

Data Anlysis: Sales Trend of Video Games

Author: Ha Doan

INTRODUCTION

- In 2021, the video game industry is estimated to be worth roughly \$178.73 Billion and still increasing
- Very popular and long-established industry.

OBJECTIVES

- What genres - platforms - publishers are leading global sales and compare sales in each region (mainly North America, Europe, Japan, and Other).
- Trends/ relationships of video game sales over time and make prediction.

DATA

- Combined all the top 100 video games in global sales across over 40 years into a large dataset (16k).
- From 1980 - 2017 (pre COVID-19).

METHODOLOGY

- Statistics Summary, Graphs, Linear Regression (with Residuals, Inference), Multivariate Linear Regression, ANOVA, Chi Square Tests.

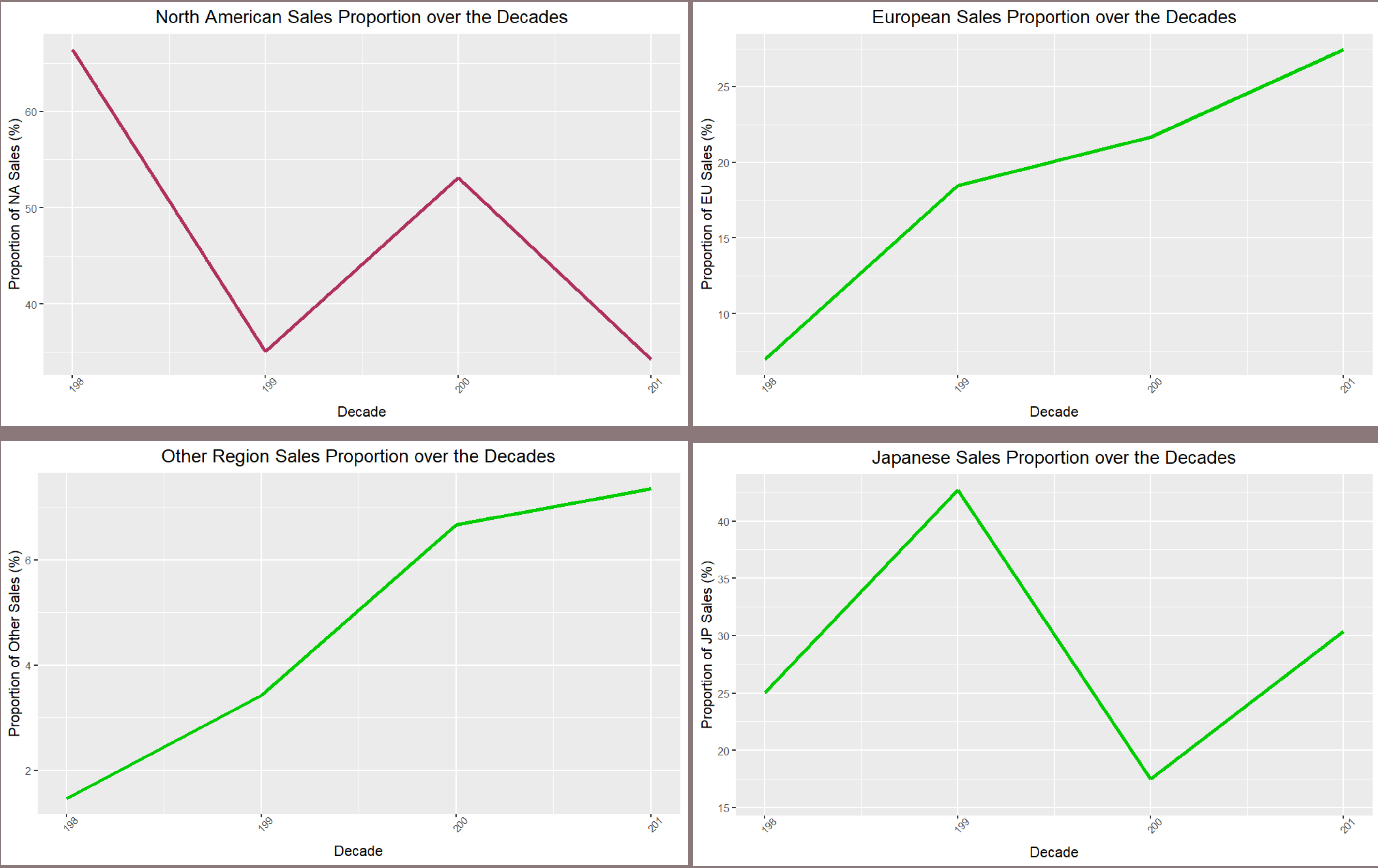
ACKNOWLEDGEMENT

- Data is before COVID-19
- 200+ missing data information (Year)
- "Other" is unclear, and so biased towards NA and EU.

