

Real versus Nominal Values: Let's Go to the Movies!

Lesson Author

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Grade Level

9–12

Concepts

Real values

Nominal values

Inflation

Cost of living

Objectives

Students will be able to:

- Explain the difference between nominal values and real values.
- Demonstrate the use of a consumer price index (CPI) calculator.
- Identify factors that influence the demand for movies over time.

Time required

Quick Pick: Steps 1 through 3 (5 minutes)

Power Up: Steps 1 through 7 (10 minutes)

Deep Dive: Steps 1 through 8 (20 minutes)

Materials

Handout 1: "Let's Go to the Movies! Activity"

Handout 1: "Let's Go to the Movies! Activity (Answer Key)"

Internet access for teacher and students

Projector for displaying websites

Procedures

This short activity uses the website www.boxofficemojo.com to teach students about the difference between real and nominal values using something they all know about—movies.

1. Ask students, "What is the largest-grossing movie of all time?" (*Answers will vary, but students will probably respond with one of the highest-grossing films of the current year. For example, this activity was updated in 2020, so students are likely to say Star Wars: The Force Awakens or Avengers: Endgame. [Box Office Mojo](http://www.boxofficemojo.com) will provide information for the current year at <https://www.boxofficemojo.com/yearly/>.)*
2. Display the following chart from the Box Office Mojo website:
https://www.boxofficemojo.com/chart_top_lifetime_gross/. (As of April 2020, *Star Wars: The Force Awakens* held the top spot for all-time domestic grosses.)



3. Tell students that *Star Wars: The Force Awakens* only holds the top spot when measuring the movie's gross receipts in current dollars. Ask students if they can think of another way to measure the top-grossing movie of all time. (*Answers will vary, but a student may say that the gross receipts should be adjusted for inflation, which is a change in the overall price level of goods and services in the economy. It is important to emphasize that an increase in movie ticket prices alone is not inflation, but a change in the "cost of living."*)
4. Tell students that when gross receipts are adjusted for inflation, another film rises to the top of the list. Display the chart found at the following link:https://www.boxofficemojo.com/chart/top_lifetime_gross_adjusted/?adjust_gross_to=2020.
5. Explain that when box office receipts are adjusted for inflation, *Gone with the Wind* is number one. When news reports say that *Star Wars: The Force Awakens* is number one, they are counting receipts in current dollars. In economics, this is called the "nominal" value. Ask students how much movie tickets cost today, and how much they think they cost in 1939, when *Gone with the Wind* was made. (The website uses an average US ticket price for the calculations. In 2020, this was \$9.37. Remind students that ticket prices in their area may differ from the current national average. Tickets were 23 cents in 1939. See the method used [here](https://bit.ly/ticket-price-inflation) (<https://bit.ly/ticket-price-inflation>). Multiple releases of older movies are accounted for on the site.
6. Tell students that when we adjust a value, such as a ticket price, for inflation, we are calculating the "real" value. When we adjust gross box office receipts for inflation, *Star Wars: The Force Awakens* is no longer in the top spot.
7. Tell students they can also find out how much a ticket price from the past is worth in current dollars. Ask students to adjust the 1939 ticket price of 23 cents for *Gone with the Wind* into today's dollars, using the [Federal Reserve Bank of Minneapolis's CPI Calculator](https://bit.ly/inflation-calculator) (<https://bit.ly/inflation-calculator>). Twenty-three cents in 1939 would be worth \$4.23 in 2019 dollars.
8. You can assign students the following questions on Handout 1: "Let's Go to the Movies! Activity" or discuss them together using the website as a guide.



