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201p Special 301 Review  
Attn: Sung Chang

## COMMENT TO THE SPECIAL 301 SUBCOMMITTEE AND REQUEST TO TESTIFY

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The Program on Information Justice and Intellectual Property (PIJIP) is the internationally recognized intellectual property and information law research and academic program of American University Washington College of Law (AUWCL).<sup>1</sup> This comment is informed by PIJIP's ongoing multidisciplinary research project studying the economic impact of copyright limitations. See <http://infojustice.org/flexible-use/research>.

Please note that Sean Flynn requests to testify at the February 27<sup>th</sup> Public Hearing of the Special 301 Committee.

Many academics and other researchers have expounded on the free expression and other public interest benefits of the open and flexible US fair use clause. Our research shows that general public interests in accessing and using information can be served by policies that also promote trade economic interests of both US and foreign firms.

PIJIP's research indicates that *American firms in industries that rely on copyright limitations enjoy better outcomes when our trading partners' limitations are more like fair use*. Specifically, US firms in technology and related sectors do better in countries where copyright exceptions permit fair uses and practices of any type of work, by any user, and for any purpose – as long as the use itself is fair to the owner.

One area where the lack of limitations and exceptions in copyright poses a direct trade barrier to US firms is with respect to the right to research. Countries that do not permit uses of copyrighted material by commercial firms for data analysis, indexing and other research purposes create barriers to firms who seek to develop or market such services internationally.

Our research further shows that firms in the more traditional “copyright sectors” (i.e. – music, movies, and printed media), are not negatively affected by having more openness in copyright limitations.

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<sup>11</sup>More information on PIJIP is available at <https://www.wcl.american.edu/impact/initiatives-programs/pijip/>

Based on this finding we make the following recommendations:

- The Special 301 Committee should include analysis of copyright limitations when evaluating whether a country provides adequate and effective protection of intellectual property. In particular, it should examine whether our trading partners permit *rights to use copyrighted materials for research purposes*, including for commercial data and information analysis needed to support indexing and machine learning services.
- The 2019 Special 301 Report should highlight countries that are moving to adopt more flexible copyright practices or protect the right to research in its “Best Practices.” Two countries that should be highlighted, and encouraged to follow through on pending copyright reforms are:
  - **Singapore:** which has announced its intention to improve its existing fair use provision by removing the “fifth factor” in its current law and by recognizing a right to commercial and noncommercial data analysis.
  - **South Africa:** which has announced plans to implement fair use as part of its ongoing copyright reforms, which right includes a right to research.

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I. U.S. FIRMS BENEFIT FROM GREATER OPENNESS IN OUR TRADING PARTNERS’ COPYRIGHT LIMITATIONS

PIJIP has been conducting empirical research pertaining to the impact of balanced copyright systems on trade and economic development. One key element of an adequately balanced copyright system is having sufficiently “open” copyright limitations. We refer to “open” limitations and exceptions as those that are open to the use of any kind of work, by any kind of user and for any purpose, as long as the use does not unreasonably prejudice the legitimate interests of the author. Such openness is the hallmark of the U.S. fair use clause, but other nations have often chosen to meet local needs by opening more specific copyright exceptions. For instance, by ending restrictions that unauthorized research uses be non-commercial in nature. These “open” aspects are crucial because the current pace of technological change creates new opportunities to use different kinds of works, by different users and for different purposes than were envisioned in most copyright statutes. An open statute is a flexible one – and flexibility is needed to accommodate and encourage innovation in the digital environment.

As will be described in greater detail in section three, PIJIP has surveyed copyright experts in various countries in order to develop metrics that describe changes in the law over time. In particular, we have developed an *openness score* that allows us to compare the openness of copyright limitations from between countries and as they change within particular countries. We have found that it is positively related to profitability and income of U.S. multinational firms’ foreign affiliates in our sample set of countries.

II. HOW OPEN COPYRIGHT LIMITATIONS BENEFIT FIRMS

Intellectual property law in the United States balances the interests of those who own intellectual property and those use it. In the field of copyright, this involves protections against infringement, and when appropriate, limitations allowing unauthorized reproduction and use.

