What effects do freely available online music videos have on digital sales of songs and albums? Tobias Kretschmer and Christian Peukert investigate the impact of YouTube samples on iTunes purchases, using a performing rights controversy in Germany that led to far more videos being blocked there than elsewhere.

Video killed the radio star? Evidence from YouTube and iTunes

Do free samples threaten sales of the full product – or do they encourage consumers to go on to buy the real thing? In a recent study, we explore the effect of sampling of music videos via YouTube on the iTunes sales performance of two related products: single songs and albums containing the song.

Two countervailing effects are possible here. People may fall in love with a song after watching a video clip and then decide to buy it. Alternatively, because watching the music video is not much different from owning the song, they may stick to YouTube and not buy the song at all.

We find that making video clips of a song unavailable on YouTube – as has happened on a large scale in Germany – has no effect on sales one way or the other. This suggests that either YouTube availability and iTunes sales are unconnected or that the promotion effect and the displacement effect cancel each other out.

But looking at album sales, where the displacement effect is likely to be smaller because the song in question is just one part of the full product, we find that there is indeed a promotion effect. An additional video that becomes unavailable on YouTube results in 1-3% lower album sales on iTunes.

Our findings suggest that different digital channels interact in intricate ways and that availability on one can have an impact on success on other channels. This means that copyright agreements – and estimations of the economic loss (or gain)
from copyright infringements – have to consider both the promotion and displacement effects arising from (legal and illegal) sampling.

**Try before you buy**

If prospective consumers can find out before buying whether a product matches their tastes or will deliver the promised quality, sampling is unnecessary. Simply providing information about the objective product characteristics will help match consumers to products.

But if consumers have to experience the good to be really sure they like it, no amount of upfront information will ensure a satisfactory match. Many products and services have the characteristics of ‘experience goods’: think of an expensive bottle of Bordeaux that may or may not be to your taste, despite what the label – and the price! – tell you. Even advertising or signalling through price will not resolve this, especially if there is an element of matching personal preferences on top of unobservable product quality.

This means that consumers will look to recommendations from others (ideally with similar preferences), they will look for cues from related products or, given the opportunity, they will try the product, or parts of it, before they buy. Clearly, the more that consumers get to sample the complete product, the more certain they will be that they like it. But offering a larger sample has an obvious downside in many cases: if we let consumers sample the full product, they may not need to buy it.

Sometimes, firms cannot even choose whether (and how much) to offer samples. Many digital products, including music and books, can be copied easily and without the consent of their creator. Moreover, they are often copied in their entirety and without any losses of quality. This often illegally distributed (pirated) content is frequently considered a threat to the revenues of content producers as it is a near-perfect substitute and consumers might end up not purchasing original content any more.

This argument has been around for a long time, at least since the anti-copyright infringement campaign by the British Phonographic Industry with its striking slogan ‘Home taping is killing music – and it’s illegal’. But the substitution of legal by pirated content may only tell one part of the story: pirated content may also serve the positive function of a promotional sample of the full version.

**YouTube disputes in Germany**

YouTube is rife with cat videos, compilations of ‘fails’ and countless ‘how-to’ films. But about one third of what’s available is music videos – official clips, user-generated, cover versions, live versions, etc. Many of the clips are uploaded by users, mostly without permission. As such, YouTube functions as a sampling device for the songs uploaded, though clearly some users may watch a song for free on YouTube instead of purchasing it either online or offline.

Aware of this possible displacement effect, GEMA, a performance rights organisation in Germany, entered into negotiations with YouTube about royalties for their members (virtually all German artists and, because of international cooperation of national collection societies, virtually all artists worldwide). Negotiations were unsuccessful, with YouTube arguing that GEMA was asking for unreasonably high fees. An agreement was made even more difficult as GEMA had a statutory duty to make any agreement with YouTube public, while YouTube would only enter a private agreement.

As a result, YouTube started blocking virtually all videos containing music in 2009. The consequence was a fundamentally different YouTube experience for German users than for those in other countries. Measured in the number of restricted videos, no other country in the world has less access to popular content on YouTube than Germany – not even South Sudan or Afghanistan. Figure 1 illustrates the number of blocked videos per song in Germany and compared with the United States.

**Figure 1:** Blocked videos on YouTube in Germany and the United States

![Graph showing the number of blocked videos on YouTube in Germany and the United States.](image-url)

- **Mean** for Germany: 9.36, **median**: 8, **min**: 0, **max**: 43
- **Mean** for the United States: 0.10, **median**: 0, **min**: 0, **max**: 20

Number of unique videos that show up in the top 25 search results across all countries, except Germany (the United States) but are blocked in Germany (the United States) – referring to search query “Artist – Song” on international YouTube sites. Note that the scale of the right-hand graph is five times the scale of the left-hand graph.
The impact on sales of individual songs and albums

Our research makes use of the differences between YouTube in Germany and other countries to estimate the impact of YouTube as a promotion (or displacement) channel on music sales.

We analyse data on the iTunes sales ranks of more than 67,000 songs (and the corresponding albums) in 10 countries, including Germany. Using variation both across countries (YouTube also blocks some – but far fewer – videos elsewhere) and over time (clips are not always blocked immediately after uploading), we find that blocking clips extensively seems neither to reduce nor increase the sales rank of the corresponding song.

A non-result? Maybe so, but it could be that two effects – promotion and displacement – are cancelling each other out. To dig deeper, our analysis looks at the sales performance of the corresponding album. We would expect the displacement effect to be weaker because a clip only shows one song from a collection on an album, while the promotion effect should stay intact – at least to the extent that one song tells us something about the rest of the album.

We find that blocking clips of a specific song on an album has a significant effect on album sales: blocking one clip containing the song leads to a reduction in sales of 1-3%. This is not a trivial number – and it is not surprising that some high-profile German artists have started publicly calling for YouTube and GEMA to find an agreement so that the promotion effect kicks in for them.

Writing on their Facebook page in March 2012, the electro/hip-hop band Deichkind said:

‘Whether it’s the record label, YouTube or GEMA, whoever’s responsible. We want our videos to be seen. Finally get your sh*t sorted out and do your homework! You are a barrier to evolution and you are irritating the cr*p out of us.’

Just how irritating the loss of an important promotion channel can be to artists is shown by our research – which means that the accepted wisdom on home taping and its successors in the digital age may finally have become outdated.

Different digital channels interact in intricate ways and availability on one can influence success on another.


Tobias Kretschmer, professor of management at Ludwig-Maximilians-Universität Munich, is a CEP research associate. Christian Peukert is a senior research associate at the University of Zurich.