



# Choice:

ECONOMICS MATERIALS FOR  
SUCCESS

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## Worksheet – Supply, demand, and equilibrium

**Related news article:** [Surge pricing: Is your favorite restaurant about to start charging you more at peak times?](#) (The Guardian, March 11, 2024), and [Dynamic pricing keeps spreading, despite protest from Wendy's customers](#) (Inc.com, March 11, 2024)

**Summary:** This worksheet could be used for in-class or homework practice. Students will be asked to read the excerpts from two short articles about surge and dynamic pricing. Both articles refer to the announcement made by Wendy's CEO that the company would adopt surge pricing. The article from *The Guardian* explains that after negative customer reactions, the CEO clarified that he had been referring to dynamic pricing, and Wendy's would only decrease prices at times when demand decreases. The article from *Inc.com* also mentions Wendy's attempt to adopt dynamic pricing, and elaborates on industries in which dynamic pricing is a common practice. Then, students will be asked to explain the difference between surge and dynamic pricing, and analyze businesses to determine which ones are more or less likely to adopt dynamic pricing. The worksheet will also ask students to discuss surge pricing from the consumer's point of view. **Answers are provided at the end of this document.**

### Learning objectives:

At the end of this worksheet, students will be able to:

- o Understand the concepts of dynamic and surge pricing;
- o Understand the difference between dynamic and surge pricing;
- o Recognize scenarios when a business adopts dynamic pricing;
- o Explain the purpose of dynamic pricing;
- o Evaluate scenarios to recognize analogies;

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- o Apply the concept of dynamic pricing to predict price changes;
- o Apply the supply and demand model to show the effect of slow and busy restaurant times on the prices of menu items.

**Economics concepts:** Surge pricing, Dynamic pricing, Elasticity, Supply, Demand, Profit

**Suggested excerpts:**

[Surge pricing: is your favorite restaurant about to start charging you more at peak times?](#) (The Guardian, March 11, 2024)

“Name: Surge pricing.”

“Appearance: That depends on what time it is.”

“Why would I want to eat lunch then [after lunch]? Because it’s cheaper – that’s the point of surge pricing.”

“To make people eat lunch when they don’t want lunch? Essentially, yes: to even out demand across the day, while maximising profits.”

“Whose idea was this? Airlines have used this strategy for decades. Ride services such as Uber also charge more at peak times. Now restaurants are taking up the idea.”

“... some restaurant chains in the US are using new technology to vary pricing according to demand...”

“In that case, why wouldn’t you deploy surge pricing? Customers really don’t like it. Last month, Wendy’s CEO, Kirk Tanner, seemed to announce that the chain would adopt surge pricing in 2025, but after a backlash the company quickly clarified that it was only talking about “dynamic pricing”.”

“What’s the difference? Dynamic pricing means changing prices in response to various factors, one of which might be demand.”

“And surge pricing? Is the practice of increasing prices in response to high demand, which Wendy’s denies is its intention. “We have no plans to do that



and would not raise prices when our customers are visiting us most,” read a statement.”

[Dynamic pricing keeps spreading, despite protest from Wendy’s customers](#)  
(Inc.com, March 11, 2024)

“Fast-food chain Wendy's got a heaping helping of blowback last month from angry customers reacting to its plans to test dynamic pricing--an irate reaction that led to the company doing a bit of strategic backtracking.”

“People have gotten used to surge pricing in industries like travel, where airlines and hotels increase fees during peak periods and on weekends. Nobody likes that, but the practice has become standard--as it has for other businesses like ride-sharing apps, which also use the income-boosting method during high-demand periods.”

“How does it [dynamic pricing] work? A pulled-pork sandwich from San Diego's Cali BBQ, for example, cost \$18 on a Saturday night compared to \$12 on weekday afternoons.”

“... in a 2021 article on dynamic pricing, McKinsey urged smaller businesses adopting the technique to stress its upside of offering lower-cost advantages to buyers who wait to purchase at opportune times. The consulting giant also recommended avoiding pricing shifts on big ticket goods like TVs or computers, and focusing on items where demand or production factors justify adjustments.”



