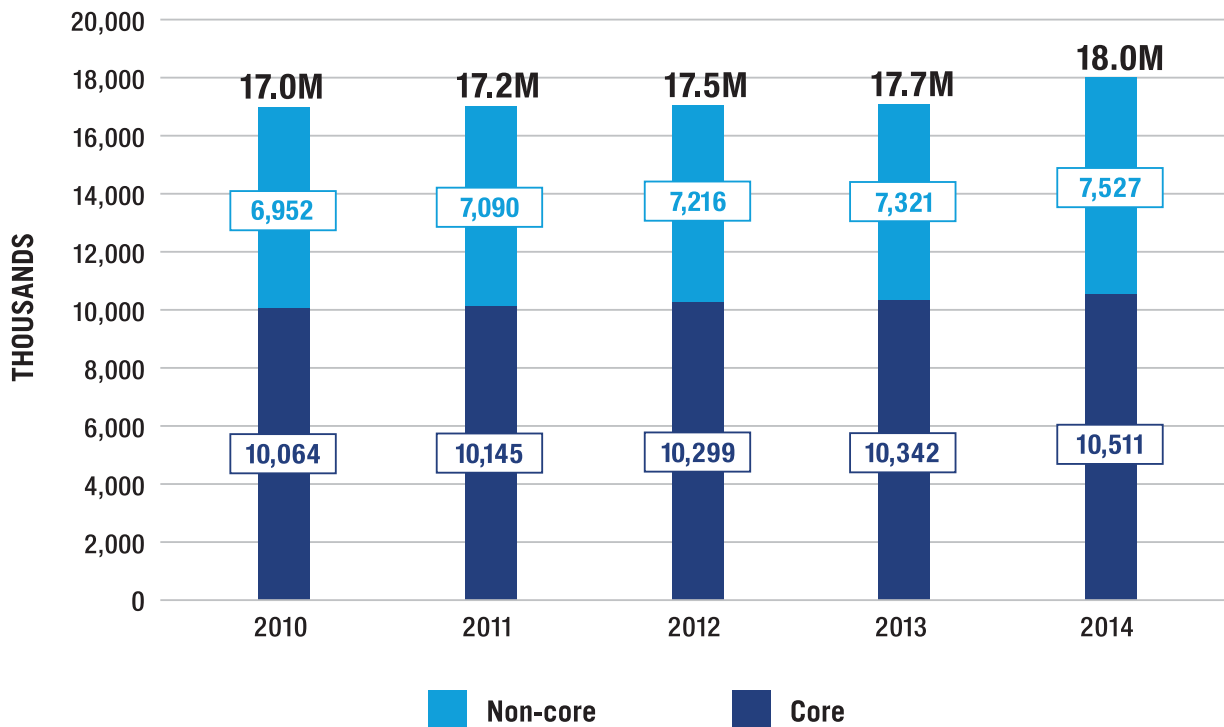
42 Appendix VI contains tables detailing employment for each core and non-core industry.

