It was Fifty Years Ago Today: Recording Copyright Term and the Supply of Music

NBER Digitization Meeting

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Megan MacGarvie
John McKeon
Jeremy Watson

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Copyright term and the supply of music

- How does copyright affect consumers’ access to creative works?

- May restrict entry by producers who could distribute reproductions without paying for licenses

- Longer copyrights may create incentives to maintain and promote existing works
We look at how the expiry of recording copyrights in the UK affects access to music by artists popular in the 1960s.

- Recording copyright was 50 years until 2013; 70 afterwards
  - Composition and lyrics protected separately
- Many artists of the '60s still living, actively touring in 2013
- This allows us to look at two aspects of the supply of music
  - Availability: e.g., re-releases of tracks, digital streaming
  - Performance of songs in concert
- The UK term extension of 2013 allows us to econometrically identify the effect of public domain status controlling for age, time, and artist effects
Preview of Results

- Overall, mixed results for the effect of copyright term on supply:
  - Expiry of recording copyright: 141-247% increase in re-releases
  - No significant difference in online streaming availability
  - However, artists less likely to perform (promote) songs in public domain
Prior Literature

- Prior research has found an association between copyright status and the availability of books
- Copyright expiry has been found to be associated with price declines
- Reuse of copyrighted material
Term Extension - “Cliff’s Law”

- Motivated by “income gap”

- Copyright in sound recordings established in the UK with the Copyright Act of 1911
  - Limited to term of 50 years from date of recording

- Directive 2011/77/EU extends the copyright of sound recordings to 70 years
  - Effective November 1, 2013, extends terms of recordings from November 1963 and later.

- Not retroactive; “use it or lose it” clause
Dataset construction

- Sample based on all Top 10/20 UK Album charts from 1960 through the end of 1965 (OfficialCharts.com)
- Collected all tracks released by these artists in the MusicBrainz database
  - Information on country of release – we focus on UK artists
  - $\Rightarrow$ 13,238 tracks by 140 artists first released between 1928 and 1975
    - Supplemented year of original release with data from Discogs
- Spotify API
  - Digital streaming availability, disaggregated by geographic market
- Setlists.fm
  - Concert dates + locations, setlists of tracks performed in concert
Empirical Strategy

\[ Y_{ijtA} = \alpha_0 + \alpha_1 PD_{ijtA} + \sum_{t=1961}^{2017} \beta_t year_t + \sum_{A=2}^{89} \gamma_A age_A + \sum_{j=2}^{140} \delta_j artist_j + \varepsilon_{ijtA} \]

- \( Y_{ijt} \): count of releases for track \( i \) by artist \( j \) in year \( t \) with track-age \( A \)
- \( PD_{ijtA} = 1 \) for tracks whose recording copyright is expired as of year \( t \)
- Term extension allows for identification with year, age, and artist effects:
  - year effects control for variation in demand over time,
  - age effects control for variation as tracks age,
  - artist effects control for heterogeneity in demand across artists
- Poisson regression with robust standard errors clustered by artist
Re-issues before/after term extension

![Graph showing the average number of reissues of tracks by age and type of release between 1968-2013 and 2014-2017. The graph compares major and non-major tracks.]
Recording right expiry boosts availability

<table>
<thead>
<tr>
<th></th>
<th># UK Releases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poisson</td>
</tr>
<tr>
<td>PublicDomain</td>
<td>2.939*** (0.465)</td>
</tr>
<tr>
<td>Age</td>
<td>No</td>
</tr>
<tr>
<td>Year</td>
<td>No</td>
</tr>
<tr>
<td>Artist</td>
<td>No</td>
</tr>
</tbody>
</table>

Incidence rate ratios (IRR) displayed for Poisson regressions

N. obs: 1,001,480.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$
Digital availability unaffected by copyright expiry

- Compare streaming availability in UK vs. US markets for songs released before 1963

<table>
<thead>
<tr>
<th>Available in Market (1/0)</th>
<th>0.0474*** (0.010)</th>
<th>0.0474*** (0.010)</th>
<th>0.0367*** (0.012)</th>
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<th>0.0367*** (0.012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK-market</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-1963</td>
<td>0.0911*** (0.032)</td>
<td>0.0749** (0.031)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-1963* UK</td>
<td>0.0323 (0.021)</td>
<td>0.0323 (0.021)</td>
<td></td>
<td></td>
<td>-0.0538 (0.076)</td>
<td></td>
</tr>
<tr>
<td>ObscureArtist</td>
<td></td>
<td></td>
<td></td>
<td>-0.0713*** (0.014)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obscure<em>Pre-1963</em>UK</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.0216 (0.020)</td>
<td></td>
</tr>
</tbody>
</table>

- Release Year No No No Yes No Yes
- Artist Yes Yes Yes Yes No Yes

Linear probability models
N. obs: 32,704.

*** p < 0.01, ** p < 0.05, * p < 0.1
Robust results, with little difference across artist types

- Re-release results robust to:
  - Dropping bootleg releases
  - Excluding most prolific artists
  - Placebo U.S. regressions

- Little difference across artist types
  - Effect of Public Domain slightly weaker for UK artists (though only borderline significant)
  - No significant difference in the effect for artists on the NME top 500 album list
  - No significant difference in the effect for artists with more than 1 million certified units (RIAA)
How do rightsholders react to copyright expiry & threat of competition?

- Patented drug producers attempt to deter entry under threat of:
  - generic competition (Ellison and Ellison, 2011)
  - parallel trade (Kyle, 2008)

- How do copyright holders react to expiration?
  - Term extension during lifetime of artist
  - Clearly, performances not restricted by recording copyrights
  - To the extent that live performances promote album sales...
  - Are artists using public performance to promote protected recordings?
Public performances decline when copyright expires

<table>
<thead>
<tr>
<th></th>
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<th>Poisson</th>
<th>Poisson</th>
<th>Poisson</th>
</tr>
</thead>
<tbody>
<tr>
<td>PublicDomain</td>
<td>0.792</td>
<td>0.140***</td>
<td>0.477***</td>
<td>0.123***</td>
<td>0.529**</td>
</tr>
<tr>
<td></td>
<td>(0.270)</td>
<td>(0.0423)</td>
<td>(0.119)</td>
<td>(0.0383)</td>
<td>(0.142)</td>
</tr>
<tr>
<td>UK Artist * PublicDomain</td>
<td>1.044</td>
<td>0.418*</td>
<td>0.265***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.491)</td>
<td>(0.193)</td>
<td>(0.125)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Year</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Artist</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Incidence rate ratios (IRR) displayed for Poisson regressions
N. obs: 103,792.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Results robust to dropping top 5 artists, restricting sample to touring years
No consistent evidence of expiry’s effect on creativity for compilations and re-releases

- Does rights expiry allow labels to bundle novel combinations of prior works?

- Construct Jaccard indices for album/compilation releases at artist and song level
  
  $J(A, B) = \frac{|A \cap B|}{|A \cup B|}$

  - For any release $i$, calculate $\max J(i, j)$ over previous releases $j$
  
  - Captures novel combinations of artists, songs that have not been previously released together

- Ultimately, we observe limited evidence of copyright expiry on the creativity + novelty of new works
Conclusions

- Copyright expiry results in significant boost in availability of music
  - ... via physical media
  - Digital platforms (and blanket licensing practices) limit this restriction from copyright
  - Future implications given structure of music distribution?

- Term extension did meaningfully impact the incentives of living artists
  - Original recording falls into the public domain ↓ live performances
  - However, this increase in the supply of performances for copyrighted works almost certainly short lived
Thanks!

jwats@bu.edu