

EDUCATIONAL NOTE

Teaching How Markets Work Using the Economics of *The Office* Website

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Abstract

This paper describes a series of assignments that can be used in conjunction with the Economics of *The Office* website to help students identify the equilibrium price and quantity sold of a good in a market, differentiate between a shift in the demand curve and a movement along the demand curve, understand elasticity of demand and supply, comprehend willingness to pay and willingness to sell, and make subjective valuations. We augment videos from *The Office* with group work to encourage students to draw supply and demand curves and explain if there is a nonequilibrium price in a market or a shift in the demand function. These activities strengthen core knowledge of how markets work to help students intuitively grasp economics as a whole.

JEL Codes: A11, A22, Z11

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I. Introduction and Motivation

The motivation behind the Economics of *The Office* website (www.economicsoftheoffice.com; referred to as ETO hereafter) is to provide economics instructors with ready-made examples of economics concepts. The site's short videos are accompanied by brief descriptions of how an instructor might wish to use a video during class to illustrate a point about each concept.

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The traditional mode of “chalk and talk” is still prevalent in many classrooms (Watts and Becker 2008) and often reinforces a teacher-centered, passive learning environment. Willingham (2009) shows that students learn more easily when concepts are presented in both verbal and visual form.

Many introductory courses attempt to cover too many concepts, which means that insufficient time and attention are devoted to mastering the important threshold concepts (Frank 2007). The idea that less is more in the teaching of economics is not new (Becker 2004). Building on Becker’s work, we use *The Office* as a tool to help students understand how markets work. Students who develop an intuitive understanding of core economic principles, such as supply and demand, make better voters. Even those students who never take another economics course will, at the very least, have a stronger grasp of how economics works and applies to their lives.

The last decade has seen an emerging literature on ways to teach economics other than traditional lectures. Those alternative approaches include using literature (Watts 2003); art (Watts and Christopher 2012); music (Mateer and Rice 2007; Hall and Lawson 2008; Hall et al. 2008); podcasts (Moryl 2013); popular television shows such as *Seinfeld* (Ghent et al. 2011), *The Simpsons* (Hall 2013), and *The Office* (Kuester et al. 2014); and film (Leet and Houser 2003; Mateer 2004; Sexton 2006; Mateer and Li 2008; Geerling 2012; Mateer and Stevenson 2011, 2015).

This paper differs from the broad literature in that it focuses on providing a media-rich learning environment directed at mastering a few specific concepts. *The Office* is popular among undergraduates and connects with students’ mental schemas. Thus, the choice of *The Office* allows students to assimilate new economic information more easily. As Piaget (1936) noted, knowledge isn’t simply transferred, but rather built up. Students go through a unique mental construction process based on their existing knowledge and understanding of the world. Using clips from *The Office* facilitates that process and enables the instructor to better capture students’ attention and increase their retention of important subject matter.

While much has been written about economic instruction, the majority of the literature focuses on the macro landscape, or big-picture innovations that can transform a learning environment. Comparatively little has been written at the micro level. One especially useful micro-level pedagogical article is Krasnozhon’s (2013) piece about the use of Beyoncé’s song “Irreplaceable” to help

students learn the law of demand. Interested readers looking for micro-level materials should also access Starting Point: Teaching and Learning Economics. This website contains seventeen different teaching modules, each with a handful of micro-level examples to help instructors teach more effectively. Last, but not least, *The Ultimate Guide to Teaching Microeconomics* (Geerling and Mateer 2014) contains over 500 teaching tips.

II. General Comments about the Media-Based Approach to Teaching Fundamentals of Demand and Supply

While most students can intuitively grasp the concept of a downward-sloping demand function, many students struggle to differentiate between a movement along the demand curve and a shift in demand. The series of in-class exercises described in this paper teaches that concept and also allows students to demonstrate their ability to properly label and identify supply and demand curves along with the equilibrium price. We have discovered that many students feel quite confident that they understand the concept of equilibrium and are able to interpret the relevant curves, but when they are forced to illustrate this concept themselves, they tend to struggle.

