

Claims to Expand Copyright Exceptions Driven by “Bad Science”¹

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Executive Summary

Some stakeholders, large companies and private advocacy groups are currently engaged in a concerted effort to enact major copyright policy changes in Asia Pacific. However, some of the key arguments used by the proponents of these changes are based on a faulty or misleading interpretation of data. The process underway in Australia is a recent example. This report reviews five papers being used to advocate for such change, and specifically cited by, for instance, Google in support of its submission (the Submission) to the Productivity Commission’s (PC) inquiry into Australia’s intellectual property arrangements.

In the Submission, Google expressed the view that Australia’s copyright system is not as effective, efficient or adaptive as it needs to be, and that it is impeding Australia’s capacity to innovate. Our review of the empirical data Google cites finds that in general, contrary to the claims that they are being used to support, these studies are bad science and offer no substantial empirical evidence of a causal link between broader copyright exceptions and productivity and economic growth.

The studies cited in the Submission have been discredited, containing fundamental errors in empirical research, making them unfit for policy-making.² Moreover, the evidence in the studies appears to contradict the claims made in the Submission. In particular:

- The 2012 Singapore fair use study suggests that US-style fair use exceptions in Singapore were associated with a fall in the rate of growth of copyright industries. Singaporean copyright industry revenue growth slowed from 14.16 per cent to around 6.68 per cent per annum after the introduction of fair use.
- The 2012 Australian Lateral Economics Study’s own data shows that fair use exceptions in the US are associated with a lower rate of growth of value-add in what it calls copyright exceptions industries in the US, compared the same industries in Australia.

However, the studies’ authors fail to draw attention to these results, which if they had done so, would undermine their conclusions. Generally, the claims from the five studies referred to in the Submission are unreliable:

The Ghafele and Gibert Singapore Fair Use Study

The key claim from the 2012 Singapore fair use study, authored by Ghafele and Gibert, is that Singapore’s introduction of an open ended fair dealing clause³ that closely resembled

¹ See <http://www.ucmp.berkeley.edu/diapsids/buzz/dinoscience.html> for a useful discussion of “good science” which is said to include the following key features: reliance on “fact versus opinions,” “the formulation of falsifiable hypotheses developed via systematic empiricism,” “Acceptance of scientific ideas is based on a process of publication and peer review,” and that “replication is also vital to good science”. The studies discussed here fail on all these key points.

² See Dr George S. Ford (2016) “The Economic Impact of Expanding Fair Use in Singapore: More Junk Science for Copyright Reform” Perspectives: Phoenix Centre for Advanced Legal and Economic Public Policy Studies <http://phoenix-center.org/perspectives/Perspective16-01Final.pdf>; Dr. George S. Ford (2015) *The Lisbon Council’s 2015 Intellectual Property and Economic Growth Index: A Showcase of Methodological Blunder*, Phoenix Center

<http://phoenix-center.org/perspectives/Perspective15-03Final.pdf>. George Barker & Ivan Png 2013, Unfair Evidence on Fair Use, 3 June, available at <https://law.anu.edu.au/news/cle/unfair-evidence-fair-use/>; George R Barker 2013, ‘Agreed Use and Fair Use: The Economic Effects of Fair Use and Other Copyright Exceptions’ paper presented to the 2013 Annual Congress of the Society for Economic Research on Copyright Issues (SERCI), MINES ParisTech, Paris (France)

³ Clause III.35. *Fair dealing in relation to works* was adopted as an amendment to The Singapore Copyright Act (Ch. 63) -

the US fair use law provided a significant stimulation of growth in “private copying technology industries,” generating an additional 11% growth in total value-add in private copying. This claim is incorrect and misleading for at least three reasons, which, along with other errors, render the claim from the Singapore Study irrelevant to policy making: First, 95% of Singapore’s output of private copying technology is exported and could not have been affected by the domestic legal change, and the type of growth that would have been necessary within the domestic 5% is clearly impossible. Second, the study’s aggregation of a so-called private copying industry is the product of subjectively aggregating a number of diverse industries that have only an incidental relation to private copying.⁴ Finally, as Dr. George S. Ford of The Phoenix Center demonstrated, the authors of the study violated “the most basic and necessary assumption” of the “difference in differences” methodology that they used and made numerous other methodological errors, causing him to assess their study as “junk science.”⁵ Ford was unable to replicate their results even after correcting a number of key errors in their methodology.

The Lateral Economics Australian Study

The Australian study authored by Lateral Economics for the Australian Digital Alliance focuses on two main claims. First, the study claims that industries that rely on copyright exceptions and limitations contribute more to the Australian economy (\$182 billion or 14% of GDP) than those that rely on copyright (\$98 billion or 10% of GDP). Second, the study offers a “very conservative estimate” that if US-style fair use copyright exceptions were introduced to Australia the “value added or the welfare gain to the Australian economy would be \$593 million higher” per annum after 10 years. We prove that both these claims are unfounded, and contradicted by Lateral Economics own data presented in the report.

This report and earlier reviews show that their industry groupings are redundant and not relevant to the key question, and that the claimed increase in real growth by 1% (or around \$600 million) from introducing flexible fair use policies over three years is groundless. Lateral Economics’ own data shows that fair use exceptions in the US are associated with a lower rate of growth of value-add in what it calls copyright exceptions industries in the US, compared to the same industries in Australia. In addition, the evidence from the Singapore study shows that US-style fair use exceptions was associated with a large decline in the growth rate of the core copyright industries.