Open copyright exceptions allow firms in certain sectors like information, research, and

communications technology to use works as needed, including certain uses without authorization that do not affect the commercialization of the work. The most open copyright limitations (such as the U.S.'s fair use) allow greater innovation with new technologies that move faster than legislative processes. A series of CCIA white papers has identified industries that rely on limitations and exceptions to copyright in order to add value to the U.S. economy, a list that includes communications technology hardware firms, internet search and hosting providers, software developers, educational institutions, and contract research and development – among many others. In 2014, these firms added \$2.8 trillion to the U.S. GDP, and employed 18 million workers.<sup>2</sup>

A small but growing body of academic literature has shown how open copyright limitations are associated with positive industry indicators such as greater investment in certain industries,<sup>3</sup> that greater openness supports greater innovative activities by communications firms,<sup>4</sup> and that a *lack* of openness has hampered innovation in certain settings.<sup>5</sup> There is a subset of empirical event studies that focus on legal changes in single countries and over a comparatively short period of time.<sup>6</sup>

Last year, PIJIP released working paper at the Global Congress on Intellectual Property and the Public Interest that introduces our data on changes to copyright law over time and presents initial econometric tests of the openness of copyright limitations.<sup>7</sup> We found positive relationships between the openness of copyright limitations and (1) returns to foreign firms, (2) returns to U.S. multinationals, and (3) the production of scholarly output. This submission uses the same copyright data, but focuses on the returns to American firms doing business in countries that have (or have not) changed their copyright law to make limitations more open.

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<sup>2</sup> Andrew Szamoszszegi & Mary Ann McCleary, Fair Use in the U.S. Economy, CCIA (2017) (employing WIPO's methodology for the study of copyright industries to those that rely on copyright exceptions, in the U.S., finding that they employ 18 million workers and accounted for 16% of the U.S. economy).

<sup>3</sup> Joshua Lerner, The Impact of Copyright Policy Changes on Venture Capital Investment in Cloud Computing Companies, CCIA (2014) (demonstrating how a court ruling clarifying copyright user rights increased venture capital funding to American cloud technology firms); Michael Palmedo, R&D Spending and Patenting in the Technology Hardware Sector in Nations With and Without Fair Use (PIJIP Research Paper Series, Paper No. 02, 2017) (finding that technology hardware firms in countries with fair use spent more on research and development and received more patents).

<sup>4</sup> Fred von Lohmann, Fair Use as Innovation Policy, 23 Berkeley Tech. L.J. 8 (2008) (describing “fair use” rights, by which he means generally any private copying rights, as providing a “reservoir of incentive” to the development of private copying technology industries from the VCR to the I-Pod);

<sup>5</sup> Michael A. Carrier, Copyright and Innovation: The Untold Story, 891 Wis. L. Rev. (2012) (focusing on the strength of copyright enforcement rather than exceptions, finding that aggressive online enforcement deterred venture capital funding for new technologies related to online music sharing).

<sup>6</sup> See Roya Ghafele & Brooke Friedman, footnote 11, exceptions for Libraries and Archives, Benjamin Gilbert, A Counterfactual Impact Analysis of Fair Use Policy on Copyright Related Industries in Singapore (2014) (finding that technology hardware firms in Singapore enjoyed faster growth after the nation's introduction of fair use in 2006); Lerner (finding that clarification of fair use of remote DVR providers led to an explosion of investment into what is now the cloud storage industry); Barbara Biasi & Petra Moser, Effects of Copyright on Science: Evidence from the WWII Book Replication Program (2016) (using a natural experiment to test the relationship between unfettered access to science knowledge and research output; the U.S.'s suspension of copyright on German science publications during World War II drove subsequent innovations that can be found in patent citations to these German works).

<sup>7</sup> Flynn, Sean and Palmedo, Michael, The User Rights Database: Measuring the Impact of Opening Copyright User Rights. (September 30, 2018). Available at SSRN: <http://infojustice.org/flexible-use>

### III. EMPIRICAL EVIDENCE

#### A. User Rights Database

PIJIP has developed a metric that measures the openness of copyright across countries and over time: the User Rights Database. To date, we have collected information about the history of copyright user right laws in 21 geographically and economically diverse countries, allowing us to run initial econometric tests. We plan to expand the database to include information on 40 or more countries.

