Motivated by the growing importance of social media, especially in the context of music, this paper examines the inter-relationship between social media buzz, radio play and music sales, at both the album and song levels of analysis. In particular, we first examine the relationship between radio play, song blog buzz and song sales at the song-level and then we examine the relationship between radio play, album blog buzz and album-level sales. To examine these relationships, we employ Panel Vector Auto-regression (PVAR) methodology, an extension of vector auto-regression to be used with panel data, which has largely been used in the Finance literature and more recently in the Marketing literature.

To conduct the PVAR analysis, we have created a panel dataset of approximately 1000 cross-sections across 24 time periods. That is, for a set of approximately 1000 songs, we have obtained weekly data on song-level and album-level blog buzz from Google Blog search, song-level and album-level sales from Nielsen SoundScan and radio play from Nielsen SoundScan for a period of twenty-four weeks in 2006. We have supplemented this set of data to include data on label and artist reputation from Amazon.com and Billboard Music.

Our initial results indicate interesting differences in the relationships at the song-level and album-level. We find that while airplay (traditional media) is fairly consistently related to future sales at both the song-level and album level, blog buzz (social media) is negatively related to future song sales but positively related to future album sales. These relationships are particularly strong for niche music – music released by independent labels and music released by artists with comparatively low reputation. A potential explanation for these findings is that buzz at the song level is a contemporaneous with online media sharing, thus encouraging “free” music consumption and reducing sales. This may not be the case at the album level as it is less likely for buzz to be created around entire albums; in addition there is likely a distinct difference in individuals who consume only songs versus individuals who consume entire albums.