The Gibert Lisbon Council Study

Google claims the paper authored by Gibert for the Lisbon Council found that copyright exceptions enhance economic growth, jobs and prosperity. However, due to numerous fundamental errors detailed in this paper and by other reviewers,⁶ the study cannot be relied upon. The Lisbon paper examines correlations in eight countries between selected economic outcomes and an index which the authors claim measures the scope and flexibility of exceptions to exclusive rights (SFEER Index) for each country. However, errors in the economic data used, make the statistical tests meaningless. The source economic data used, for example, was in nominal terms, and expressed in five different currencies. Consequently irrelevant variations in the nominal values, and in cross-country exchange rates over time make it impossible to draw any conclusions. Moreover the SFEER Index is based on the subjective and incomplete review of a limited number of the relevant features of copyright

Act 2 of 1987 on 1 January 2005. Ghafele and Gibert claim that clause III.35 “strongly echoes §107. *Limitations on exclusive rights: fair use* of the Copyright Law of the USA. The clause outlines the various factors courts must consider when making a retroactive judgment about fair use... The language of the clause embeds a degree of flexibility into the law in terms of determining whether or not a particular use of a copyrighted work is fair, and thus non-infringing. It is in stark contrast to alternative systems, such as those found in Europe, that specifically define what constitutes a non-infringing use of a copyrighted work by exhaustively listing the activities that are exempt from infringement liability. Exhaustive lists denote a very strong, but limited, boundary for what constitutes a non-infringing use.” Ibid pp3-4

⁴ George R. Barker (2013)

⁵ [George S Ford \(2016\)](#) pp 6, 12 and 13

⁶ George S. Ford (2015)

exceptions in the eight countries. As a result, the index cannot be replicated, which implies that the study is unscientific. The correlations the Lisbon study reports are further based on at most eight and as few as five observations. This is too few to generate reliable statistical results. The Lisbon Council's conclusions are moreover based on the statistical significance of less than 5% of the 462 tests run, suggesting "cherry picking of results," with the small number of "successes" in turn simply explained by random variation.

The Mike Masnick Study

The Sky is Rising Report, authored by Mike Masnick (of the highly anti-copyright blog, *Techdirt*), for the Computer and Communications Industry Association (CCIA) states that "there has been an explosion in creative output over the past couple of decades." While technological advances have, in fact, facilitated measuring an increase in the creation of creative content, this fact does not demonstrate a case for weakening copyright, without a clear method for separating the effects of digitization and the effects of copyright protection.

Further, the evidence cited in the Masnick report is misleading. For example, it claims "Americans have greater access to music than ever before in history, and in 2006, it was estimated that consumers downloaded about one billion tracks per month."⁷ But the report fails to mention that much of that downloading was *unpaid*, or downloaded *illegally*, and that *these illegal downloads have been shown to displace legitimate sales*. The report incorrectly claims that music sales have hit "record highs in 2011 and 2012." This is inaccurate. Music sales revenue (including both physical sales and digital downloads) has decreased by more than 40% from 1999 to 2013 both in the US and internationally (inflation adjusted). Similarly for movies, the report argues that "box office remains the largest revenue driver. Sales of physical home entertainment media (DVD, Blu-ray) will continue to decline, and will be the only category of video entertainment that does so." However, the report fails to note that the declining category (DVD, Blu-ray) was previously the main source of revenues, and the most affected by piracy, being more vulnerable to copying than the more experiential movie theater viewing. For television, the report argues that average TV viewing amounts to approximately nine hours per day, an obvious error. Actually these nine hours include listening to radio and other types of media uses.⁸ More generally the report simply fails to mention the well documented evidence that piracy harms media sales, and the growing evidence on consequent falls in investment and employment in creative sectors as a result.

The Antony Dnes 2011 UK Study

Finally, *A Law and Economics Analysis of Fair Use Differences Comparing the US and UK* by Antony Dnes from 2011⁹ is cited by Google for the proposition that that fair use appears to allow "innovations to emerge rapidly in the US," "of high value to consumers" "without generating significant damage to copyright holders." Upon review, however, the Dnes study is not an empirical study and provides no evidence for these propositions. Rather it is a review of the legal doctrines in the US and the UK. In fact as Dnes notes,

"No-one quite knows whether the US fair-use and UK fair-dealing approaches are truly distinct, or what the full economic significance is of any distinctions; these issues are assessed here through an analysis of laws and cases." Dnes Study P7

Also, although Google correctly points out that the Dnes report was prepared for the UK's

⁷ Masnick cites "Hiatt, Brian and Serpick, Evan. (2007). The Recording Industry's Decline. Rolling Stone Magazine" for this claim but this article is not available. Instead one can find [Brian Hiatt and Evan Serpick](#) "Music Biz Laments Worst Year Ever" Rolling Stone January 13, 2006 which notes "sales of digital tracks jumped from 141 million in 2004 to 353 million in 2005, and sales of digital albums rose from 5.5 million to 16.2 million" this indicates Masnick's billion per month number must include illegal downloads see <http://www.rollingstone.com/music/news/music-biz-laments-worst-year-ever-20060113#ixzz46Fy0LZ2D>

⁸ <http://www.nielsen.com/content/dam/corporate/us/en/reports-downloads/2014%20Reports/nielsen-cross-platform-report-march-2014.pdf>

⁹ *A Law and Economics Analysis of Fair Use Differences Comparing the US and UK*, Antony W. Dnes, 2011 <http://webarchive.nationalarchives.gov.uk/20140603093549/http://www.ipo.gov.uk/ipreview-doc-j.pdf>

Hargreaves Review of Intellectual Property and Growth, it is important to point out that in his final report Hargreaves does not explicitly rely on, or cite Dnes report for any key propositions, although it was included in his reference list. Hargreaves instead concluded fair use was not a good idea for the UK and that fair use's benefits were overstated.¹⁰

For all of the above reasons, discussed in more detail in the following pages, this report concludes that the argument advanced in the Submission that broader copyright exceptions will promote productivity and economic growth is not based on sound research.

