RESEARCH PROPOSAL MASTER THESIS MARKETING

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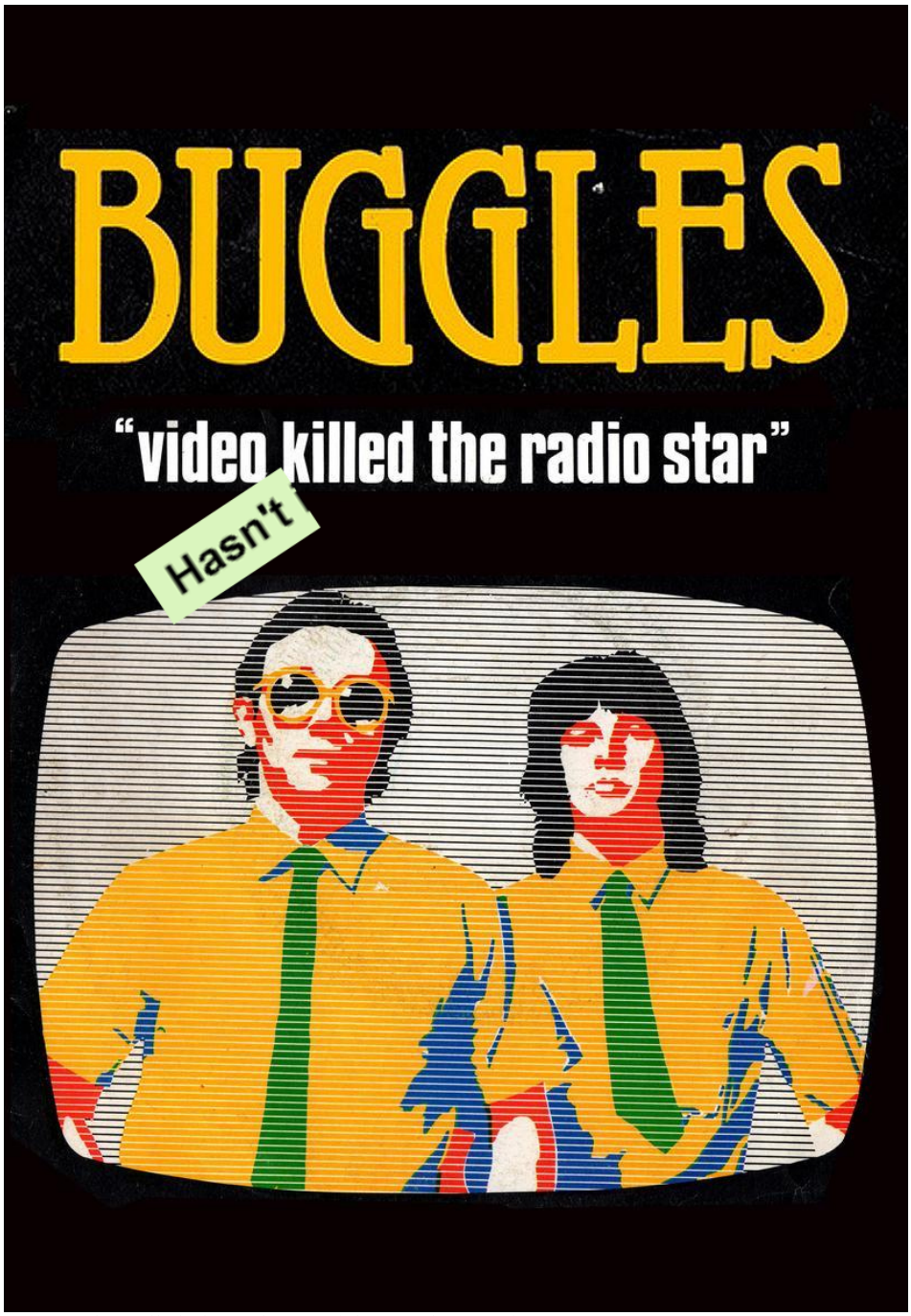

Video Killed The Radio Star (The Buggles, 1979)

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1. Business Problem: Background

Music sales have generated 26 billion dollars in 2022 (IFPI, 2022). But regardless of this success, the music industry is still struggling, specifically the independent part of it (Chiftalaryan, 2019). A report of the Intellectual Property Office showed that the top 1% artists account for 80% of all online streams (The Guardian, 2021). The rest of the artists are having a harder time getting online streams and making revenue. There might be a way to tackle this problem.

Music has always been an important factor in film. Ellis and Simons (2005) showed that a film with a soundtrack (versus muted volume) has more influence on valence and arousal. Music shapes the understanding of a character, and their actions, emotions, and intentions (Tan et al., 2007). It is safe to say that music enhances a film scene, but does this also work the other way around? Does a film soundtrack enhance music performance (music streams)?