The cognitive science literature has shown that some students have poor metacognition, or understanding of their own thought processes (Girash 2014). In fact, one of the defining characteristics of a good versus a bad student is their level of metacognition. Students with poor metacognition benefit greatly from a teaching technique and assessment that shows them what they don't know. Therefore, frequent assessments are a good thing, and ones that incorporate television clips are more fun than ordinary quizzes. The exercises we recommend also provide an opportunity to take advantage of collaborative learning through dividing the class into groups of two or three to solve a problem and illustrate what is occurring in a particular clip.

III. The Lessons

In the following sections, we outline ETO clips that can be used to teach five major concepts related to pricing and demand. There are many different ways faculty may choose to grade these activities. We typically try to keep the exercises fun and give bonus points to students who incorrectly answer these questions (to reward effort) and additional bonus points to students who correctly answer the

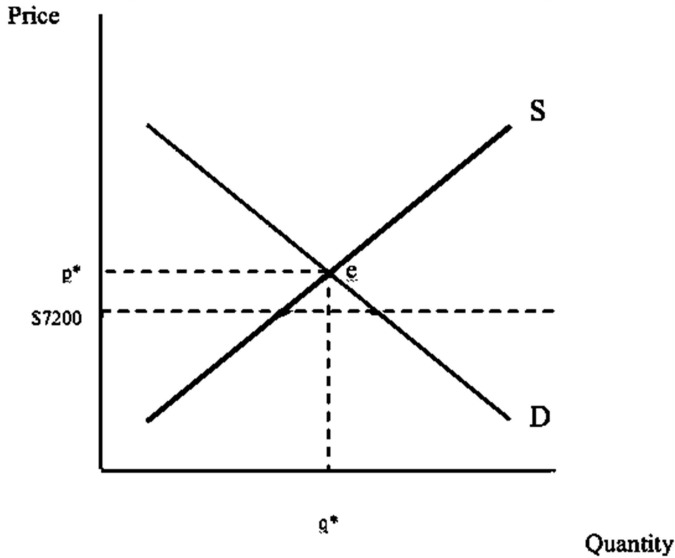
questions (to reward accuracy). This reward system encourages groups to take the questions seriously.

Hand out the questions on half sheets of paper before showing the video and ask students to divide into groups of two or three. Since different groups work at various speeds, it is important to give a strict time limit (e.g., 3 minutes) for each group to answer the question in order focus their attention and promote the rapid exchange of information. This way, students do not goof off, and faster groups do not become impatient with groups that are not answering quickly.

A. Lesson One: Understanding Market Equilibrium, Shortages, and Surpluses

1. *Summary:* The clip labeled “Arbitrage” can be used to cover the concept of an equilibrium price along with shortages and surpluses in markets. In this scene, the viewer discovers that Andy Bernard is trying to sell his Nissan Xterra. His advertised sale price is \$8,700, which appears to be a reasonable price for the automobile. Dwight Schrute convinces Andy to sell the car to him for \$7,200. Dwight then cleans the car and tries to sell it for \$9,995 on eBay, which leads to a rich classroom discussion about how complete information leads to more efficient markets.

2. *Instructor directions:* We recommend that instructors keep the questions simple for this clip (see appendix 1). Each group must correctly draw and label their supply and demand curves and show that the equilibrium price of the vehicle is above \$7,200 (see figure 1). Many students will be worried about what the actual equilibrium price is. Instructors should stress that the important thing to take away from this question is whether or not \$7,200 is an equilibrium price and why or why not. For the students to figure out where the \$7,200 comes from, it is important to pause the video and point out that Andy’s original asking price was consistent with the prices that similar Nissan Xterras were selling for.