¹⁰ Hargreaves page 45 paragraph 5.16

Introduction

Some stakeholders, large companies and private advocacy groups are currently engaged in a concerted effort to enact major copyright policy changes in Asia Pacific. However, some of the key arguments used by the proponents of these changes are based on a faulty or misleading interpretation of data. The process underway in Australia is a recent example. In August 2015, the Australian Government asked the Productivity Commission (PC) to undertake an inquiry into Australia's intellectual property arrangements, and recommend changes to the current scope and duration of protection.¹¹ In its submission to the PC inquiry in November 2015¹² (the Submission), Google expresses the view that Australia's copyright system is not as effective, efficient or adaptive as it needs to be, and that it is impeding Australia's capacity to innovate. The Submission therefore recommends "amendments to the Copyright Act to: introduce a dynamic, flexible copyright exception such as fair use; and amend the safe harbour scheme so that it applies to all online service providers, in line with Australia's obligations under the AUSFTA."¹³

On copyright exceptions the Submission notes that the Australian Law Reform Commission (ALRC) "got it right" when the ALRC recommended that Australia should adopt a flexible fair use copyright exception.¹⁴ In support of these recommendations the Submission claims that "there is substantial empirical evidence showing the importance of copyright exceptions to productivity and economic growth."¹⁵

Google then cites four papers in support of this claim:

1. 2012 Singapore Fair Use Study by Roya Ghafele and Benjamin Gibert
2. 2012 Australia Lateral Economics Study and
3. 2015 Lisbon Council Study by Benjamin Gibert
4. 2011 UK Study by Antony Dnes entitled *A Law and Economics Analysis of Fair Use Differences Comparing the US and UK*

The Submission also maintains that "Creators have nothing to fear from flexible, dynamic copyright exceptions. On the contrary, a 2014 report on the health of the US content industries found that there has been an explosion in creative output in the US over the past couple of decades."¹⁶ In support of this assertion, the Submission cites a fourth study

5. 2014 *The Sky is Rising* (2014) by M, Masnick, M. Ho, J. Hung and L. Beadon¹⁷

Considering the importance of the policy shift recommended in the Submission, and the importance of evidence based copyright policy, we review each of the above five reports relied on by the Submission in detail.

Our review of the empirical data relied upon in the Submission finds that these studies are bad science, and offer no substantial empirical evidence of a causal link between copyright exceptions and productivity and economic growth. The evidence cited by the Submission in general presents a highly biased positive view of the impact of copyright exceptions, and misunderstandings about the creative sector.¹⁸

¹¹ <http://www.pc.gov.au/inquiries/current/intellectual-property/terms-of-reference>

¹² http://www.pc.gov.au/_data/assets/pdf_file/0011/194861/sub102-intellectual-property.pdf

¹³ Google Submission p4

¹⁴ Google Submission p4

¹⁵ Google Submission p2

¹⁶ Google Submission p29

¹⁷ *The Sky is Rising*, Michael Masnick, Michael Ho, Joyce Hung and Leigh Beadon, October 2014

<https://www.cciagnet.org/wp-content/uploads/2014/10/Sky-Is-Rising-2014.pdf>

¹⁸ see George Barker & Ivan Png 2013, *Unfair Evidence on Fair Use*, 3 June, available at <https://law.anu.edu.au/news/cle/unfair-evidence-fair-use>; and George R Barker 2013, 'Agreed Use and Fair Use: The Economic Effects of Fair Use and Other Copyright Exceptions' paper presented to the 2013 Annual Congress of the Society for Economic Research on Copyright Issues

Moreover, the evidence in the studies appears to contradict the claims made in the Submission. In particular:

1. The 2012 Singapore study suggests that US-style fair use exceptions in Singapore were associated with a fall in the rate of growth of copyright industries. Singaporean copyright industry revenue growth slowed from 14.16 per cent to around 6.68 per cent per annum after the introduction of fair use.¹⁹
2. The 2012 Australian Lateral Economics Study's own data shows that fair use exceptions in the US are associated with a lower rate of growth of value-add in what it calls copyright exceptions industries in the US, compared to the same industries in Australia.

However, the studies' authors fail to draw attention to these results, which if they had done so would undermine their conclusions. Generally, as we outline below, the claims from the five studies referred to in the Submission are unreliable.

1. The Gibert Singapore Fair Use Study

The key claim from the Singapore study, authored by Ghafele and Gibert, is that fair use laws in Singapore provided a significant stimulation of growth in "*private copying technology industries*,"²⁰ generating an additional 11% growth in total value add in private copying.²¹ This claim is incorrect and misleading for two main reasons²², which, along with many other errors, render the claim from the Singapore Study irrelevant to policy making:

- a) First, Singapore is a small open economy and most of its output of private copying technology is exported. Indeed over 95% of Singapore's electronic goods are exported.²³ Clearly Singapore's fair use laws cannot affect demand conditions in the countries to which Singapore exports. Changes in Singapore's fair use laws only affect domestic demand for private copying technology. Given domestic sales of electronic goods in Singapore is less than 5% of the total output, then domestic sales could not generate the kind of increases in growth in total value add outlined. To generate an additional 11% growth in total value add, domestic sales would have had to increase by over 200% under certain assumptions.
- b) Second, a key problem with their claim that the "private copying industries" have benefited from the fair use law is that their so-called private copying industry is quite simply a fiction. It is the product of subjectively aggregating a number of diverse industries that have only an incidental relation to private copying. Given this arbitrary grouping, there are obviously significant other reasons for the boom in the fictional "private copying" technology industry group other than Singapore's 2005 Fair use

(SERC), MINES ParisTech, Paris (France) Dr. George S. Ford (2015) *The Lisbon Council's 2015 Intellectual Property and Economic Growth Index: A Showcase of Methodological Blunder*, Phoenix Center <http://phoenix-center.org/perspectives/Perspective15-03Final.pdf> Dr. George S. Ford (2016) *The Economic Impact of Expanding Fair Use in Singapore: More Junk Science for Copyright Reform* Phoenix Center <http://phoenix-center.org/perspectives/Perspective16-01Final.pdf>

¹⁹ Roya Ghafele & Benjamin Gibert 2012, *The Economic Value of Fair Use in Copyright Law Counterfactual Impact Analysis of Fair Use Policy On Private Copying Technology and Copyright Markets in Singapore*, Oxfirst Limited, October page 5

²⁰ Private copying technology industries were defined as those industries that manufacture and sell technologies – and related electronic components, infrastructure, and services - that enable consumers to record, store, and transmit copyrighted material for their own personal use. The private copying group includes manufacturers of computers, data processing and peripheral equipment, disk media, storage subsystems, audio and video combination equipment as well as the wholesale and retail sale of computers, peripheral units and recording equipment.