## Questions

1. What is dynamic pricing?
2. Which industries have adopted dynamic pricing? Please provide at least two examples.
3. The article from *The Guardian* mentions that if a consumer has chosen to have lunch in a restaurant that engages in dynamic pricing, he/she might sometimes prefer to wait for lunch until after lunch time because eating lunch later might be “cheaper.” In your own words, what is the purpose of surge pricing?
4. In 2024, Wendy’s’ CEO revealed that the company would install digital menu displays that would allow dynamic pricing. Which of the following scenarios resembles this event the most?
  - a. In the late 20<sup>th</sup> century, Coca-Cola’s CEO announced that vending machines would charge higher prices on hot days.
  - b. Tesla created the most luxurious sports car, the Tesla Roadster, knowing that it would not be able to achieve the needed scale or efficiency to earn a profit.
  - c. Spotify decided to offer a free version of its online music streaming service, and a premium option with more features.
  - d. The co-founders of Airbnb started to take photographs of their listings and to upload them on their website to increase sales.
5. When Wendy’s CEO announced that the business would deploy surge pricing, customers’ discontent led the CEO to:
  - a. Resign.
  - b. Explain that he meant dynamic rather than surge pricing.
  - c. Start offering free coffee from noon to 2pm every day.
  - d. Agree that Wendy’s charges fixed prices for all items on its menu.
6. According to the article from *The Guardian*, what is the difference between surge pricing and dynamic pricing?



- a. Surge pricing refers to decreasing prices when supply increases; dynamic pricing refers to increasing prices when demand increases.
- b. Surge pricing refers to any price change; dynamic pricing refers to decreasing prices when demand decreases.
- c. Surge pricing refers to increasing prices when demand increases; dynamic pricing refers to increasing or decreasing prices due to various factors.
- d. Surge pricing refers to increasing or decreasing prices due to various factors; dynamic pricing refers to decreasing prices when supply increases.

7. The article from *The Guardian* mentions that the UK's Slug & Lettuce chain has announced that it would create "what was described by critics as an "unhappy hour"." Specifically, it would introduce higher prices "at busy periods in 800 of its 4,000 pubs." This suggests that Slug & Lettuce would engage in:

- a. Price discrimination.
- b. Economies of scale.
- c. Product differentiation.
- d. Surge pricing.

8. In your opinion, from consumers' point of view, is surge pricing a "good" idea? Why or why not?

9. The article from *Inc.com* states that Appleby's and IHOP said that "they aren't [weren't] willing to tempt the patience of price sensitive clients by introducing dynamic menu options." This implies that if Appleby's and IHOP adopt dynamic pricing and increase prices during peak times, the more \_\_\_\_\_ customers would be more likely to get annoyed and go elsewhere.

- a. Relatively price elastic.
- b. Relatively price inelastic.
- c. Unit elastic
- d. Perfectly inelastic.

10. Which of the following Uber rides is expected to be the most expensive?

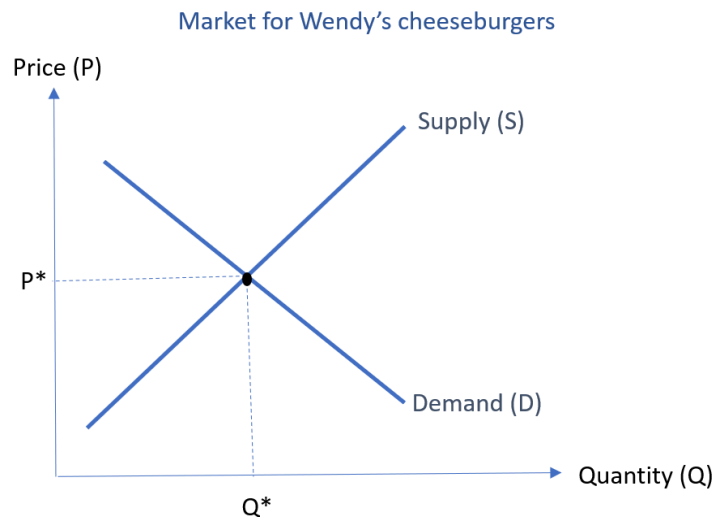


- a. A ride from a residential area to Target on Wednesday afternoon.
- b. A ride to a public school during the weekend.
- c. A ride from the location of Taylor Swift's concert immediately after the event ends.
- d. A ride to a mall around noon on a weekday.