To create the database, we circulated a detailed survey on changes in copyright law to legal scholars to collect data on the presence of openness and other qualities such as flexibility and generality in nations' copyright laws from 1970 to present. The survey defines "law" broadly, explicitly including "all authoritative, published rules or interpretations," including "statutory law, administrative regulations or directives, decisions by courts, enforcement agencies or others." It asks a series of questions about 20 copyright limitations often found in national laws, (i.e. – the quotation exception, the education exception).<sup>8</sup> For each of the provisions, it asks whether the law is open to use for any purpose, open to use of any type of work, open to use by any type of user, and open to commercial uses. For some copyright limitations, it asks further questions relevant to that specific provision – for instance, we ask if the exception for use of computer programs is open to reverse engineering for the development of interoperable products. Respondents support their answers to our survey questions with legal citations.

Once we received initial survey responses from our experts, we cite checked and coded the data. For coding purposes, we assigned a numerical value of between 0 and 3 for each question. 0 indicated that the attribute (e.g., whether a particular exception is open to the use of any work) is definitely not present in the nations law. 3 indicated that the attribute is definitely present. 1 and 2 indicated the exception is "probably not" or "probably or mostly" present depending on factors such as the ambiguity of statutory language and its development through case law.

Our data is publically available under a creative commons license at <http://infojustice.org/survey>. The site includes both the survey responses in their raw form as provided by respondents, and in its coded form for use in empirical work. We have posted the survey instrument on this page as well.

To test whether firms doing business in a particular country are affected by the openness of copyright exceptions in that country, we devised an "Openness Score" from our dataset. This is the unweighted average of the 76 questions in our survey that ask about the openness of copyright exceptions. Each country earns a score between 0 and 3 for each year. PIJIP has run a series of econometric tests of the relationship between openness of

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<sup>8</sup> The user rights that form the subject of our survey are the General Exception; Quotation; Education; Research; Personal or Private Uses; Computer Programs; Databases or Other Compilations of Non-Original Facts; Text and data mining; Library Rights; Disability Access; Transformative Use; Parody and/or Satire; Incidental Inclusion; Panorama Right; Orphan Works; National Government Works; Exhaustion of Rights; Safeguards From Secondary/ISP Liability; Temporary Copies for Technological Processes; and Protections from Supremacy of Contracts.

countries' copyright limitations and various firm- and industry-level economic indicators.

## **B. Copyright Balance and Returns to U.S. Firm's Foreign Affiliates**

A key finding from our research thus far is that having *more open copyright systems abroad* – defined as systems in which a greater number of limitations and exceptions are open to any work, user, and purpose – *benefit U.S. companies*.

One set of tests utilizes industry level data on majority-owned foreign affiliates of U.S. multinational enterprises between 1999 and 2015, inclusive, taken from the Bureau of Economic Analysis (BEA).<sup>9</sup> First, we examine outcomes experienced by affiliates in the Scientific and Technical Services sector. These are the industries under the two-digit NAICS code 54, which include research and development services and computer systems development, among others.