Figure 1. The equilibrium price in the “Arbitrage” clip

3. *Expected answers:* After the answers have been turned in, instructors should go over the correct answer to this question. Students should draw the equilibrium price at any price above \$7,200, appropriately label the axes, and label the supply and demand curves correctly. The key is that the student recognizes that the sale price of \$7,200 is below the market equilibrium price since Dwight immediately turns around and tries to resell the car for \$9,995.

An alternative that provides more time for discussion and a more reflective answer is to use this clip as the last activity of one class period and then go over the answer at the beginning of the next class period.

4. *Additional insights:* Instructors may use this clip to teach other lessons. Andy incredulously asks Dwight why he would “flip his car for profit” and notes that Dwight took advantage of their friendship. This exchange could motivate a discussion on how we expect some individuals in efficient markets to take advantage of arbitrage situations. In addition, the clip primes students to consider the ethical dimension of arbitrage opportunities and consider whether it is always appropriate to take advantage of them. A related follow-up question that we like is to ask students how they feel about ticket brokers selling tickets to concerts and sporting events for well above face value and if they think that practice is efficient.

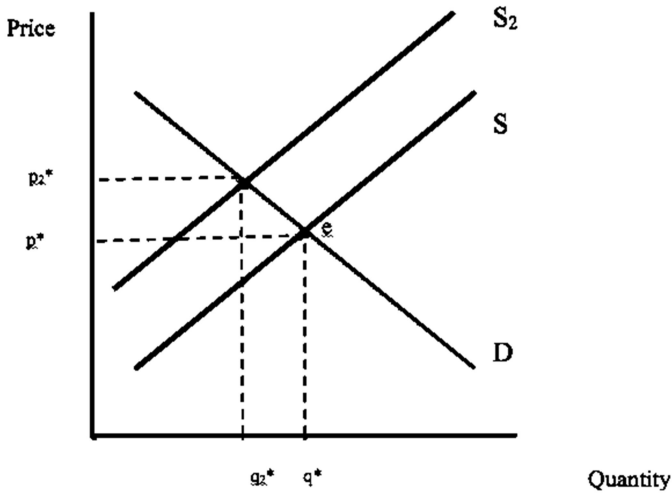
B. Lesson Two: Understanding Demand Determinants and Being Able to Demonstrate Shifts in Demand

1. *Summary:* This lesson consists of two clips from the same episode. In the first clip, “Huge Turnaround for Profit,” Dwight correctly anticipates the increased demand for Princess Unicorn dolls as the Christmas season approaches. In his words, as “lazy parents become more desperate,” he will be able to sell these dolls “at an enormous profit.” After watching this scene, students should be able to demonstrate that the demand curve for Princess Unicorn dolls will shift to the right.

2. *Instructor directions:* Show the second clip, “Fa LaLa CaChing,” before the students answer the questions the instructor provides. Using the prompts in appendix 2, the instructor should ask students which demand or supply determinant is responsible for this change in the market. There are two acceptable answers: “an expected change in future price” or “a change in tastes and preferences” for the demand determinant.

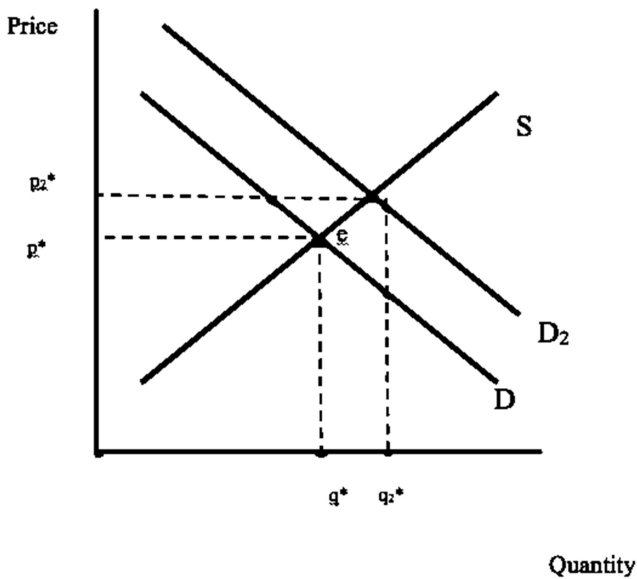
3. *Expected answers:* Begin by demonstrating that many students incorrectly shift the supply curve in order to demonstrate a price increase. The problem with the answer in figure 2a (a supply decrease) is that the quantity sold declines. Dwight wants to sell q^* dolls. In figure 2a, he only sells q_2^* dolls.