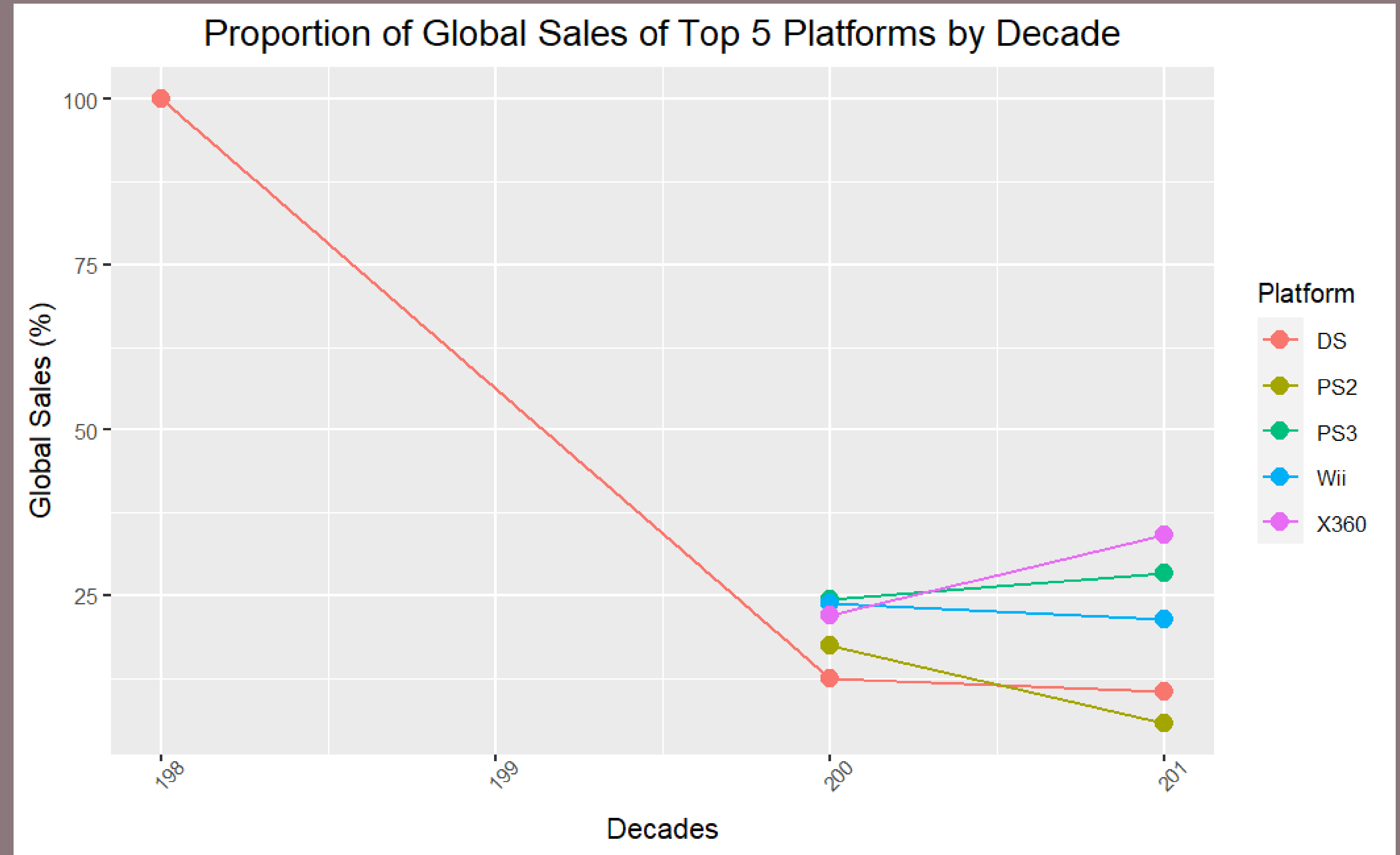
REFERENCE

- Devore, J. L. (2015). *Probability and Statistics for Engineering and the Sciences*. Cengage Learning.