When watching a compelling film, you might also be extra interested in the music that comes with it. Considering upcoming platforms such as Shazam, Spotify, and Snapchat you can generate the name of a soundtrack within seconds (Business Insider, 2020). This can then be used to explore a song and creates a way to discover 'new' music. Hence, technology plays a major role in this boost of music. As content of on-demand platforms such as Netflix has grown, and their shows have gotten more audience, fans are tracking down music of their favorite shows via Shazam and Tunefind (The Guardian, 2019).

Previous research has focused a lot about film music emotion (Juslin & Sloboda, 2011) and psychology (Nagari, 2015), which is more based on the performance of the film. There is a lack of research based around the performance of music enhanced by a film. Recently there has been a new phenomenon called "The Netflix-effect". Which means that an old, and sometimes even 'forgotten' song, gets (back) in the top rankings because it was used in a popular TV series. A song of Kate Bush "Running Up That Hill" was featured in the Netflix series called "Stranger Things" and the song started to climb the charts again, with huge number of streams on TikTok and Spotify (57.2 million streams) in a matter of days.

The same happened with "Dreams" of Fleetwood Mac in 2020, when it became a streaming hit after an Idaho potato worker made a TikTok video of himself listening to it while drinking Cran-Raspberry juice. Also, Nirvana's 31-year-old "Something in the Way" made its first appearance on the Hot 100 after the song was used in "The Batman." (New York Times, 2022). "That is the true game-changer, as it lays down a precedent for other music to do the same if circumstances meet." (The Guardian, 2022).

Against this background, we set out to assess the relationship between film soundtracks and online music streams. Since we are trying to capture a new phenomenon research is rather scarce. Beaster-Jones (2009) studied the relationship between Indian film songs and popular music in India and found a positive relationship. Film soundtracks serve as a representative for a film. The soundtrack sales indicated that both the music and the film were a success. According to Beaster-Jones, film soundtracks are also used as a promotional tool, which shows their importance and generates profits and streams for the music label (Beaster-Jones, 2009). Another research of Simon Frith (2002) takes a closer look on the relationship between television and music. It discusses the impact of television on music culture and that television can change perceptions about music (Frith, 2002). Simon's research is not directly in line with this research, but it suggests that film can strengthen perceptions about music and in this matter influence the outcome variable, online music streams. This research suggests that the relationship between film soundtracks and online music streams is strengthened by the number of views a film has. Which means that as a film is viewed more, the soundtrack is listened to more, and therefore the number of online music streams will increase.

Current studies mainly focus on the effect music has on films. Research about film music emotion (Juslin & Sloboda, 2011), psychology (Nagari, 2015) and arousal (Ellis & Simons, 2005) indicate that music has a positive influence on film performance. They have not analyzed the reversed effect of a film having influence on music performance (online streams). This research is relevant for music labels that are interested in enrolling film soundtracks, also as a promotional tool (Beaster-Jones, 2009). If this research shows that making an appearance in a film significantly increases online music streams, then the music label industry can use this in their strategic marketing implications to increase online music streams and with that also revenue. Because this research is based on a new phenomenon, there is a gap between the current literature and this research. This gap is caused because the topic is new and there is no recent research linking film soundtracks to online music. In this study, the relationship between film soundtracks and online music streams will be investigated. Hence, this study will be conducted as a completely new topic.

2. Problem statement and research questions

Because of this background, the following problem statement is formulated:

To what extent does the presence of a song in film soundtracks (yes/no) relate to their number of online music streams, and to what extent does the number of views of a film have an influence on this relationship?

To answer this problem statement the following research questions are formulated:

Theoretical research questions:

- How does the presence of a song in film soundtracks (yes/no) affect their number of online music streams?
- How does the number of views of a film influence the relationship between the presence of a song in film soundtracks (yes/no) and online music streams?

Practical research questions:

- To what extent does the presence of a song in film soundtracks (yes/no) relate to their number of online music streams?
- To what extent does the number of views of a film influence the relationship between the presence of a song in film soundtracks (yes/no) and online music streams?
- To what extent can music labels increase their number of online music streams by making an appearance in a film?