Figure 2a. The incorrect answer many students provide



Many students draw an increase in demand. This better answer, shown in figure 2b, explains the increase in price and shows that the number of dolls sold will increase.

Figure 2b. The better answer many students provide



Students who provide this answer are keying in on the anticipated increase in demand as the holidays near. This shift produces a price increase and also an increase in the quantity sold. However, Dwight has bought up all of the remaining Princess Unicorn dolls, so simply

sliding along a typical supply curve in the short run overstates how many dolls will be sold.

There are always a few astute students who respond to the fact that Dwight claims he “bought out every store in the area over the past couple of weeks,” which implies that in the short run, the supply of these dolls is fixed. Many of these astute students will correctly draw a vertical supply curve and show that the number of dolls sold in this case does not change.

Figure 2c. The ideal answer

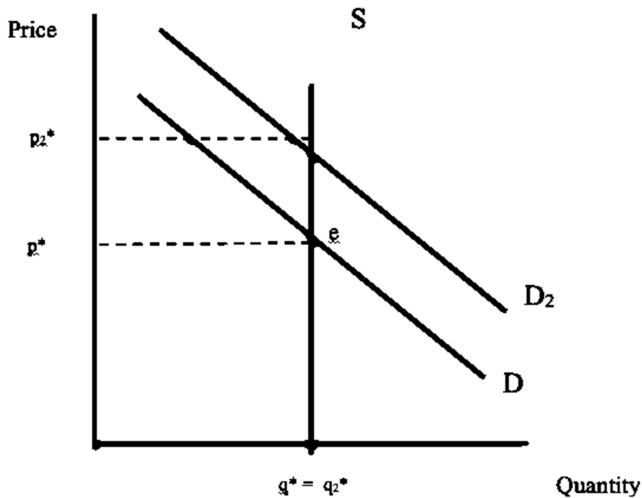


Figure 2c illustrates a market with a fixed (vertical) supply curve. It also shows a much larger increase in the price, p_2^* , than in figures 2a and 2b.

4. Additional insights: There is only one best answer: supply is fixed and demand increases. We show this solution in figure 2c. Supply is fixed (vertical) in the very short run, and that is exactly the time frame under consideration in the example. This is an important teaching point that often goes unaddressed until elasticity is covered. By differentiating between the typical short-run answer in figure 2b and the very short-run answer in figure 2c, the instructor builds students’ intuition for using time in the adjustment process.

C. Lesson Three: A Decrease in Demand

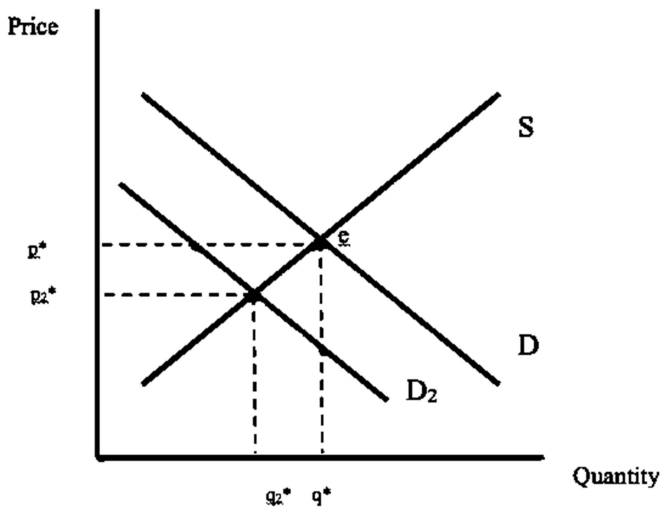
1. Summary: “Write That Down” is a scene from the “Business School” episode where Michael Scott demonstrates a lack of