11. Suppose that the prices of hotels in Tampa, FL on the weekend of Tampa's annual Gasparilla Pirate Fest, do not adjust to balance out the quantity supplied and the quantity demanded. Would the result be efficient or not?

12. According to the article from *Inc.com*, "McKinsey urged smaller businesses adopting the technique [dynamic pricing] to stress its upside of offering lower-cost advantages to buyers who wait to purchase at opportune times." Is this reasoning more likely to work for a business that makes and delivers pizzas, or a seller of toothpaste?

13. The following graph shows the supply and demand curves for Wendy's cheeseburgers. If Wendy's starts using artificial intelligence algorithms to introduce dynamic pricing, what is expected to happen to the price of Wendy's cheeseburgers during slow times? Show the effect on the graph below.





## Answer Key

1. What is dynamic pricing?

**Answer: Dynamic pricing refers to changing the price of products due to various factors, including demand, in real time.**

2. Which industries have adopted dynamic pricing? Please provide at least two examples.

**Answer: Dynamic pricing is common in the accommodation and travel industries. Some popular examples include airlines and ride services, such as Uber. More recently, restaurants have started to deploy dynamic pricing. The article from *Inc.com* mentions that “the method is already being used by countless eateries, grocers, retailers.” Another example is Amazon which changes the prices of some goods, sometimes several times a day.**

3. The article from *The Guardian* mentions that if a consumer has chosen to have lunch in a restaurant that engages in dynamic pricing, he/she might sometimes prefer to wait for lunch until after lunch time because eating lunch later might be “cheaper.” In your own words, what is the purpose of surge pricing?

**Answer: The purpose of surge pricing is for companies “to even out demand across the day, while maximising profits.”**

4. In 2024, Wendy's' CEO revealed that the company would install digital menu displays that would allow dynamic pricing. Which of the following scenarios resembles this event the most?

- a. In the late 20<sup>th</sup> century, Coca-Cola's CEO announced that vending machines would charge higher prices on hot days.
- b. Tesla created the most luxurious sports car, the Tesla Roadster, knowing that it would not be able to achieve the needed scale or efficiency to earn a profit.
- c. Spotify decided to offer a free version of its online music streaming service, and a premium option with more features.



- d. The co-founders of Airbnb started to take photographs of their listings and to upload them on their website to increase sales.

**Answer: A. The scenarios about Wendy's and Coca Cola are both examples of dynamic pricing. Tesla's Roadster was a way for the company to differentiate itself from its competitors.**

5. When Wendy's CEO announced that the business would deploy surge pricing, customers' discontent led the CEO to:

- a. Resign.
- b. Explain that he meant dynamic rather than surge pricing.
- c. Start offering free coffee from noon to 2pm every day.
- d. Agree that Wendy's charges fixed prices for all items on its menu.

**Answer: B.**

6. According to the article from *The Guardian*, what is the difference between surge pricing and dynamic pricing?

- a. Surge pricing refers to decreasing prices when supply increases; dynamic pricing refers to increasing prices when demand increases.
- b. Surge pricing refers to any price change; dynamic pricing refers to decreasing prices when demand decreases.
- c. Surge pricing refers to increasing prices when demand increases; dynamic pricing refers to increasing or decreasing prices due to various factors.
- d. Surge pricing refers to increasing or decreasing prices due to various factors; dynamic pricing refers to decreasing prices when supply increases.

**Answer: C. According to the article from *The Guardian*, "dynamic pricing means changing prices in response to various factors, one of which might be demand" whereas surge pricing is "the practice of increasing prices in response to high demand."**

7. The article from *The Guardian* mentions that the UK's Slug & Lettuce chain has announced that it would create "what was described by critics as an "unhappy hour"." Specifically, it would introduce higher prices "at busy



periods in 800 of its 4,000 pubs.” This suggests that Slug & Lettuce would engage in:

- a. Price discrimination.
- b. Economies of scale.
- c. Product differentiation.
- d. Surge pricing.