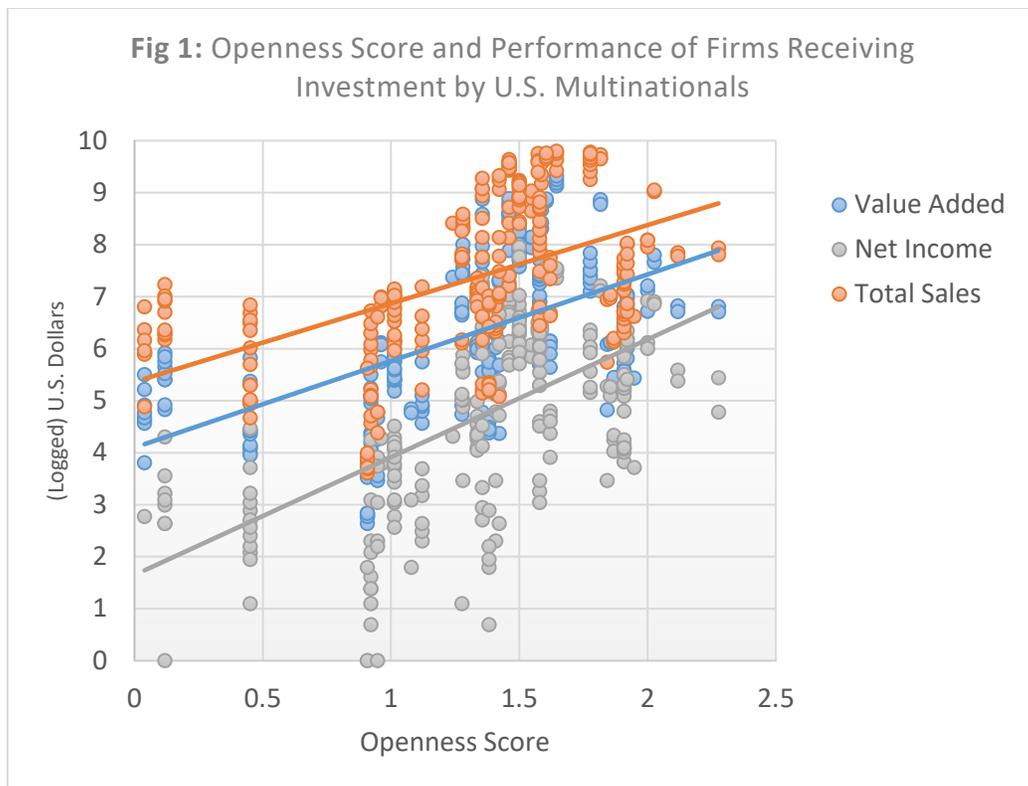
Figure 1 shows the positive relationship between our openness score and three indicators of economic returns to the foreign affiliates:

- a. Value Added – the value of goods or services produced by the foreign affiliate in the foreign affiliate's country. It differs from sales because it excludes the costs of inputs purchased. Value added is also referred to as gross profit.
- b. Net Income – the income received by the foreign affiliate from all sources, minus costs and expenses
- c. Total sales – dollar value of all final sales transactions

The positive correlations indicate that foreign affiliates in this sector tended to be more profitable, earn higher net income and higher gross sales when they operated in countries

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<sup>9</sup> The data is publicly available at: <https://www.bea.gov/international/di1usdop.htm>



with more open national copyright limitations.

To control for other factors that ought to affect industry returns, we ran a series of panel regressions testing the relationship of openness with these three indicators as dependent variables. In these regressions, GDP per capita and population control for the wealth and size of the national markets in which the affiliates operate. We use time- and country-fixed effects to control for unobserved variation that differ by year and country.<sup>10</sup> The results are summarized in Table 1.

Column 1 of Table 1 reports the regression results for Value Added. The coefficient on our openness score is positive and statistically significant at the 95% level of confidence, indicating that firms in this sector have earned higher profits from their affiliates in our sample countries when the copyright limitations in these countries have become more open. When Net Income and Total Sales are the dependent variables, the coefficients on the openness score are positive and significant at the 90% level. Coefficients on the control variables indicate that GDP per capita is positively related to nation-level returns to our firms in these sectors, but that the size of the local market is insignificant. Taken together, the results indicate that openness is associated with greater returns to foreign affiliates of U.S. firms in these industries, even when controlling for other factors (wealth, market size, time, and static country characteristics) which affect returns as well.

<sup>10</sup> Data on GDP and population were taken from the World Bank databank.

**Table 1:** Regression results for NAIC 54  
Professional, Scientific, and Technical Services

VARIABLES	(1) Dep. Variable: (Log) Value Added	(2) Dep. Variable: (Log) Net Income	(3) Dep. Variable: (Log) Total Sales
Openness Score	0.372** (0.141)	0.628* (0.311)	0.401* (0.200)
(Log) GDP per capita	1.481*** (0.192)	1.878*** (0.212)	1.580*** (0.181)
(Log) Population	-0.376 (0.616)	2.004 (1.275)	-0.156 (0.590)
Constant	-1.489 (11.95)	-49.02* (23.69)	-5.288 (11.40)
Observations	272	242	265
Within-entity R <sup>2</sup>	0.779	0.592	0.775
Time and country F.E.	Yes	Yes	Yes