understanding of what has happened to the demand for paper over the past several years. When he tells the students that “real business is done on paper,” it has some resonance until he tells the students to “write that down.” No one in the class is using paper to take notes—everyone types their notes on a laptop!

2. *Instructor directions:* Ask students to show either a shift in supply or a shift in demand for paper in recent years given the information demonstrated in the clip.

3. *Expected answers:* Students should be able to draw a leftward shift in the demand function. This is a short clip that very directly demonstrates the effects of decreasing demand for a product. By now, students should be getting good at curve shifting!

Figure 3. The effects of decreasing demand for a product



4. *Additional insights:* “Emma, le Trefle,” viewable on YouTube, is a thoughtful ad that shows how an iPad can replace paper for drawing, sticky notes, printing, and reading. However, as wonderful as a tablet is, there are limits to how much paper use can be reduced. How does an increase in demand for a substitute good affect the demand for the original good?

D. Lesson Four: Subjective Valuation and Willingness to Pay

1. *Summary:* The clip “Garage Sale” features the *Office* staff trying to sell their unwanted stuff. Each employee has set up a table in the building’s warehouse, and Dwight takes it upon himself to bargain with each seller for a deal. Dwight begins with a thumbtack and eventually, after a series of shrewd deals, ends up with a telescope. However, he lacks one thing: the magic beans Jim holds. Professor Copperfield’s Miracle Legumes are utterly worthless, but Jim has concocted an elaborate scheme that makes it look like the beans can magically reappear after being destroyed.

When Dwight notices this, he tells Jim he’ll take them, and Jim demands that Dwight leave the telescope in return. Later, we see Dwight holding up the packet of beans and stating, “I started with a thumbtack and traded my way to a telescope. But in a way, the most valuable thing here wasn’t the telescope at all. No. It was this packet of beans.”

2. *Instructor directions:* This clip provides a perfect example of how preferences and marketing play a role in what people are willing to pay for an item. Jim’s clever campaign to make the beans appear magical eventually causes Dwight to desire the beans when at first he was certain that they were worthless. The instructor should emphasize that buyers have a willingness to pay and that sellers have a willingness to sell. When a sale is made, it is because the willingness to pay a certain price is high enough to induce the willingness to sell. Each individual’s willingness to sell or willingness to buy is determined by the subjective value they place on a particular good.

3. *Expected answers:* Figure 4 illustrates Dwight’s preferences for the magic beans at the beginning (D) and end (D_2) of his interactions with Jim.

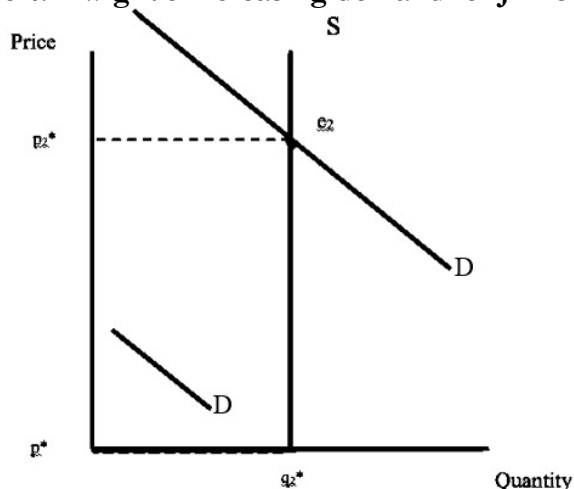
Figure 4. Dwight's increasing demand for Jim's magic beans

Figure 4 illustrates how effective marketing can shift an individual's demand curve to the right by changing the perception of a good. Dwight would not trade with Jim when he first heard of the magic beans. However, after “experiencing” the beans’ magic properties, his subjective evaluation increases to the point where he is willing to give Jim a telescope in return.