3.1 Theoretical background

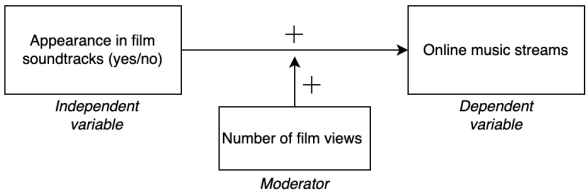

Figure 1 Conceptual model

The figure above illustrates the conceptual model of this research. The goal of this study is to examine the relationship between film soundtracks and online music streams, and to see if this relationship is significantly positive. Furthermore, this research suggests that this relationship is strengthened by the number of views a film has. Film soundtracks is categorized by appearance and is divided in yes/no. The other two variables are numeric.

Direct main effect

A film soundtrack is suggested in the literature as "an intentional sound which accompanies moving images in narrative film". A soundtrack can be literal (a voice or footsteps) or emotive (music), in this study we focus on 'emotive sounds', which indicates the way of emotion for a particular film scene. Music is most always used as an emotive sound (Deutsch, 2008). As stated before, the literature recognizes a positive relationship between film music and music popularity (Beaster-Jones, 2009). In this setting, music popularity can be indicated with online music streams. Because when a song gets more popular, it gets more online

streams (Spilker, 2017). More research justifies this relationship by proving that film music has an impact on culture. They state that film music has an impact on emotions (emotive sounds), and this can lead to change of perception and behavior (Navarro, 2019) (Frith, 2002). Change in behavior could suggest that because of the emotion connected to a film soundtrack, a person could start liking a song and eventually start streaming this song on a platform. Regarding this literature, it is expected that appearance in a film soundtrack increases the number of online music streams. Hence, it is hypothesized that:

H1: Music that makes an appearance in film soundtracks have more online music streams than music that does not make an appearance in film soundtracks.

Moderating effect

Each film has a certain number of views, this can be expressed in a daily/monthly number or in a total number. This research suggests that the number views of a film have a strengthening effect on the relationship between film soundtracks and online music streams. This moderating effect can be justified because when a film is viewed more, it has more people who have listened to the soundtrack. This creates more reach and results in more online music streams. This research will explore the magnitude of this effect. Because this relationship is rather new, there is no literature justifying the moderating effect. This research has added it into the conceptual model to extent the research and because the justification is logical. To summarize, it is expected that the relationship between film soundtracks and online music streams is strengthened by the number of views a film has. Hence, it is hypothesized that:

H2: The effect of the appearance in film soundtracks on online music streams is strengthened by the number of film views.

5. Research design

To catch the effects of the new phenomenon, this research is going to collect its own data. Using online data collection is the best approach, because this study is going to look at effects over time and it will connect multiple sources into a new and high-end dataset. With online data collection, researchers write code as extraction software to programmatically navigate a website or API and gather insights by visiting endpoints (Boegershausen et al., 2022). Literature suggests that online data collection protects against the loss of data and makes it easier to move data into a dataset for analysis (Carbonaro & Bainbridge, 2000).

Variable	Metric	Measurement	Collection
Film soundtrack	Nominal	Appearance of a song (yes/no)	Web scraping Tunefind
Number of views	Ratio	Number of hours watched per film	Public Netflix data
Online music streams	Ratio	Number of streams per song	API Spotify

As seen above, each variable will be collected in a different way. To elaborate, the collection of all film soundtracks will be done via web scraping a platform called “Tunefind”. This platform lists all the music soundtracks from a film, with addition of a small description. Via web scraping these song title can be gathered, to later use and find their online stream numbers. The variable ‘film soundtrack’ is categorized in yes/no, this can be implemented as before/after. Because the moment a song makes an appearance, it serves as a treatment. Netflix is not very generous with their data, but they have made the number of hours watched public for 10 movies and 10 TV series. These numbers will be used to conclude if there is a moderating effect on the relationship. To collect and measure the outcome variable this research uses the API of Spotify. This will give insight in the number of online music streams a film soundtrack has and will present the effect if the treatment is activated.

As statistical analysis this research is conducted as descriptive research. “Descriptive statistics are used to summarize data in an organized manner by describing the relationship between variables in a sample or population” (Kaur et al., 2018). From this analysis can be drawn conclusions about the relationship between film soundtracks and online music streams, and the moderating effect of number of views. The ideal goal of this research would be to make causal claims, since this gives the most comparative advantage (Durand & Vaara, 2009). But this research might not satisfy the statistical assumptions (counterfactual reasoning, and randomization) (Gill, 2014).
To analyze the created dataset, this research will be using a linear model to see if the relationship is significant and to express the magnitude. If causality claims can be satisfied, this research would be conducted as a Difference in Differences analysis. Which is an experiment that compares treatment- and control group and accounts for time within the analysis (Donald & Lang, 2007).

In both analysis cases there is a film soundtrack that makes their appearance and starts the treatment. Following the data over time results in the treatment group changing the outcome variable and calculating the magnitude of the effect.

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