43 See Rogers and Szamoszegi (2011) at page 21.

44 See Bureau of Economic Analysis for Current Employment Statistics data on employment by industry.

Chart 3: Employment of Fair Use Industries

Total Employment = 18 Million in 2014



Sources: Bureau of Labor Statistics

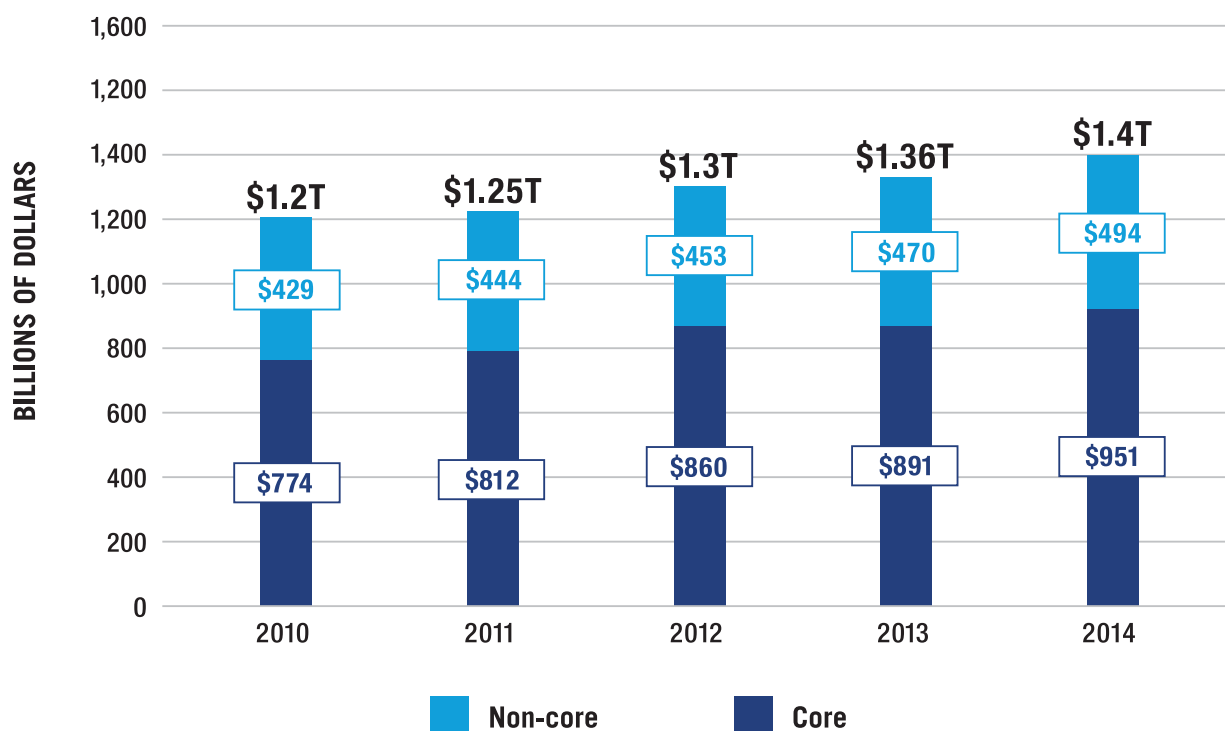
Payroll in fair use industries continue to expand. Chart 4 shows that total fair use industry payroll increased by 20 percent from approximately \$1.2 trillion in 2010 to \$1.4 trillion in 2014. In 2010, core industry payroll was \$774 billion, accounting for 64.4 percent of total fair use payrolls. By 2014, payroll in core industries amounted to \$951 billion, accounting for 65.8 percent of fair use payrolls.⁴⁵ In real terms, the payroll of core fair use industries increased by 13 percent from 2010 to 2014, while the payroll of non-core industries grew by 6 percent.⁴⁶

⁴⁵ Appendix VII contains tables detailing payroll for each core and non-core industry.

⁴⁶ Payroll values were deflated by the consumer price index for urban consumers (series ID CUUR0000SA0, CUUS0000SA0).

Chart 4: Payroll of Fair Use Industries

Total Payroll = \$1.4 Trillion in 2014



Sources: U.S. Census Bureau

The rate of increase in payrolls exceeded the rate of increase in employment. Thus, payroll per employee at fair use-related firms has continued to expand. Table 1 below indicates that payroll per employee expanded from approximately \$71,000 in 2010 to approximately \$80,000 in 2014. In 2002, payroll per worker was approximately \$53,000 per year. Payroll per employee at core industries, \$90,000 in 2014, has been higher than at non-core industries, which had an average payroll of \$66,000 in 2014.

Table 1: Payroll Per Employee of Fair Use-Related Industries

| | DOLLARS PER EMPLOYEE | | | | |
|----------|----------------------|--------|--------|--------|--------|
| | 2010 | 2011 | 2012 | 2013 | 2014 |
| Core | 76,885 | 80,052 | 83,516 | 86,133 | 90,457 |
| Non-core | 61,643 | 62,578 | 62,801 | 64,219 | 65,610 |
| Total | 70,658 | 72,864 | 74,981 | 77,050 | 80,088 |

Sources: Authors' estimates based on data from the U.S. Census Bureau and Bureau of Labor Statistics.

