



Worksheet – Monopolistic competition

Related video: [Domino's built a pizza empire on delivery innovations; Now it faces challenges](#)
(Wall Street Journal, February 23, 2023)

Summary: This worksheet could be used for in-class or homework practice. Students will be asked to watch a 5-minute video about Domino's, and its commitment to deliver pizzas for 30 minutes or less. Then, students will need to understand the importance of product differentiation, and propose ways in which a company could differentiate its product. Students will also be asked questions related to Domino's costs of production, and will have to graphically show Domino's profit. **Answers are provided at the end of this document.**

Learning objectives:

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

- o Propose strategies that a company could utilize to differentiate its product;
- o Understand the importance of product differentiation for businesses that operate in a monopolistically competitive market;
- o Evaluate the characteristics of the pizza market to determine the market structure pizza shops operate under;
- o Identify Domino's costs of production;
- o Distinguish between fixed and variable costs;
- o Analyze some of Domino's strategies for rapid deliveries and cost reduction;
- o Analyze the relationship between product differentiation and the degree of competition;
- o Graphically represent Domino's profit.

Economics concepts: Monopolistic competition, Product differentiation, Costs of production, Profit

Questions

1. According to the video, what does Domino's do to differentiate itself from its competitors?
 - a. It makes the pizza dough from scratch in the stores where the pizzas are made and baked.
 - b. It prepares all toppings from scratch in the stores where the pizzas are made and baked.
 - c. It delivers pizzas in 30 minutes or less.
 - d. It delivers pizzas only with helicopters.

2. What are some of Domino's innovations mentioned in the video? List at least two innovations.

3. Why is it important for Domino's pizza chain to differentiate itself from its competitors and to be innovative?

4. Although "in 2022, more than 40% of online delivery orders for major pizza chains were from Domino's," there are many companies that deliver pizzas including Pizza Hut, Papa John's, Little Caesars and others. Companies that deliver pizzas can freely enter and exit the market. In addition, although the pizzas supplied by different pizza chains are close substitutes, they are not identical. Given this information, which market structure most accurately describes the market for pizza deliveries Domino's and its competitors operate in?
 - a. Monopoly
 - b. Monopolistic competition
 - c. Duopoly
 - d. Perfect competition

5. According to the video, Domino's started to deliver pizzas in 1960, the year when the first restaurant opened in Michigan. Very few restaurants were offering a delivery service at the time. Domino's started to promise fast delivery in less than 30 minutes in the 1980s which helped for the chain's marketing. However, Domino's had to stop promising a 30-minute delivery in 1993. Why?
 - a. A lawsuit was filed after a delivery driver hit another vehicle.
 - b. A lawsuit was filed after a Domino's employee accidentally put a pizza topping a customer was allergic to.
 - c. It became illegal to advertise the speed of delivery services.
 - d. Domino's was not required to stop promising a 30-minute delivery; it decided to do that strategically to surprise its customers with speedy pizza delivery.

6. Why has Domino's strategically chosen to have relatively small stores with little dining space?
- Because this reduces the costs of production by lowering rent.
 - Because the small dining space creates a unique experience for Domino's customers.
 - Because delivery costs are lower than the price of renting a bigger store.
 - There is no specific reason for the small stores and dining space.
7. What are some of Domino's production costs? List at least three.
8. What type of cost is Domino's rent?
- Fixed cost.
 - Variable cost.
 - Implicit cost.
 - Marginal cost.
9. What type of cost is the cost of one of Domino's delivery vehicles?
- Fixed cost.
 - Variable cost.
 - Implicit cost.
 - Marginal cost.
10. The video explains that Domino's utilizes a strategy called fortressing to fulfill orders rapidly. Which of the following statements correctly explains what this strategy means?
- Hiring more than the optimal number of workers to make sure that there is a worker who is able to start fulfilling an order as soon as the order has been placed.
 - Locating Domino's pizza shops in such a way that there is at least one store in a certain mile radius.
 - Opening more than the optimal number of Domino's pizza shops to make sure that there is no queue at any store at any time.
 - Cooperating with competitors' pizza shops to make sure that any order could be fulfilled within 30 minutes.
11. According to the video, there has been a shortage of delivery drivers. Consumers have started to order pizzas from apps with more flexible hours than those of Domino's, Pizza Hut and Papa John's. Which of the following statements about the response of these pizza shops is correct?