4. Additional insights: The “Garage Sale” clip is loosely based on the true story of Canadian entrepreneur Kyle MacDonald, who started with one red paper clip and ended up, after a series of swaps, owning a small house.¹ Connecting the fictional TV episode with a real-life example creates a memorable association. Appendix 4 has questions instructors can use in conjunction with the “Garage Sale” clip.

E. Lesson Five: Labor Market Supply

1. Summary: The “Babysitter” clip discusses why the supply of babysitters who meet Jim and Pam’s criteria is very low, resulting in their inability to find a sitter.

2. Instructor directions: This clip is about the labor market. The instructor’s objective is to help students illustrate why valuable skills allow workers to earn higher wages than their less-skilled

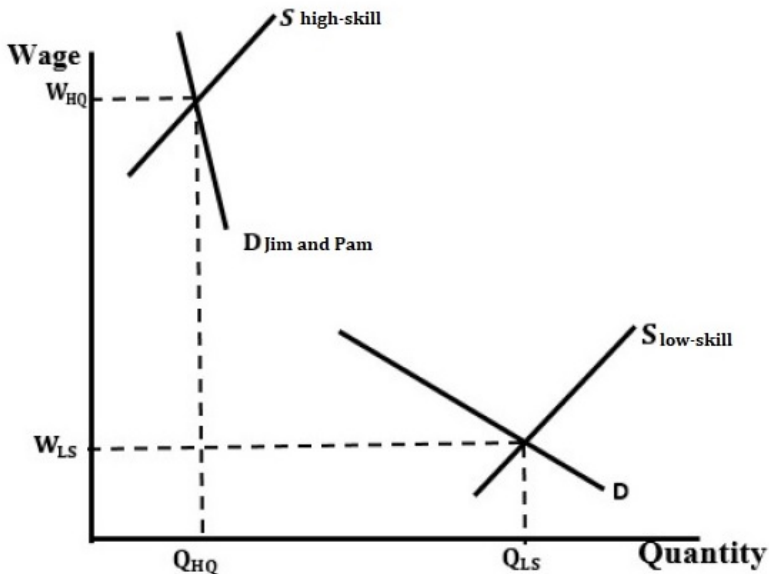
¹ Along similar lines, a fascinating YouTube video, “From a Cell Phone to Porsche, The Craigslist Master,” chronicles how one man started with a cell phone and, through a series of swaps, traded up to a Porsche.

counterparts. Ask students to draw a graph that shows the wages that highly trained babysitters receive compared to the wages that less-skilled babysitters earn.

3. *Expected answers:* To draw the correct answer, students need to recognize that the supply of highly qualified babysitters is much lower than the supply of less-skilled babysitters. This concept is illustrated in figure 5, with two different supply curves labeled “high-skill” and “low-skill.” The second element students need to identify is demand. Jim and Pam’s preferences are uncommon. Most parents do not seek out the perfect sitter because they either are unwilling to pay or don’t think that a high level of skill is necessary.

The ideal answer shows two supply and demand intersections. The first occurs in the upper left quadrant, where we observe a low supply of highly skilled babysitters intersecting with an inelastic demand curve from concerned parents. The second occurs in the lower right quadrant, where supply and demand intersect in the low-skill babysitter market. In this market, demand is much more elastic, since consumers view babysitters as close substitutes. Jim and Pam, however, won’t accept any babysitter.

