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### Mini-Project 4 Write-Up

By looking at the genre, MPAA rating, and gross revenue adjusted for inflation, a judgment can be made on what types of movies are most profitable for Disney, and how that has changed over time. In order to analyze the relationships between these factors, it is important to look at gross revenue in terms of genre and rating separately, then at the relation between genre and rating.

Overall, the most common rating was PG, then in order from most to least was PG-13, R, G, Not Listed, then Not Rated. However, when looking at what ratings had the highest gross revenue, the G rating came in front at \$25.048bn. Following this was PG (\$18.988bn), PG-13 (\$14.928bn), R (\$5.641bn), Not Listed (\$3.258bn), and Not Rated (\$899m). When looking at 20 year periods, from 1937 to 1977 there are only G, Not Listed, or Not Rated films. This is likely influenced by the fact that many of the absent values in the dataset were from older films. The period from 1977 to 1997 introduced the R, PG, and PG-13 ratings, and it was also the time when those categories were most prominent (order being PG, R, PG-13, Not Listed, then G). Considering all of this, the most interesting takeaway would likely be that, despite the G rating having a much higher head start on PG, it seems to have been able to catch up over a relatively short period of time.

When we dissect Disney's Movie genre production by a factor of 20 years, we see that Disney has the highest increase in its gross revenue by 35 billion dollars between 1997 and 2016. During this period, Adventure movies are leading in Disney's production schedule. Overall as Disney diversifies the number of genres produced, its gross revenue increases, we see this especially as between 1957 and 1977 Disney had 4 billion dollars in gross revenue with only 5 genres but this increased by 17 billion dollars to 21 billion dollars in the time period of 1977 to 1997 when 6 additional genres were released.

For movies rated G, Adventure was the most produced genre and generated the highest inflation-adjusted box office gross, representing 40.47% of the grand total. Comedy was the second most produced genre, but it was Musical that generated the second highest total gross at 33.58% of the grand total. One possible interpretation of this data is that family-friendly adventure movies are highly successful among audiences of all ages. For movies rated PG,

Comedy was the most produced genre, followed by Adventure. This suggests that movies targeted at a slightly older audience still rely heavily on humor to attract viewers. For movies rated PG-13, Comedy and Drama were the most produced genres, but it was Adventure that generated the highest box office gross at 30.49% of the grand total. This could indicate that teenage audiences are more interested in exciting action-packed adventures than in more dramatic or comedic films. Finally, for movies rated Restricted, Drama and Comedy were the most produced genres and also generated the highest box office gross, representing 51.32% of the grand total. This suggests that adult audiences are drawn to movies that are both emotionally impactful and humorous.