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Next, we test whether copyright limitations have a negative association with firms in copyright intensive industries. We use BEA data on the returns to majority-owned foreign affiliates in the “information” sector, identified under the two-digit NAICS codes 51. This is a very high level of industry aggregation – including copyright industries such as print publishing (5111), movies (5121), and music (5122), as well as industries that rely more on flexibilities in copyright, such as data processing, hosting (5182), and software development (5112). The high level of aggregation makes the results difficult to interpret, but this is the only publicly available industry-level data on foreign affiliates we are aware of, and it allows us to test the effect of openness of copyright user rights on a set of industries that should be sensitive to copyright protection.

We run the same set of panel regressions on Value Added, Net Income and Total Sales as before, this time using data from the information sector. GDP per capita is the most significant control variable, and population is significantly, positively related to sales. Yet we find no statistically significant relationship – negative or otherwise – between our openness score and any of the three variables measuring industry outcomes in our sample countries. According to the available data, there is no evidence that foreign affiliates of U.S. firms based in our sample countries have been adversely affected when these countries have adopted more open copyright limitations.

The results are summarized in Table 2.

**Table 2:** Regression results for NAICS 51  
Information Industries

VARIABLES	(1) Dep. Variable: (Log) Value Added	(2) Dep. Variable: (Log) Net Income	(3) Dep. Variable: (Log) Total Sales
Openness Score	0.454 (0.390)	0.105 (0.597)	0.743 (0.515)
(Log) GDP per capita	1.223*** (0.188)	1.148*** (0.178)	1.071*** (0.228)
(Log) Population	0.807 (0.631)	-1.505 (0.991)	1.273** (0.537)
Constant	-20.30* (10.64)	20.40 (17.25)	-26.20** (10.65)
Observations	261	180	264
Within-entity R <sup>2</sup>	0.541	0.291	0.577
Time and country F.E.	Yes	Yes	Yes

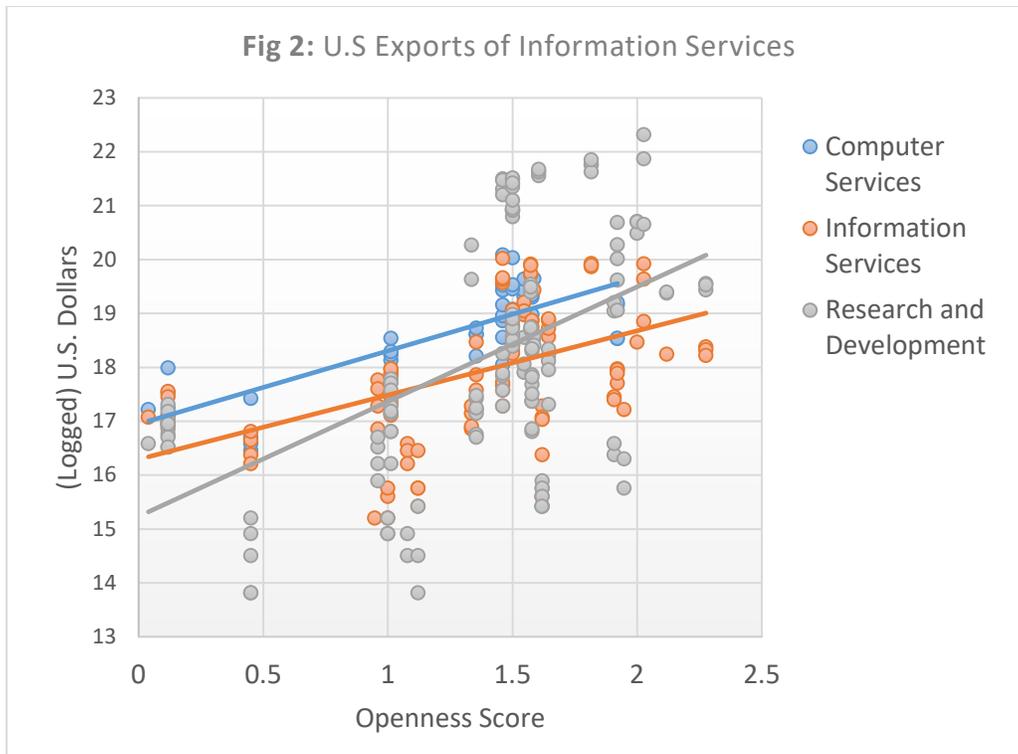
Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### C. Copyright Balance and Imports of Goods and Services from the United States

