Does the running order of when a song is performed in the Eurovision Song Contest influence its final result?

The Eurovision Song Contest attracts more than 160 million viewers every year across Europe and beyond. Every competing song is performed from a specific position - referred to as the running order. Fans and journalists have over the years speculated that there seems to be a correlation with the later a song performs, the better it tends to do in the final results. This is often attributed to voters allegedly having a recency bias towards the later performing entries. Is there any truth to this theory? And are there any specific positions affected by this possible pattern, like the commonly referred to "death spot" position nr. 2, as no one has ever won from that position? We also want to find out if any music style has an impact on the final result. In this project, we will test these speculations by analyzing historical data of the songs, their running order, music style and their final result across different years in the Eurovision Song Contest.

Research questions:
- Does the running order of performances in the Eurovision Song Contest influence the final ranking or score of a song in the grand final? Is there a statistically significant difference in final rankings between songs performed early in the show versus those performed later (like the first third of the show compared to the last third of the show)?
- Does the style of the entry have an impact on its final results statistically?
- How does the running order impact an entry's chances of qualifying from their semifinal (if it doesn't belong to the automatic qualifiers Big5 - UK, Spain, Germany, Italy, France - or the host country)?
- Does the commonly referred "death slot" (position 2) lead to lower final rankings compared to other performance positions?
- Do voting patterns differ between the jury and televote in terms of performance order, and is the televote more influenced by performance timing?

Hypotheses
We have several hypotheses related to running order bias.
- Hypothesis 1: There is a correlation between the running order (R/O) and the final result. Performing later tends to be associated with a better final result.
- Hypothesis 2: Contestants who perform in the last third of the show receive higher average scores than those performing in the first third of the show.
- Hypothesis 3: Slot 2 is often referred to as the "death slot" as no contestant performing at this position has ever won a final, and consistently rank lower than other positions, so a song performing second will perform worse in the final result than it would otherwise.

- Hypothesis 4: Voting patterns differ between juries and the televote in regards to the running order. The televote appears more influenced by when a song is performed compared to the juries.
- Hypothesis 5: The choice of music style has a big impact on the final result.

Expected Solution:

It's our expectation that we can use data exploration (EDA), data manipulation, transformation and visualization techniques to either prove or disprove the existence of a noteworthy correlation between the running order at Eurovision and the final placement of a song.

With use of various models we are trying to predict, and visualize different outputs related to the Eurovision song contest.

We expect that our solution will consist of things such as linear regression, correlation, heatmaps and scatter plots to examine historical Eurovision data.

Possible impact:

- The organizers of the Eurovision Song Contest (participating tv-stations, reference group, EBU etc.): They will be better able to continuously adjust the contest to be as fair and transparent as possible for all participants regardless of their running order. If the analyzed results show off a remarkable impact of the running order on the final results - maybe that signals that the contest needs to be reformed?
- Eurovision fans and journalists: They will gain a deeper understanding of how important or not important the running order is on the final result, which will make their commentary and analysis of the contest more informed. It could also spark discussion about the running order's impact - if we find it to be crucial to the results.
- Betting sites: They can more accurately refine their prediction models of the placements of songs in future editions based on the results of this analysis - and therefore make more money, as they can better predict the songs' final placements and give them the most accurate odds - so that they won't have to pay out as much money. As Eurovision can still be quite unpredictable at times, surprising results may lead betting sites to give out more money to lucky bettors, which they would want to reduce as much as possible.
- Analysts: They can analyze the impact that these results have on the Eurovision Song Contest as a whole. Academic researchers can also use this more broadly as media analysis and the understanding of how subjective bias can influence the results of an international competition.