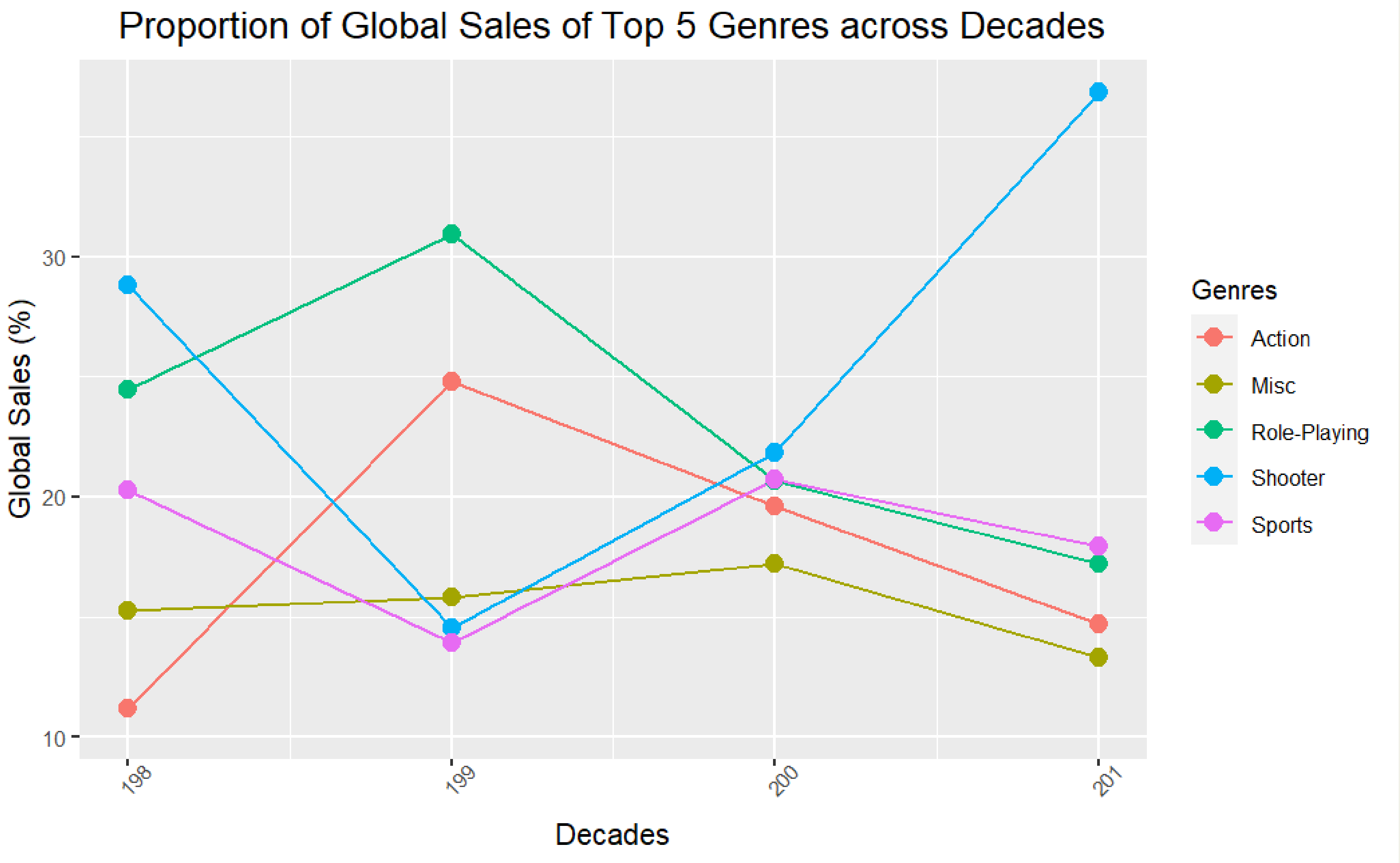
DATA ANALYSIS



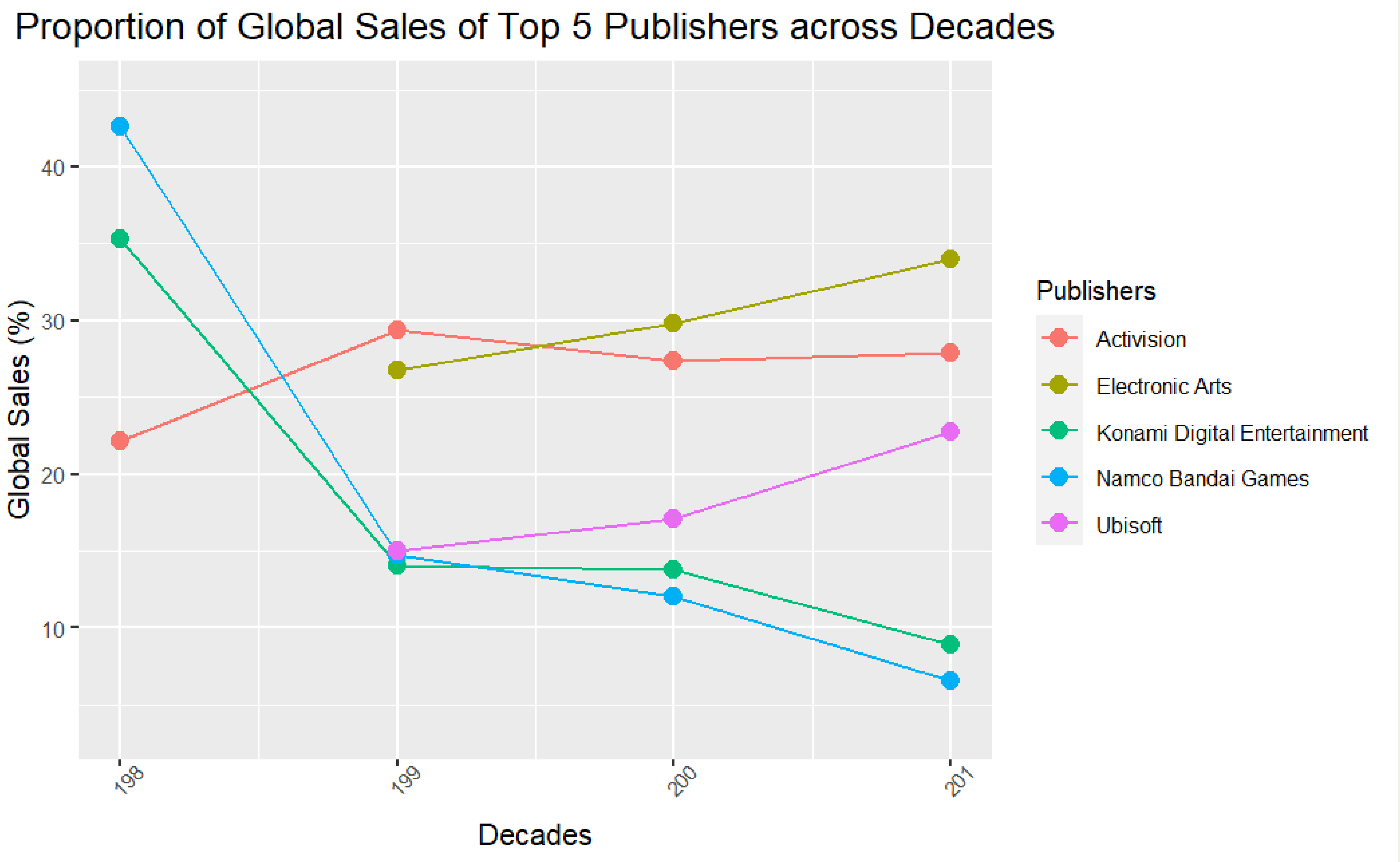
NA makes up the most sales on average, following by EU -> JP -> Other.



We can predict sales of PS2, PS3, Wii and X360 based on DS sales. But platforms alone do not influence global sales (R-squared = 0.62%).



NA, EU follows quite similar trend while Japan clearly prefer Role-Playing. Others see a sharp decline in Role-Playing and rise for Shooter games.



NA , EU and other have similar patterns, but Japan is dominated by Konami and Namco (domestic).

CONCLUSION

- Leading in the market: Shooter (genre), Electronic Arts (publisher).
- Recently, sales of PS3, Wii and X360 account for the majority while DS sales decline sharply.
- North America might not be the focus anymore.
- Sales can't be predicted by platforms or genres.