²¹ Ibid p 5

²² See also the critique of the study Dr. George S. Ford (2016) *The Economic Impact of Expanding Fair Use in Singapore: More Junk Science for Copyright Reform* Phoenix Center

<http://phoenix-center.org/perspectives/Perspective16-01Final.pdf>

²³ George Barker & Ivan Png 2013, *Unfair Evidence on Fair Use*, 3 June, available at <https://law.anu.edu.au/news/cle/unfair-evidence-fair-use>; and George R Barker 2013, 'Agreed Use and Fair Use: The Economic Effects of Fair Use and Other Copyright Exceptions' paper presented to the 2013 Annual Congress of the Society for Economic Research on Copyright Issues (SERC), MINES ParisTech, Paris (France)

amendment. For example, 66% of the growth of the fictional private copying group post 2005 is accounted for by growth in computers. That can hardly be linked solely, or attributed if at all, to fair use copyright reform.

Finally, Ghafele and Gibert make a number of other major methodological errors, claiming to use a

“differences-in- differences methodology that is applied in this report to evaluate the economic impact of 2005 fair use amendments to the Singapore Copyright Act on private copying technology and copyright markets in Singapore.”²⁴

As Dr. George S. Ford of The Phoenix Center has demonstrated, however, the authors violated “the most basic and necessary assumption” of a “difference in differences” methodology and made numerous other methodological errors, causing him to assess their study as “junk science”.²⁵ In particular Ford notes:

“ The control group is improperly used and ineptly chosen. Moreover, by Ghafele and Gibert’s own admission, the most basic and necessary assumption of the difference-in-differences method is violated (the parallel paths assumption). For this reason alone, the results are meaningless. Also, Ghafele and Gibert make a glaring and basic error in their treatment of first-differenced data. Ghafele and Gibert use aggregate data to such a level that only six data points (1999-2004) are used to forecast a single future value five years out (2010) based on a linear trend, thereby ignoring the non-linear patterns and tossing out the vast majority of the available data. In so doing, the authors foreclose the ability to use common statistical testing techniques due to very small samples. Additionally, the treated and control groups have sizeable differences in their mean values, so it is essentially impossible for the control group to serve any meaningful purpose in the calculations used.”²⁶

George S Ford tried to replicate the results of Ghafele and Gibert’s *Singapore Study* using a better approach that remedied some of the many (but not all) shortcomings. For this he

“applied the standard regression- based difference-in-differences test so that statistical testing can be performed within a more proper difference-in-differences regression model. Using the same data as the *Singapore Study* (which is not good data) but using it along with the standard difference-in-differences regression model, I am unable to reject the hypothesis that the changes in Singapore’s laws had “no effect” on the industry groups.”²⁷

2. The Lateral Economics Australian Study

The Australian study authored by Lateral Economics for the Australian Digital Alliance focuses on two main claims:

- a) First, the study claims that industries that rely on copyright exceptions and limitations contribute more to the Australian economy than those that rely on copyright. For example it purports to show that for Australia value added for what it defines as copyright exceptions industries was 182 Billion (14% of GDP), which is 62% higher than value added for core copyright industries at 98 billion (10% of GDP).

²⁴ Op cit 11 at p 14

²⁵ See George S. Ford (2016) “The Economic Impact of Expanding Fair Use in Singapore: More Junk Science for Copyright Reform” Perspectives: Phoenix Centre for Advanced Legal and Economic Public Policy Studies pp6, 12 and 13

²⁶ Op cit p2

²⁷ Op cit p 2

- b) Second, the study offers a “very conservative estimate” that if US-style fair use copyright exceptions were introduced to Australia the “value added or the welfare gain to the Australian economy would be \$593 million higher” per annum after 10 years.

Both of these claims are unfounded, and contradicted by Lateral Economics own data presented in the report.

- i. First, the only reason why Lateral Economics’ measure of copyright related industries (CRI) is smaller than its measure of copyright exceptions industries (CEI) is that it includes core copyright related industries (CRI) as a subset of its copyright exceptions industries. Thus, Lateral Economics uses a wider set of industries in what it calls the copyright-exceptions industries, and compares it to a narrower subset of industries, which it calls copyright related industries. By definition then, the economic contribution of the copyright-exceptions industries is larger than the contribution of copyright industries involving a smaller subset of the “copyright exceptions” industries. It is thus quite simply an artefact of coding more industries as CEI than CRI for purposes of comparison.

The methodology used to code copyright exceptions and limitations industries is moreover fundamentally flawed, as it is not possible to distinguish copyright exceptions industries from copyright related industries in the first place. The so-called copyright exceptions industries of course actually exploit and rely on copyright content to make a profit. In other words, copyright contributes to and drives the growth in the so-called copyright exceptions industries. By definition copyright and copyright exceptions relate to the same goods. On a fair comparison the two terms must cover the same industries. If an industry relies on goods covered by copyright, then it relies on goods covered by copyright exceptions - and vice versa. Copyright and copyright exceptions are the inverse of each other – but must affect the same industries. Like the Singapore study, which tried to identify and measure a fictional copying technology industry, the Australian study thus tried to identify and measure a fictional copyright exceptions and limitations industries group that is different from copyright related industries. As a result of this error, the Lateral Economics study makes arbitrary and irrelevant comparisons between its copyright exceptions industries and copyright related industries economic contributions. It does not compare like for like. The study is thus fundamentally flawed. We note that the World Intellectual Property Organization (WIPO) have already developed a better data set for analyzing the central concerns the study is focused on.