We next tested the relationship between U.S. exports of services using data from the UN COMTRADE database.<sup>11</sup> We examined three information-based sectors identified under the Electronic Balance of Payment Services (EBOPS) codes: computer services, information services, and research and development. There is a limited quantity of data, yet there is a clearly positive correlation between the openness found in a trading partner's copyright user rights and the value of services imported by that country from U.S. firms. Figure 2 shows the scatterplot illustrating the relationship before the addition of control variables.

<sup>11</sup> The data is available at: <https://comtrade.un.org/data/>



We run a panel regressions to test this relationship while controlling for market wealth, size, and unobservable variation over country and time. Due to the small sample sizes (i.e. - only 40 observations for the computer services industry), we combine the three into one dataset and establish panels at the country-industry level. Table 3 summarizes the results. There is a positive significant relationship between openness and service exports and the control variables are positive and significant as expected. This implies that U.S. firms export more services to countries that have more open copyright limitations, a relationship which is robust to the inclusion of controls.

**Table 3:** Regression results for Service Exports

VARIABLES	(3) U.S. Service Exports
Open	0.370*** (0.087)
(Log) GDP per capita	0.622*** (0.203)
(Log) Population	4.742*** (1.133)
Constant	-84.21*** (17.39)
Observations	278
Within-Entity R <sup>2</sup>	0.525
Time and country F.E.	Yes

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

#### IV. RECOMMENDATIONS TO THE SPECIAL 301 COMMITTEE

Based on these findings, we would like to make two recommendations to the Committee regarding copyright limitations and the Special 301:

##### **A. The Special 301 Committee should include analysis of copyright limitations when evaluating whether a country provides adequate and effective protection**

The inclusion of limitations and exceptions as a necessary component to an adequate and effective intellectual property system is consistent with evolving U.S. trade policy. The trade negotiation objectives stated in the Bipartisan Congressional Trade Priorities and Accountability Act of 2015 require negotiators to seek levels of intellectual property protection that "reflect a standard of protection similar to that found in United States law."

When introducing the copyright balance provision into the Trans Pacific Partnership negotiations, USTR wrote:

A robust copyright framework ensures that authors and creators are respected, investments (both intellectual and financial) are promoted, that limitations and exceptions provide an appropriate balance, and that enforcement measures are effective.

An important part of the copyright ecosystem is the limitations or exceptions placed on the exercise of exclusive rights in certain circumstances. In the United States, for example, consumers and businesses rely on a range of exceptions and limitations, such as fair use, in their businesses and daily lives. Further, under the U.S. Digital Millennium Copyright Act (DMCA), the United States provides safe harbors limiting copyright liability, which help to ensure that legitimate providers of cloud computing, user-generated content sites, and a host of other Internet-related services who act responsibly can thrive online.<sup>12</sup>

**B. The 2017 Special 301 Report should highlight countries that are moving to adopt more flexible copyright practices in its “Best Practices”**

One place USTR should comment on copyright limitations in foreign country laws is in the Best Practices section of the 2019 Special 301 Report. Many of our trading partners such as Australia, Hong Kong, Nigeria and South Africa (among others) have been debating how much to open up the copyright limitations in their laws, including Australia, Hong Kong, New Zealand, Nigeria, Singapore and South Africa. Inclusion of fair use based on the four factor test as a Best Practice would encourage them to do so, which would benefit U.S. firms in industries that rely on copyright limitations, and the 18 million people they employ.

Two countries which should be specifically highlighted for making progress towards opening their copyright limitations are South Africa and Singapore.