Handout 1: Let's Go to the Movies! Activity

1. *Star Wars: The Force Awakens* is number one in all-time unadjusted domestic grosses. Where does it fall on the adjusted list?
2. *Gone with the Wind* is the number one film in domestic grosses (adjusted for ticket price inflation) of all time, but where does it fall on the unadjusted list?
3. How many of the top 25 domestic grosses (unadjusted for ticket price inflation) movies were produced after the year 2000? How do you explain this?
4. How many of the top 25 domestic grosses (adjusted for ticket price inflation) movies were produced after 2000? How do you explain this?
5. Is the worldwide list different from the list for the United States? What factors might influence international box office sales? (Note: The worldwide list is not adjusted for movie ticket price inflation.)
6. Many of the older movies on the list get their total from multiple releases. Click on *Gone with the Wind*. How many releases has it had? From which release was the majority of its box office gross total?
7. What was happening in the United States when *Gone with the Wind* was released? Do economic factors affect movie attendance? In what way?
8. What demand factors might be the cause of such a large number of films in the top 100 all-time list being produced after the year 2000?
9. *Star Wars: The Force Awakens* and *Titanic* are the only two movies to appear in the top 10 on both lists. What is a possible explanation for this? Is there any trend you see to the movies in the top 10 of the unadjusted list?
10. Have there been any changes in the quality of movies since *Gone with the Wind* was released? Have there been changes in the entertainment industry or types of entertainment available?



Handout 1: Let's Go to the Movies! Activity (Answer Key)

(Note: All answers are correct as of April 2020. Please verify all information before grading the activity.)

1. *Star Wars: The Force Awakens* is number one in all-time unadjusted domestic grosses. Where does it fall on the adjusted list? *11*
2. *Gone with the Wind* is the number one film in domestic grosses (adjusted for ticket price inflation) of all time, but where does it fall on the unadjusted list? *214*
3. How many of the top 25 domestic grosses (unadjusted for ticket price inflation) movies were produced after the year 2000? How do you explain this? *More recent movies will be on the unadjusted list because inflation is not accounted for and movie tickets cost more now.*
4. How many of the top 25 domestic grosses (adjusted for ticket price inflation) movies were produced after 2000? How do you explain this? *Answers will vary, as new movies are being added to the list each year. When ticket sales are adjusted for inflation, you can see how many tickets were actually sold; older movies often have more releases than newer movies.*
5. Is the worldwide list different from the list for the United States? What factors might influence international box office sales? (Note: The worldwide list is not adjusted for movie ticket price inflation.) *While the list is similar, there are some differences. Movies may not have been in wide release yet overseas, and tastes may differ among international audiences.*
6. Many of the older movies on the list get their total from multiple releases. Click on *Gone with the Wind*. How many releases has it had? From which release was the majority of its box office gross total? *Four, with the majority of its earnings derived from the first release.*
7. What was happening in the United States when *Gone with the Wind* was released? Do economic factors affect movie attendance? In what way? *The United States was still recovering from the Great Depression. Economic factors do influence movie attendance, since economic factors influence spending, particularly disposable spending. If people have lower incomes, they would tend to spend less, although there is some evidence that movie attendance rises during tough economic times, as movies provide an "escape" from the realities of life. (An article on this theory and recent movie attendance can be found [here](https://bit.ly/movie-attendance) <https://bit.ly/movie-attendance>.)*
8. What demand factors might be the cause of such a large number of films in the top 100 all-time list being produced after the year 2000? *Answers will vary, but may include a larger population; movie attendance continues to be popular; incomes have risen in the United States, allowing more people to go to the movies; more movies are being released; the relative price of a movie ticket is lower compared to other forms of entertainment; there are more ways to advertise movies these days; ticket prices are higher than they were in the past.*
9. *Star Wars: The Force Awakens* and *Titanic* are the only two movies to appear in the top 10 on both lists. What is a possible explanation for this? Is there any trend you see to the movies in the top 10 of the unadjusted list? *Answers will vary, but may include both movies were very popular, Titanic won 11 Academy Awards, and Star Wars was groundbreaking due to its special effects. Most movies in the top 10 unadjusted list are action adventure flicks.*

Real versus Nominal Values: Let's Go to the Movies! (Updated 2020)

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10. Have there been any changes in the quality of movies since *Gone with the Wind* was released? Have there been changes in the entertainment industry or types of entertainment available? *Technology has led to a great improvement in the quality of movies and the movie experience such as visuals, special effects, surround sound, 3D, and 4D. Even though movies cost more today than in 1939 (even when adjusted for inflation), quality and technology have to be factored in. Compared to 1939 when Gone with the Wind was released, there are many more entertainment options: TV, DVDs, cable, and internet. There are also many other ways to see movies (online, streaming, DVD, cable). Both of these factors speak to Gone with the Wind's popularity.*

Note: This activity may be a good opportunity to reinforce the difference between inflation and cost-of-living changes. The increase in the price of one good, such as movie tickets, is not inflation; inflation is a macroeconomic variable that occurs when the overall price level rises.