D. Productivity

On the supply side, a country’s economic growth depends overwhelmingly on two factors: changes in the level of productive inputs such as labor and capital, and the productivity with which those inputs are used. In other words, an economy experiences economic growth if it adds inputs (e.g., more workers and more machines), increases the output associated with a given level of inputs, or does both.

In order to improve the earnings for labor, by increasing real hourly wages, for example, it is necessary to increase labor productivity.⁴⁷ Rising productivity is therefore important to long-term improvements in living standards. The positive impacts of information technology on productivity have been well documented.⁴⁸ Prior fair use studies have demonstrated relatively high levels of worker productivity in fair use industries.

Table 2 contains estimates of value added per employee, a common measure of labor productivity, for the core and non-core fair use industries. In the core industries, average labor productivity expanded from approximately \$146,000 per worker in 2010 to approximately \$163,000 in 2014, representing an annual growth rate of 2.8 percent. In non-core industries, average labor productivity expanded from \$124,000 to \$145,000 over the same period, or 3.9 percent annually. These productivity levels exceed economy-wide labor productivity, approximately \$125,000 in 2014, by a wide margin.⁴⁹

On an inflation-adjusted basis, real productivity of core and non-core industries expanded 3 percent and 7 percent, respectively.

Table 2: Value Added Per Employee of Fair Use-Related Industries

| | DOLLARS PER EMPLOYEE | | | | |
|----------|----------------------|---------|---------|---------|---------|
| | 2010 | 2011 | 2012 | 2013 | 2014 |
| Core | 145,650 | 146,858 | 153,820 | 155,743 | 162,908 |
| Non-core | 124,610 | 124,147 | 140,109 | 141,949 | 145,099 |
| Total | 137,054 | 137,515 | 148,171 | 150,025 | 155,476 |

Sources: Authors’ estimates based on data from the U.S. Census Bureau, Bureau of Economic Analysis, and Bureau of Labor Statistics.

E. Trade

The globalization of the U.S. economy has been one of the primary economic trends in recent decades. U.S. trade in goods and services now accounts for 28 percent of U.S. GDP.⁵⁰ While the United States runs a large deficit in merchandise trade, it traditionally

47 For example, if growth is achieved solely by adding workers without increasing productivity, then wages will not rise in the long term.

48 See Brynjolfsson and Hitt (2003). See also, Jorgenson and Stiroh (2000); Harchaoui, Tarkhani, and Khanam (2004); Economic Report of the President (2002) at pages 58-60; and Landenfeld, and Fraumeni (2001) at pages 23-39.

49 The national total is based on current dollar GDP divided by the annual average of seasonally adjusted monthly nonfarm employment levels reported by BLS (series ID CEU0000000001). It thus overstates economy-wide productivity by not including agricultural labor.