**Answer: D. Increasing prices during busy periods means that Slug & Lettuce would introduce surge pricing.**

**Price discrimination refers to charging different prices to different consumers for the same good or service.**

**A company experiences economies of scale when the long-run average total cost decreases as the company increases the level of output.**

**Product differentiation refers to businesses’ attempt to distinguish their product from that of their competitors.**

8. In your opinion, from consumers’ point of view, is surge pricing a “good” idea? Why or why not?

**Answer: Answers will vary. According to the article from *The Guardian*, surge pricing is not a “good idea” from the customer’s point of view, because “the value of a large fries doesn’t rise just because the restaurant is busy.”**

9. The article from *Inc.com* states that Appleby's and IHOP said that “they aren't [weren't] willing to tempt the patience of price sensitive clients by introducing dynamic menu options.” This implies that if Appleby's and IHOP adopt dynamic pricing and increase prices during peak times, the more \_\_\_\_\_ customers would be more likely to get annoyed and go elsewhere.

- a. Relatively price elastic.
- b. Relatively price inelastic.
- c. Unit elastic
- d. Perfectly inelastic.



**Answer: A. The more “price sensitive clients” have relatively more elastic demand for the food of Appleby's and IHOP.**

10. Which of the following Uber rides is expected to be the most expensive?

- a. A ride from a residential area to Target on Wednesday afternoon.
- b. A ride to a public school during the weekend.
- c. A ride from the location of Taylor Swift’s concert immediately after the event ends.
- d. A ride to a mall around noon on a weekday.

**Answer: C. The Uber ride is expected to be the most expensive “during high-demand periods.” In this example, the demand for Uber rides seems to be the highest from the location of a concert immediately after the event ends.**

11. Suppose that the prices of hotels in Tampa, FL on the weekend of Tampa’s annual Gasparilla Pirate Fest, do not adjust to balance out the quantity supplied and the quantity demanded. Would the result be efficient or not?

**Answer: If the prices of hotel rooms do not adjust accordingly, the result would not be efficient. A free, competitive market is efficient in equilibrium.**

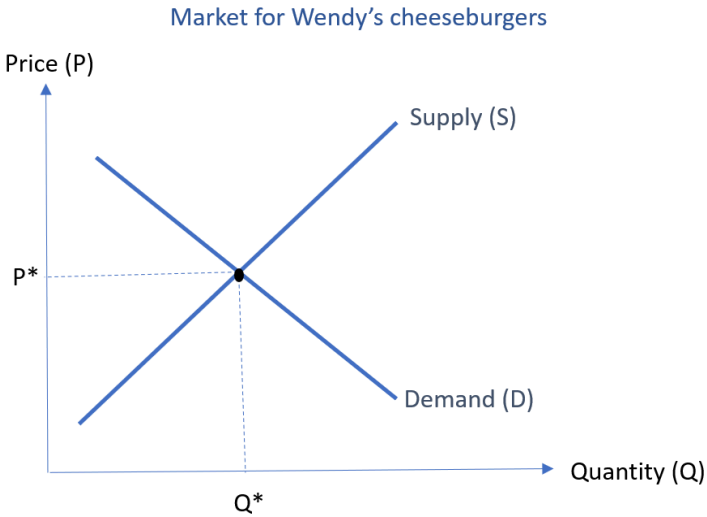
12. According to the article from *Inc.com*, “McKinsey urged smaller businesses adopting the technique [dynamic pricing] to stress its upside of offering lower-cost advantages to buyers who wait to purchase at opportune times.” Is this reasoning more likely to work for a business that makes and delivers pizzas, or a seller of toothpaste?

**Answer: This method is more likely to work for the pizza seller, because the demand for pizza is more likely to vary during different times of the day. For example, the demand might increase around lunchtime and in the evening. In addition, consumers of toothpaste may wait to purchase the good. There is no specific time of the day when more or fewer consumers are expected to buy toothpaste.**

13. The following graph shows the supply and demand curves for Wendy’s cheeseburgers. If Wendy’s starts using artificial intelligence algorithms to



introduce dynamic pricing, what is expected to happen to the price of Wendy's cheeseburgers during slow times? Show the effect on the graph below.



**Answer: Demand for cheeseburgers decreases during slow times. Graphically, the demand curve for Wendy's cheeseburgers shifts to the left. As a result, the equilibrium price decreases, and the equilibrium quantity decreases as well. The effect is shown on the following graph:**