**1. Singapore**

*Fair Use.* Singapore opened its fair dealing right to any purpose in 2004, a move that made its general exception closely resemble the U.S. fair use provision.<sup>13</sup> However, its law included a fifth factor to be considered in determination of whether or not a use is fair: whether or not a work was available on the market at a reasonable price. This fifth factor is not present in the laws of other countries with fair use. It was interpreted by many to mean that a user would need to seek a license before relying upon fair use (this interpretation was incorrect, according to the Government of Singapore).<sup>14</sup> PIJIP faculty submitted comments to the Singaporean government warning that the fifth factor was inconsistent with the preceding four factors, prejudiced the determination analysis against finding fairness of use, and was inconsistent with analyses of fairness based on transformative

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<sup>12</sup> Office of the US Trade Representative. USTR Introduces New Copyright Exceptions and Limitations Provision at San Diego TPP Talks. July 2012. Available at <https://ustr.gov/about-us/policy-offices/press-office/blog/2012/july/ustr-introduces-new-copyright-exceptions-limitations-provision>

<sup>13</sup> Singapore Ministry of Law and the Intellectual Property Office of Singapore. Singapore Copyright Review Report. (January 17, 2019). Available at <https://www.mlaw.gov.sg/content/minlaw/en/news/press-releases/singapore-copyright-review-report-2019.html>

<sup>14</sup> Ibid

use.<sup>15</sup>

Last month the Government of Singapore announced its intent to remove the fifth factor. The removal of Singapore's fifth factor will resolve the misconception that a user may seek a license. Furthermore, it will better serve the Government's stated goal to "create an environment conducive to the development of creative works, and to facilitate greater investment, research and development in the copyright industries in Singapore."

*Right to Research.* Singapore should also be commended for considering a right to research that applies to commercial and non-commercial uses.<sup>16</sup>

The potential for machine analysis of information on the Internet to reveal new depths of information is one of the most important frontiers for technological innovation. But that innovation will occur only in places that allow it to flourish.

A debate is emerging on whether data research rights should include commercial research. In the UK, and as proposed in the EU, exceptions to use works for data analysis apply only to uses for "the purpose of non-commercial research." In the US, fair use has always been interpreted to permit commercial as well as non-commercial applications, and this attribute is sometimes described as the reason technology companies continue to choose to base most of their development activities in the US. It will be a rare machine learning venture that will choose to locate in an environment in which only non-commercial data research is permitted.

## **2. South Africa**

*Fair use.* South Africa should be commended for proposing to introduce a US-style fair use right into its law. That right will make it easier for US companies to trade fair use technologies and services in South Africa.

South Africa's current law includes a general exception for "fair dealing," which is confined to a short list of purposes: research or private study, personal or private use, criticism or review, and reporting current events. The exception allows uses only if they are "fair," but it does not list factors to be considered in determining fairness.

In 2016, the government launched a copyright law review, and South African creators and international experts advocated for a more open general exception.<sup>17</sup> Last December, the South African National Assembly passed legislation that specifically applies the fair dealing clause to uses and purposes not specifically authorized or listed in the text. The

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<sup>15</sup> Peter Jaszi, Michael Carroll, Sean Flynn and Meredith Jacob. Comments to Singapore Ministry of Law, Intellectual Property Division, and the Intellectual Property Office of Singapore. re: Public Consultation on Proposed Changes to Singapore's Copyright Regime. (November 7, 2016) Available at <http://infojustice.org/wp-content/uploads/2016/11/AUWCL-Copyright-Submission-Nov-7-2016-Singapore.pdf>

<sup>16</sup> The Singapore Report explains: "There will be a new exception for data analysis. The exception will apply to copyright works and other subject matter. The exception will only cover acts of copying (and not other acts protected by copyright). The copying must be for the purpose of data analysis. If no analysis is performed on the work that has been copied, the exception will not apply. Both non-commercial and commercial activities can qualify for the exception."

<sup>17</sup> See submissions to the South African government in response to a call for in 2017: <http://infojustice.org/b13-comments>, and in 2018: <http://infojustice.org/b13-comments-2018>

result is a general exception resembling U.S. fair use. The legislation must still pass two more legislative bodies and be signed by the president to become law.

The South African fair use law includes “research” as one of the specifically permitted purposes and does not restrict its operation to non-commercial uses. This will make it easier for firms to enter South Africa with trade in research services – including indexing, data analysis and machine learning.