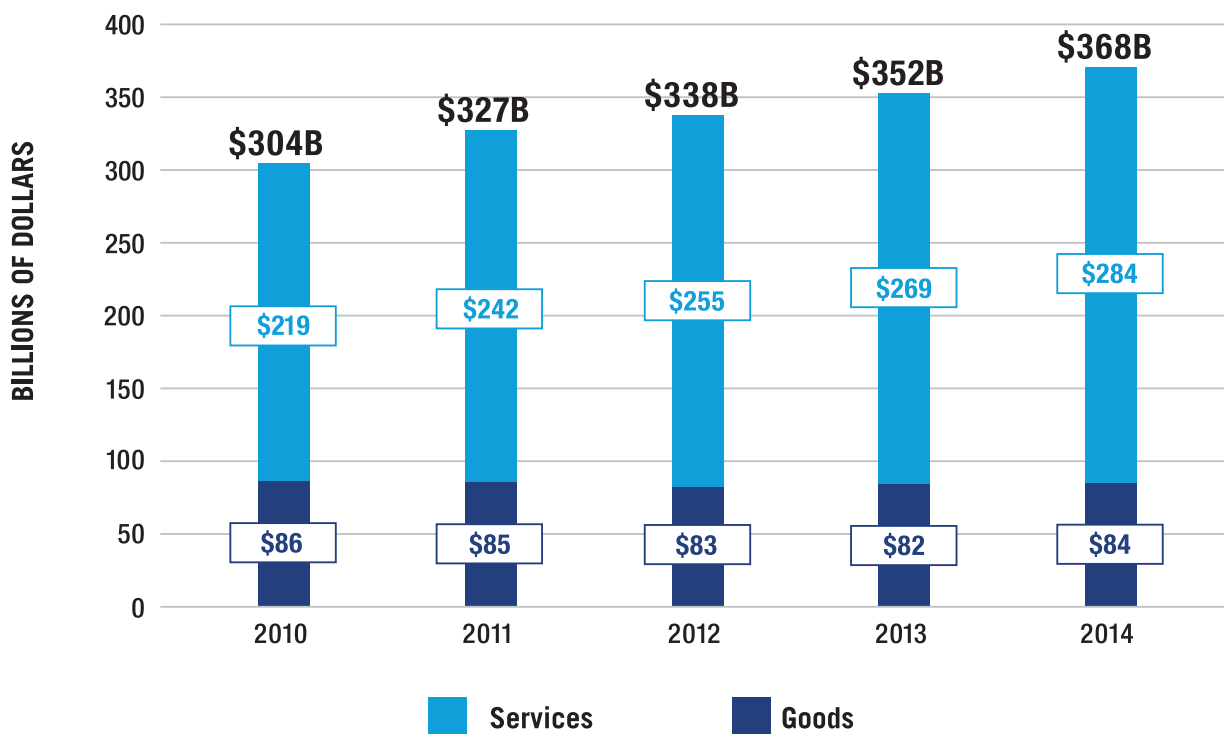
50 See Bureau of Economic Analysis, “Gross Domestic Product: Second Quarter 2016 (Second Estimate),” BEA 16-44, August 26, 2016, at Table 3. Exports of goods and services in 2015 were \$ 2,264.3 billion, imports were \$ 2,786.3 billion, and U.S. current dollar GDP was \$ 18,036.6 billion.

has run a surplus in services trade, and is believed to hold a comparative advantage in many service sectors. In 2015, the United States balance in goods trade was -\$792.7 billion, while the balance in services trade was +\$270.7 billion.⁵¹

Exports are an increasingly important source of sales for firms benefiting from fair use.⁵² U.S. manufacturers have a long history in foreign markets, but many Internet firms are relatively new exporters. Due to international differences in copyright law and the importance of the Internet to the U.S. economy, U.S. trade officials have incorporated certain ISP safe harbors into free trade agreements, and have also begun to include other critical copyright limitations and exceptions such as fair use. Such provisions are necessary for U.S. Internet service exporters – such as ISPs and search engines, as well as the increasing number of U.S. sectors that rely on Internet services to reach customers abroad – to fully exercise their comparative advantages in foreign markets.

Chart 5 shows that estimated fair use industry exports increased by 21 percent from \$304 billion in 2010 to \$368 billion in 2014.⁵³ Due to the high level of aggregation of services trade data, it is not practical to distinguish between core and non-core exports. Accordingly, Chart 5 highlights exports of total fair use goods and services.

Chart 5: Exports for Fair Use Industries



Sources: U.S. Census Bureau

⁵¹ *Id.*

⁵² Though the revenue from the goods and services exports of fair use industries is included in the revenues and value added already measured above, exports are also reported separately in order to highlight the growing importance of trade to those industries.

⁵³ Appendix VIII contains tables detailing fair use exports of goods and services by category.