Figure 5. Jim and Pam’s babysitter selection process



4. *Additional insights:* Many students cite babysitting as their first job. Poll the class to find out how many have worked (or are currently

working) as a babysitter. Ask students to share the wages they earned and what qualifications they obtained before getting their first babysitting jobs. Appendix 5 contains an additional application question instructors can assign to ensure that students understand how supply and demand impact labor decisions in this market.

IV. Conclusion

The Economics of *The Office* website contains several short video clips that instructors can use to teach supply and demand. We hope that the five examples provided here will spur interested readers to utilize the website when teaching how market forces determine price and quantity.²

References

- Becker, William E. 2004. "Economics for a Higher Education." *International Review of Economics Education*, 3(1): 52–62.
- Frank, Robert H. 2007. *The Economic Naturalist: In Search of Explanations for Everyday Enigmas*. New York: Basic Books.
- Geerling, Wayne. 2012. "Bringing the 'Dismal Science' to Life: Teaching Economics through Multimedia." *International Review of Economics Education*, 11(2): 81–90.
- Geerling, Wayne, and G. Dirk Mateer. 2014. "A Spoonful of Sugar Helps the Medicine Go Down: Why Good Content Is Never Enough." In *New Developments in Economic Education*, ed. Franklin G. Mixon, Jr., and Richard J. Cebula, 1–20. Cheltenham, UK: Edward Elgar.
- Geerling, Wayne, and G. Dirk Mateer. 2014. *The Ultimate Guide to Teaching Microeconomics*. New York: W.W. Norton.
- Ghent, L. S., A. Grant, and G. Lesica. 2011. "The Economics of Seinfeld." *Journal of Economic Education*, 42(3): 317–18.
- Girash, John 2014. "Metacognition and Instruction." In *Applying Science of Learning in Education: Infusing Psychological Science into the Curriculum*, ed. Victor A. Benassi, Catherine E. Overson, and Christopher M. Hakala, 152–68. Society for the Teaching of Psychology.
- Hall, Joshua. 2013. "Homer Economicus: Using *The Simpsons* to Teach Economics." *Journal of Private Enterprise*, 20(2): 166–77.
- Hall, Joshua C., and Robert A. Lawson. 2008. "From Abba to Zeppelin, Led: Using Music to Teach Introductory Economics." *Perspectives on Economic Education Research*, 4(1): 23–36.

² These are not the only examples of clips on the ETO website that can be used to teach supply and demand. The "Flowers" clip demonstrates that Michael was unable to purchase flowers at a price he was willing to pay. The "Jacket" clip notes that Kevin was willing to pay much more for a jacket because his name was monogrammed on it.