- ii. Second, one of Lateral Economics’ central claims is not supported by data at all, but is literally an arbitrary assumption. In fact, their data undermines their assumption. Lateral Economics claims that introducing US-style flexible exceptions would lift the productivity growth rate of its copyright exceptions industries in Australia by 1% and as a result that “value added or the welfare gain to the Australian economy would be \$593 million higher” per annum after 10 years.²⁸ However, Lateral Economics gives no theoretical or empirical basis for this 1% increase in growth of value add. It is quite simply just an arbitrary assumption. On the contrary of course, introducing copyright exceptions would negatively affect the copyright industries (resulting in less investment and less creative output), which would in turn harm the so-called copyright exceptions industries (which rely on the copyright works) in the long run.

Indeed, Lateral Economics’ own data is inconsistent with this assumption.²⁹ Their own data showed that even though the US have fair use exceptions, Australia’s

²⁸ See p3 Excepting Future Part II - Lateral Economics Report (Sept 2012)

²⁹ See Table 4 Part 1 *Exceptional Industries*

growth rate of “copyright exceptions and limitations industries” was nearly 4% higher than the US growth rate in value add between 2007-2010 – not lower. This higher level of growth of the “exceptions and limitations industries” in a country with purportedly more narrow exceptions and limitations is clearly inconsistent with the Lateral Economics hypothesis. Given Lateral Economics’ assumption that US-style fair use copyright exceptions would raise the growth rate of value add by 1%, one would tend to expect the US would have a higher rate of growth of value add in copyright exceptions industries than Australia. Thus the actual data presented (but ignored) in the report itself undermines the assumption by the report authors that adopting US-style fair use exceptions would enhance the growth rate of value add amongst exceptions industries by 1%. Moreover a study by PWC at the ‘copyright exceptions’ industries level, which standardised analysis of the economic contribution of exceptions industries in Australia by Lateral Economics,³⁰ and that in a similar study for the United States³¹ revealed that not only was growth of the Australian exceptions industries higher, it also constituted a larger portion of the Australian economy (12.9 per cent) than the equivalent United States industries do in the United States (10.5 per cent).

- iii. Third, the Singapore study would seem to suggest that the introduction of fair use exceptions was correlated in Singapore with a large (>50%) reduction in the rate of growth of core copyright related industries. Thus, to achieve an overall growth rate in CEI (which is defined to include the core copyright related industries), the non-core copyright industries would have to experience growth sufficiently large to offset the net reduction in growth for core copyright industries. Private and public education and training constitute around 70% of Lateral economics measured difference between core copyright related industries, and its measure of copyright exceptions industries. Thus, US-style fair use exceptions would have to increase the value add of education and training by around 1% to make up the \$593 million welfare gain assumed to rise from US style fair use exceptions. This seems highly unlikely given education and training in Australia already enjoys extensive exceptions under the Australian fair dealing rules.

The only other part of the fictional copyright exceptions and limitations industry defined by Lateral Economics Australia that might contribute to the estimated \$593 million welfare gain assumed to rise from US-style fair use exceptions are the goods classifications involving copying technology as in the Singapore study. Australia, however, like Singapore is a relatively small open economy and a significant proportion of its output of electronic goods is either exported or imported. Clearly, Australian copyright exceptions and limitations laws can not affect export demand conditions in the countries to which Australia exports. Any changes in Australia’s fair use laws would only affect domestic demand for private copying technology, and import demand for electronic goods. A large part of any change in demand would probably therefore be met by imports involving a transfer from the Australian economy to overseas producers of such goods. Any such increase in such import values cannot then be included as a welfare gain to Australia as it is a transfer off shore to foreigners - in effect a welfare loss. All that remains is domestic sales of non-imported electronic goods in Australia. Any likely change in such domestic demand due to US fair use style exceptions however could not offset the loss in welfare due to the import transfer, and then generate the kind of increases in growth in total value add outlined by the Australian study. To generate an additional \$593

³⁰ Lateral Economics 2012a, *Exceptional Industries: The Economic Contribution to Australia of Industries Relying on Limitations and Exceptions to Copyright*, p.23

³¹ Thomas Rogers and Andrew Szamoszegi 2010, *Fair Use in the U.S. Economy: Economic Contribution of Industries Relying on Fair Use*, *Computer & Communications Industry Association*

million in total value added, non-imported domestic sales would have to increase by a large multiple. Thus, the Australian study is flawed in that it seems to assume Australia is a closed economy, or that adopting a fair use law would affect Australia's exports, and not its imports.

The assumption that introducing flexible exceptions would increase real growth by 1% or nearly \$600 million over three years is therefore groundless. Instead economic theory predicts, and the evidence from the Singapore study suggests that US style fair use exceptions would lead to a large negative percentage drop in the growth rate of the core copyright industries. In order to make up for this drop, other industries included in Lateral Economics definition of copyright exceptions industries would have to make up the deficit. This seems unlikely.

Moreover, the studies' own data shows that fair use exceptions in the US are associated with a lower rate of growth of value added in what it calls copyright exceptions industries in the US compared with the same industries in Australia. The data showed that even though the US has fair use exceptions, Australia's growth rate in value added of exceptions and limitations industries was nearly 4% higher than the US growth rate of such industries between 2007-2010 – not lower. This is clearly inconsistent with the Lateral Economics hypothesis that broader exceptions (i.e., fair use) lead to better outcomes for the so-called “exceptions and limitations industries.” And, further confirms the point that the “exceptions and limitations industries” designation is misleading, having no discernible relation to the extent of value-added in an industry that is dependent upon exceptions and limitations.

3. The Gibert Lisbon Council Study

The Submission claims that the paper authored by Gibert for the Lisbon Council found that copyright exceptions enhance economic growth, jobs and prosperity. However, due to errors in its use of data and flaws in the methodology used, the study's claimed results as to the relationship between exceptions and economic growth, jobs and prosperity cannot be relied upon.