Unlike overall exports, which are dominated by goods, fair use industry exports are oriented toward services. Financial services constitute the largest portion of fair use service exports, accounting for 31 percent of total services exports in 2014. Other leading categories with significant export growth include management and consulting services, R&D, and education.

Box 6: Fair Use in News Media

Balanced copyright is essential to the media, which frequently quotes and reproduces copyrighted works without license in the course of reporting stories. Journalists also report on factual information, depending on the well-established copyright limitation that mere data and facts are not capable of receiving copyright protection. Media accounts also often rely on reproducing existing reporting. The Newspaper Association of America told the House Judiciary IP Subcommittee

The ‘fair use’ defense, which draws a distinction between infringing and non-infringing uses of copyrighted material, is a critically important issue for the news industry in the digital age.

during its copyright review that “the ‘fair use’ defense, which draws a distinction between infringing and non-infringing uses of copyrighted material, is a critically important issue for the news industry in the digital age.”^{xiv}

Services that catalog and archive news media recordings also require the fair use doctrine. As media tracking service TVEyes argued in litigation against Fox News, its product “is exactly the type of innovation that copyright law aims to promote and the fair-use doctrine is designed to protect.”^{xv} Similarly, television monitoring service SnapStream explained to a Congressional committee that “[w]ithout fair use and the ability to make recordings, it wouldn’t be possible for government agencies to monitor television and quickly and efficiently respond to

TV coverage and to hold TV content creators accountable.”^{xvi} SnapStream added that similarly, “[w]ithout fair use and the ability to make recordings, the creative satire and comedy of programs like the Daily Show, and, in many cases, the public awareness and spirited public debates they create would not be possible.”

xiv The Scope of Fair Use: Hearing Before the Subcomm. On Courts, Intellectual Property and the Internet of the H. Comm. on the Judiciary, 113th Cong. 43 (2014) (statement of Kurt Wimmer, General Counsel, the Newspaper Association of America).

xv Memorandum of Law in Opposition to Plaintiff’s Motion for Summary Judgment at 1, Fox News Network, LLC v. TVEyes Inc., 43 F. Supp. 3d 379 (S.D.N.Y. 2014) (No. 13-05315).

xvi Innovation in America: The Role of Technology: Hearing Before the Subcomm. On Courts, Intellectual Property and the Internet of the H. Comm. on the Judiciary, 113th Cong. 174 (2013) (statement of Rakesh Agrawal, CEO, SnapStream Media).

Box 7: Education and Fair Use

Students, teachers, and scholars rely on the fair use doctrine daily, in making and using copies and portions of copyrighted works. Litigation brought by the Authors Guild against the Google Books book scanning project led to judicial affirmation of how the digital availability of scholarship and literature enabled by “Google Books provides significant public benefits.”^{xvii} The appellate court agreed, finding that “Google’s making of a digital copy to provide a search function is a transformative use, which augments public knowledge by making available information about Plaintiffs’ books without providing the public with a substantial substitute for matter protected by the Plaintiffs’ copyright interests in the original works or derivatives of them.”^{xviii}

^{xvii} *Authors Guild, Inc. v. Google Inc.*, 954 F. Supp. 2d 282, 293 (S.D.N.Y. 2013).

^{xviii} *Authors Guild, Inc. v. Google, Inc.*, 804 F.3d 202, 207 (2d Cir. 2015).

CONCLUSIONS

The fair use economy has continued to expand since the end of the Great Recession, reflecting the growth of the Internet and the increased use of it by businesses and consumers. The fair use economy is changing. Output is increasingly driven by the core Internet-based industries that depend most on fair use and other limitations and exceptions to copyright.

In 2014, the fair use economy accounted for \$5.6 trillion in revenues and \$2.8 trillion in value added, roughly 16 percent of U.S. GDP. It employed approximately 18 million people and supported an annual payroll of more than \$1.4 trillion. Additionally, the fair use economy generated \$368 billion in exports and fueled rapid productivity growth.

The protection afforded by fair use has been a major contributing factor to these economic gains, and will continue to support growth as the U.S. economy becomes even more dependent on information industries.

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