- Hall, Joshua C., Robert A. Lawson, G. Dirk Mateer, and Andrew Rice. 2008. "Teaching Private Enterprise through Tunes: An Abecedarium of Music for Economists." *Journal of Private Enterprise*, 23(2): 157–66.
- Krasnozhon, Leonid A. 2013. "Using Popular Music to Teach Principles of Economics: Beyoncé's Take on Demand and Quantity Demanded." *Journal of Private Enterprise*, 28(2): 139–49.
- Kuester, Daniel D., G. Dirk Mateer, and Christopher J. Youderian. 2014. "The Economics of *The Office*." *Journal of Economic Education*, 45(4): 392.
- Leet, Don, and Scott Houser. 2003. "Economics Goes to Hollywood: Using Classic Films to Create an Undergraduate Economics Course." *Journal of Economic Education*, 34(4): 326–32.
- Mateer, G. Dirk. 2004. *Economics in the Movies*. Mason, OH: South-Western.
- Mateer, G. Dirk, and Herman Li. 2008. "Movie Scenes for Economics." *Journal of Economic Education*, 39(3): 303.
- Mateer, G. Dirk, and Andrew Rice. 2007. "Using Synchronized Lyrics and Music to Teach Economics." *Perspectives on Economic Education Research*, 3(1): 53–64.
- Mateer, G. Dirk, and E. Frank Stephenson. 2011. "Using Film Clips to Teach Public Choice Economics." *Journal of Economics and Finance Education*, 10(1): 28–36.
- Mateer, G. Dirk, and E. Frank Stephenson. 2015. "Using Film Clips to Teach Public Choice Economics: Take 'Two.'" *Journal of Economics and Finance Education*, 14(2): 75–85.
- Moryl, Rebecca. 2013. "T-Shirts, Moonshine, and Autopsies: Using Podcasts to Engage Undergraduate Microeconomics Students." *International Review of Economics Education*, 13: 67–74.
- Piaget, Jean. 1936. *The Origins of Intelligence in Children*. New York: International University Press.
- Sexton, Robert L. 2006. "Using Short Movie and Television Clips in the Economics Principles Class." *Journal of Economic Education*, 37: 406–17.
- Watts, Michael. 2003. *The Literary Book of Economics*. Wilmington, DE: Intercollegiate Studies Institute.
- Watts, Michael, and William E. Becker. 2008. "A Little More Than Chalk and Talk: Results from a Third National Survey of Teaching Methods in Undergraduate Economics Courses." *Journal of Economic Education*, 39(3): 273–86.
- Watts, Michael, and Chineze Christopher. 2012. "Using Art (Paintings, Drawings, and Engravings) to Teach Economics." *Journal of Economic Education*, 43(4): 408–22.
- Willingham, Daniel T. 2009. *Why Don't Students Like School?* San Francisco: Jossey-Bass.

Appendix 1. Suggested Questions for the “Arbitrage” Scene

1. Completely draw and label the supply and demand curves for the vehicle that Andy is trying to sell. Be sure to label both axes, the supply and demand curves, and the equilibrium point (using p^* and q^*) on your graph.
2. Do you believe that \$7,200 is an equilibrium price for this vehicle? If \$7,200 is not an equilibrium price, label whether that price would be above or below equilibrium and demonstrate to the best of your ability the surplus or shortage you think would occur in this market. (Please note that unless you feel \$7,200 is the equilibrium price, you do not have to label an exact equilibrium price.)

Appendix 2. Suggested Questions for the Princess Unicorn Doll Scenes

1. Dwight correctly identified a change in the market for Princess Unicorn. He knew that as Christmas approached the
 - a. supply of dolls would increase.
 - b. demand for dolls would increase.
 - c. supply of dolls would decrease.
 - d. demand for dolls would decrease.
2. Because of this change, the price of these dolls will _____ while the number of dolls sold will _____. Please illustrate the change on graph below.



Appendix 3. Suggested Questions for the “Write That Down” Scene

Michael Scott appears to be somewhat oblivious to how the presence of a substitute for paper has affected the market over the past twenty years. Compare the market for the paper Dunder Mifflin sells at the time Michael was speaking to the market for paper twenty years earlier.

1. What (according to this clip) has changed the most in the market for paper?
 - a. Demand has increased.
 - b. Demand has decreased.
 - c. Supply has increased.
 - d. Supply has decreased.
2. Show this change in the graph below, being careful to label the equilibrium price and quantity both when Michael is speaking and in the past.



Appendix 4. Suggested Questions for the “Garage Sale” Scene

1. Using the terms *willingness to pay* and *willingness to sell*, explain how it is possible for both the buyer and seller to gain from a trade.
2. Trades that one person might make, another would forgo. Explain the role that subjective values play in market exchanges. If we based everything on objective values (such as cost), would anyone be willing to trade a paper clip for a cottage? Why or why not?

Appendix 5. Suggested Questions for the “Babysitter” Scene

1. Babysitter wages are partially determined by the prevailing minimum wage in the local economy. Suppose that the local minimum wage rises from \$9 to \$12 an hour. What impact will this increase have on the wage babysitters receive? Illustrate your answer by shifting either the supply or the demand curve. Be sure to label the axes.