The reasons why are numerous and can be summarized under two categories:

- a) **Data problems.** The Lisbon paper examines correlations in eight countries between selected economic outcomes and an index of the Scope and Flexibility of Exceptions to Exclusive Rights (SFEER Index) for each country. The source economic data used, however, was in nominal terms, and expressed in five different currencies. Consequently irrelevant variations in the nominal values, and in cross country exchange rates over time distort the correlation results, or create noise, making the statistical tests meaningless. Turning to the SFEER Index, the Lisbon study is not very clear about how the index was developed for each country. As described, however, it appears to be based on the subjective and incomplete review of a limited number of the relevant features of copyright exceptions of the eight countries. The construction of the SFEER Index is based on the author's interpretation of copyright laws. No attention is paid to legal decisions regarding the application of such laws, and the IP Index Report includes the explicit assumption of uniform (and presumably effective) enforcement. Given the index is determined so subjectively, it cannot be replicated. The index thus appears likely to be unreliable, and indeed had to be revised two months after it was first released. It is not fit for purpose for other reasons. The index purports to measure scope and flexibility of copyright exceptions together, combining scope and flexibility in one index, yet they are separable issues. Combining scope and flexibility into the same index creates imprecision in measurement, introduces “noise” and undermines the study's examination of correlations with economic outcomes. On scope the study also assumes broad

exceptions can be associated with strong copyright, whereas theoretically the opposite is true in relation to scope - broad exceptions are associated with weak copyright. On flexibility, it claims flexible exceptions are associated with strong copyright, when in fact flexible exceptions only imply flexible copyright, and it's not clear flexible copyright is strong copyright.

- b) Methodological problems. The correlations they present are based on a low number of observations, too few to generate reliable statistical results. There are clearly very many variables affecting the economic growth, jobs and prosperity in any of the countries. The impact of these other variables were not controlled for. It is thus not possible to conclude any correlation between the economic data examined and copyright exceptions is anything more than a coincidence. Moreover the intermediate steps by which copyright exceptions may affect economic statistics needed to be modeled, and examined to test the net effect of copyright exceptions. This is because copyright exceptions themselves do not cause economic growth directly. If anything they affect economic growth through their possible effect on multiple intermediate variables such as investment in, and distribution of creative output, which do affect economic growth.

In a report released in June 2015, Dr. George S. Ford Chief Economist at the Phoenix Center³² further demonstrates that the Lisbon Council's analysis is "*a showcase of methodological blunder*" and points to a troubling disregard for the most basic of scientific methods. As Dr. Ford highlights:

- The Lisbon Council's strong claims are based on nothing more than "cherry-picking" results from hundreds of simple correlation coefficients computed by using no more than eight and as few as five observations.
- Out of 462 statistical tests conducted, the Lisbon Council's conclusions are based on the statistical significance of less than 5% of tests. Such a small number of "successes" is readily explained by random variation (at a significance level of 5%), thereby providing reasonably strong evidence that there is *no relationship* between copyright flexibility and economic outcomes.
- Even worse, the economic activity variables for the eight non-randomly selected countries are measured as an average of nearly twenty-years of nominal (not inflation adjusted) time- series data that is *expressed in five different currencies*.
- Finally, while the Lisbon Council casually asserts that for the May revision of its *IP Index Report* "correlations tests have all been re-run [] and no significant variations were found," the Lisbon Council's claim is patently false. The statistical results from the revision are very much different and weaker than the original version.

4. The Antony Dnes 2011 UK Study

The Submission cites a paper by Antony Dnes (2011), entitled *A Law and Economics Analysis of Fair Use Differences Comparing the US and UK*, for two claims. First, that UK-style fair dealing exceptions are not as flexible as US-style fair use exceptions. Second, that the US-style fair use exceptions have allowed innovations to emerge rapidly in the US, and also allowed innovative practices that may be of high value to consumers without generating significant damage to copyright holders (Google PC Submission pp.14-15)

The Dnes paper, however, does not present new empirical data to test whether fair use is more flexible, or better facilitates innovation. In fact, Dnes' paper is simply a review of legal

³² Dr. George S. Ford (2015) *The Lisbon Council's 2015 Intellectual Property and Economic Growth Index: A Showcase of Methodological Blunder*, otherwise is disingenuous
<http://phoenix-center.org/perspectives/Perspective15-03Final.pdf>

doctrine,³³ involving legal commentary, opinion or theory. Even in this regard, however, the Submission misrepresents key elements of Dnes analysis.

On flexibility, the Submission gives the impression that Dnes finds the UK fair dealing law inflexible compared to the US. On the contrary Dnes, in fact, concludes after a detailed review of the law that judges still have significant discretion and draw on fair use principles in a fair dealing or list approach to exceptions.³⁴ The implication is that although in UK law a fair dealing purpose is necessary, such a purpose is not a sufficient condition for a successful defence. There is significant flexibility in the UK law to also consider broader fairness issues.

As noted, the submission also gives the impression that US fair use exceptions have allowed innovations to emerge rapidly in the US. Dnes, however, notes that economic theory primarily supports the opposite view: that copyright (not copyright exceptions) increases incentives for innovation.³⁵ Indeed, Dnes explicitly expresses the concern that “Moving to fair use from fair dealing would reduce the legal rights of copyright holders, suggesting a need to be cautious of the possible deterrence of the underlying innovation” (Dnes p.5). As Dnes notes, and contrary to the Submission’s main argument, economic theory sees a limited role for copyright exceptions, with copyright law, “incentivizing creativity, but allowing exceptions in cases where the uses do not harm the market interests of the copyright holder and where transaction costs threaten to undermine a beneficial use.” (Dnes p. 8).

Dnes thus implies quite a limited role for exceptions. It is further important to note that Dnes’ stated rationale for exceptions becomes less relevant with recent technological developments that have lowered transaction costs, and the cost of copying. As Dnes notes, “copyright protection may need to increase over time if the growth of markets and the value of the copyrighted work increase, particularly if the costs of copying decline Typical models do not deal with dynamic settings and catching up with change. . . .” (Dnes p.4). As noted by Dnes, the economic role of copyright is to set an optimal balance, given the trade off between current and future consumption, or between current consumption and incentives to invest in creation and innovation that drives future consumption. This implies that copyright might have to change over time, if, for example, technology changes to cause an “imbalance” in current law. The recent expansion of digitisation and the spread of broadband internet appears to be one such a dynamic change that appears to have put copyright law out of balance, so that it is no longer providing optimal incentives to create. The expansion of digitisation and the spread of broadband internet has had two economic effects justifying *strengthening* of copyright law including reducing exceptions.

- First, as noted by Dnes, the costs of copying have fallen, which has expanded the extent of piracy and market bypass, reduced sales, and lowered returns to investment in future output, and therefore incentives to create. This will have left copyright law out of balance, implying a need to strengthen copyright, and reduce copyright exceptions, not extend them.
- Second, expansion of digitisation and the spread of broadband internet have reduced transaction costs, and expanded the potential role for markets in copyright goods, further reducing the need for exceptions.

³³ As the Dnes notes, “issues are assessed here through an analysis of laws and cases” (Dnes p7), the paper “takes an overview of the UK and US doctrines concerning fair dealing and fair use and provides an economic commentary linked to the encouragement of innovation” (Dnes p33).

³⁴ Thus Dnes notes “Scope for considerable discretion in viewing fairness already exists in UK fair-dealing jurisprudence.” (Dnes p33) “there is also a requirement that the dealing be “fair,” which has generated case opinion comparable to that in the US and showing that whether copying is fair is a matter of comparison between the facts and circumstances of the case³⁴” (Dnes p8) Thus Dnes makes frequent reference to “the broad equity envisioned by Lord Denning, ” in *Hubbard v. Vospar* [1972] 2 QB 84 (Dnes p34).

³⁵ Thus Dnes notes, “Copyright . . . is conventionally justified to encourage . . . creativity by compensating for the sunk costs of producing the work that leads to copyright supporting licensing and payment of royalties. “ (Dnes p3).

The problem with moving to a US-style fair use doctrine now then is that it would involve expanding copyright exceptions exactly at a time when recent technological developments mean the opposite is probably more appropriate. This point is not mentioned in the Submission.

Rather than flexibility, or facilitation of innovation, the key differences between the current UK and Australian fair dealing exceptions and US fair use law emphasized by Dnes is the scope of exemptions and their uncertainty. As Dnes notes in the UK “The initial curtailment of the scope of fair-dealing defences to just three specified purposes does provide a considerable reduction in the uncertainty attached to the delimitation of IP rights.” (Dnes p.10). Dnes notes that other statutory exceptions separate from fair dealing are also defined in UK and Australian statute law. Dnes comments that these other exceptions are of interest in any debate over the possible replacement of fair dealing with a doctrine of fair use, not least because fair-use elements in the US often appear as one of these other stand alone statutory exceptions in the UK (e.g., time shifting).³⁶ In the UK, the purposes covered by exceptions are listed and certain, whereas in the US the limits are uncertain and may change. Thus, the UK law is flexible, while being more certain as to coverage³⁷ than U.S. law, which is more uncertain.

There may, however, be scope for misinterpreting Dnes’ views on uncertainty from his statement that “from an assessment of US cases.... *adhering* to a doctrine of fair use does not appear to be characterized by unusual levels of uncertainty.” (Dnes p.36). The point, however, is that this statement refers to the uncertainty of “adhering to a doctrine of fair use” not the change in uncertainty if one moves to US-style fair use regime from Australia’s current UK-style fair dealing regime. The reason why changing to fair use in Australia would lead to unusual levels of uncertainty is that fair dealing or listed exceptions law in the UK and Australia (and most other jurisdictions in the world) is a well-settled body of law. Statutory fair dealing law is over 100 years old, dating back to 1905 in Australia, and 1911 in the UK, with significant associated case law precedent as a result. The US statute on fair use by comparison only dates from the 1970s and is thus less well road tested. Economic theory and evidence confirms that certainty increases over the lifetime of a law, through decided cases and the doctrine of precedent. Thus the “usual” level of uncertainty is lower under the older UK and Australian fair dealing law compared to the newer US fair use law. Any statutory change to underlying Australian law would indeed inevitably introduce an unusual period of greater uncertainty in which litigation increases significantly as the parties seek to clarify the law. Given US fair use law is then more recent, and less settled than fair dealing law, the interesting implication is that if Australian law were to be changed to introduce a US fair use law, it would not only become more uncertain initially (as with any new law its effects will have to be tested in the courts), it will also probably never “catch up,” or be restored to the level of certainty there would have been under current Australian law, had it not been changed. Given US fair use law is more novel, it will always be less certain, simply because of the difference in the duration of time the laws have been in place.

Finally, Google notes that Dnes report was prepared for the Hargreaves inquiry. This tends to imply it may have been adopted or relied upon by that inquiry. Although Hargreaves clearly read the Dnes report, as it was included in his reference list, Hargreaves does not cite it, or appear to rely on it for any key propositions. Instead, Hargreaves concluded US-style fair use was not a good idea for the UK, that fair use’s benefits were overstated,³⁸ and that adopting

³⁶ Dnes notes that while the main fair dealing exceptions are in UK Copyright, Designs and Patents Act 1988 (CDPA) Ch. III, §§ 29-30 other exceptions can be found in CDPA §§ 28-76, and that here is also other secondary legislation covering copyright exceptions, such as the Copyright (Computer Programs) Regulations 1992 No.3233. (see Dnes p11)

³⁷ As Dnes notes in the UK “In practice, the UK courts have *not* radically disagreed over fair dealing, and little use appears to have been made of the broad equity allowed by Lord Denning’s dicta in *Hubbard v. Vospar*. “ p10

³⁸ Hargreaves page 45 paragraph 5.16

fair use would certainly not mean “East London would quickly become a rival to Silicon Valley”³⁹

5. The Mike Masnick Study

The Sky is Rising Report, authored by Mike Masnick (of the anti-copyright blog, *Techdirt*), for the Computer and Communications Industry Association (CCIA) presents an overview of the entertainment industry in the United States, providing data that seeks to demonstrate that, “there has been an explosion in creative output over the past couple of decades,” linking it to loosely to copyright in an opening paragraph states that, “the US is also beginning what is likely to be a long process of copyright reform.”

Before discussing the specific data, it is important to note that even assuming as true that creative output has been growing, strengthening copyright might have increased welfare by inducing even faster increases in the amount of creative output than that observed.

Further, the report’s description of the market place is skewed. For example,

- 1- The report argues on page 6 that, “Americans have greater access to music than ever before in history, and in 2006, it was estimated that consumers downloaded about one billion tracks per month.” What the report fails to mention is that according to the cited source these downloads were *unpaid* (the cited source states that, “there was a 4.4 percent increase in the number of peer-to-peer users in 2006, with about a billion tracks downloaded *illegally* per month).⁴⁰
- 2- The report argues that music sales have hit, “record highs in 2011 and 2012.” On page 6. In fact, music sales (including both physical sales and digital downloads) decreased by 52.7% in units, and by 59.9% in real revenues from 1999 to 2009 in the US, and fell by 45.4% in real revenues internationally over the same period.⁴¹
- 3- The report presents a figure on page 6 showing an alleged growth in the “total sales transactions” for music between 2000 and 2013. The report fails to clarify the definition of a transaction (for example, are both a downloaded song and a CD containing 15 songs counted as one transaction). Moreover, the figure cites a report by Nielsen as the primary source for the data but the cited report does not include such data.⁴²
- 4- The report argues that music creation is growing very fast (see Figure on page 6). Technological innovation has dramatically reduced the cost of recording of music, to the extent that garage bands can easily record songs. The report fails to even discuss this obvious point (there is an academic literature trying to adjust the quantity of the new creations by their quality).⁴³
- 5- The report argues that, “box office remains the largest revenue driver. Sales of physical home entertainment media (DVD, Blu ray will continue to decline, and will be the only category of video entertainment that does so.” page 10, The report fails to show the reader that this declining category was in earlier years the largest revenue

³⁹ Hargreaves page 45 paragraph 5.17

⁴⁰ <http://delong.typepad.com/sdj/2007/07/the-record-indu.html>

⁴¹ Liebowitz, S.J., 2011. The Metric is the Message: How Much of the Decline in Sound Recording Sales is due to File-Sharing? Available at SSRN: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1932518.

⁴² this is the link to the report which is not identical to the one cited but appears to be the same report <http://www.nielsen.com/content/dam/corporate/us/en/reports-downloads/2014%20Reports/nielsen-us-music-year-end-report-2013.pdf>

⁴³ <http://www.nber.org/papers/w17503>

driver, and the category most likely to be affected by piracy, as it is more susceptible to copying than the more experiential theatrical category.⁴⁴

- 6- Similar to the statistics for the music industry, the report also presents the number of movies without adjusting for their quality (Page 11), and without taking into account there may be shifts in the level and nature of films being made within categories.
- 7- The report argues that average TV viewing amounts to approximately nine hours per day, on page 9 where it presents a figure entitled “Time Spent Watching TV.” It’s readily apparent that this is an error, and looking at the cited Nielsen report shows that these nine hours include listening to radio and other types of media uses.⁴⁵

⁴⁴ see page 2 in the following paper: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1792615

⁴⁵ <http://www.nielsen.com/content/dam/corporate/us/en/reports-downloads/2014%20Reports/nielsen-cross-platform-report-march-2014.pdf>

Conclusion

This paper reviews a number of papers being used to try and justify major copyright policy changes in the Asia Pacific. This report specifically reviews five papers cited by Google in Australia in support of its submission (the Submission) to the Productivity Commission's (PC) inquiry into Australia's intellectual property arrangements. In the Submission, Google expressed the view that Australia's copyright system is not as effective, efficient or adaptive as it needs to be, and that it is impeding Australia's capacity to innovate.

Our review of the empirical data Google cites, however, finds that in general, contrary to the claims that they are being used to support, these studies conclusions are bad science and offer no substantial empirical evidence of a causal link between broader copyright exceptions and productivity and economic growth.

The studies cited in the Submission have been discredited, containing the fundamental errors in empirical research, making them unfit for policy-making.⁴⁶ Moreover, the only strong evidence in the studies appears to contradict the claims made in the Submission. In particular:

- The 2012 Singapore fair use study suggests that US-style fair use exceptions in Singapore were associated with a fall in the rate of growth of copyright industries. Singaporean copyright industry revenue growth slowed from 14.16 per cent to around 6.68 per cent per annum after the introduction of fair use.
- The 2012 Australian Lateral Economics Study's own data shows that fair use exceptions in the US are associated with a lower rate of growth of value-add in what it calls copyright exceptions industries in the US, compared the same industries in Australia.

Thus, as a result of the empirical analysis contained herein, this report concludes that the argument advanced by the Submission that broader copyright exceptions will promote productivity and economic growth is not based on sound research.

⁴⁶ See Dr. George S. Ford (2016) "The Economic Impact of Expanding Fair Use in Singapore: More Junk Science for Copyright Reform" Perspectives: Phoenix Centre for Advanced Legal and Economic Public Policy Studies <http://phoenix-center.org/perspectives/Perspective16-01Final.pdf>; Dr. George S. Ford (2015) *The Lisbon Council's 2015 Intellectual Property and Economic Growth Index: A Showcase of Methodological Blunder*, Phoenix Center <http://phoenix-center.org/perspectives/Perspective15-03Final.pdf>. George Barker & Ivan Png 2013, Unfair Evidence on Fair Use, 3 June, available at <https://law.anu.edu.au/news/cle/unfair-evidence-fair-use/>; George R Barker 2013, 'Agreed Use and Fair Use: The Economic Effects of Fair Use and Other Copyright Exceptions' paper presented to the 2013 Annual Congress of the Society for Economic Research on Copyright Issues (SERCI), MINES ParisTech, Paris (France)