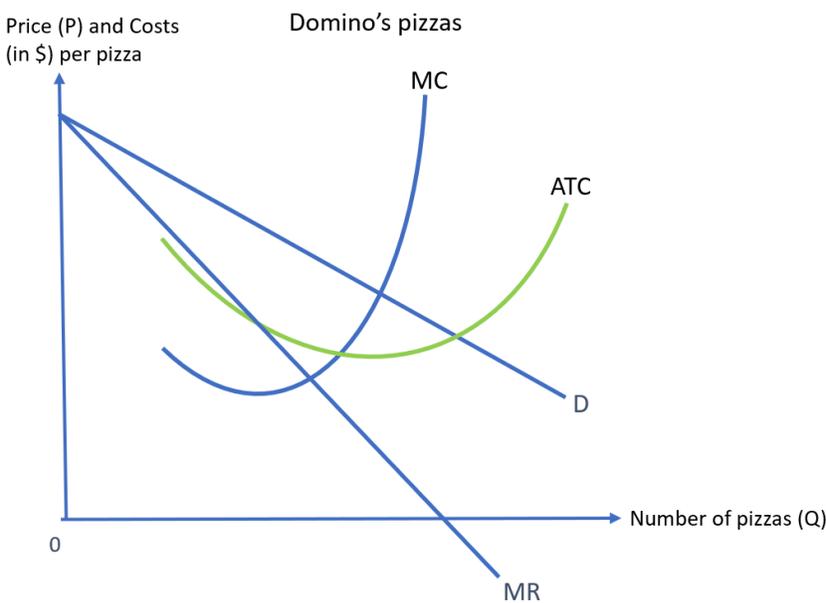
- a. Pizza Hut and Papa John's have started to work with these apps to deliver their pizzas.
- b. Domino's has refused to work with these apps because paying for an outside service to deliver pizzas is costly and distances Domino's from its customers.
- c. Domino's has started to offer customers a \$3 carryout tip if they pick up their order.
- d. All of the above.

12. What is the expected effect of the increase in the number of competitors such as Uber Eats, GrubHut, and DoorDash on Domino's pizzas?

- a. Demand shifts to the right.
- b. Demand shifts to the left.
- c. Supply shifts to the right.
- d. Supply shifts to the left.

13. True or False? Domino's is trying to differentiate its product from the product of its competitors in order to increase the degree of competition it experiences.

14. The following graph shows Domino's pizzas' demand (D), marginal revenue (MR), marginal cost (MC), and average total cost (ATC) curves. Provided that Domino's is maximizing its profit, shade the area on the graph that shows this profit. Label the profit-maximizing quantity of pizzas and the price Domino's chooses.



Answer Key

1. According to the video, what does Domino's do to differentiate itself from its competitors?
 - a. It makes the pizza dough from scratch in the stores where the pizzas are made and baked.
 - b. It prepares all toppings from scratch in the stores where the pizzas are made and baked.
 - c. It delivers pizzas in 30 minutes or less.
 - d. It delivers pizzas only with helicopters.

Answer: C. Domino's started to promise delivery in 30 minutes or less in the 1980s. The dough is mixed, and the toppings are prepared in one of the 25 supply chain centers in the US. Then, they are sold to franchise stores where the pizzas are made and baked. Domino's has tried various vehicles for delivery: cars, helicopters, electric bikes, self-driving cars, cars with a heated pizza oven, etc.

2. What are some of Domino's innovations mentioned in the video? List at least two innovations.

Answer: Domino's created a pizza box that prevents the cheese from sticking to the lid. In 2008, they also launched an "advanced ordering system which included a customized pizza builder" and a Pizza Tracker that makes the customers aware of the status of their orders, i.e., whether their pizza is being prepared, delivered, etc. Domino's has also tried different vehicles to deliver pizzas, including cars, helicopters, electric bikes, self-driving cars, cars with a heated pizza oven, etc.

3. Why is it important for Domino's pizza chain to differentiate itself from its competitors and to be innovative?

Answer: There are a number of other pizza stores Domino's competes with, and the pizzas they offer are very close substitutes for Domino's product.

4. Although "in 2022, more than 40% of online delivery orders for major pizza chains were from Domino's," there are many companies that deliver pizzas including Pizza Hut, Papa John's, Little Caesars and others. Companies that deliver pizzas can freely enter and exit the market. In addition, although the pizzas supplied by different pizza chains are close substitutes, they are

not identical. Given this information, which market structure most accurately describes the market for pizza deliveries Domino's and its competitors operate in?

- a. Monopoly
- b. Monopolistic competition
- c. Duopoly
- d. Perfect competition

Answer: B. Many firms, differentiated products, and free entry and exit are characteristics of a monopolistically competitive market.

5. According to the video, Domino's started to deliver pizzas in 1960, the year when the first restaurant opened in Michigan. Very few restaurants were offering a delivery service at the time. Domino's started to promise fast delivery in less than 30 minutes in the 1980s which helped for the chain's marketing. However, Domino's had to stop promising a 30-minute delivery in 1993. Why?

- a. A lawsuit was filed after a delivery driver hit another vehicle.
- b. A lawsuit was filed after a Domino's employee accidentally put a pizza topping a customer was allergic to.
- c. It became illegal to advertise the speed of delivery services.
- d. Domino's was not required to stop promising a 30-minute delivery; it decided to do that strategically to surprise its customers with speedy pizza delivery.

Answer: A. A delivery driver hit another vehicle and a lawsuit was filed. However, the company had already become known for its fast pizza delivery.

6. Why has Domino's strategically chosen to have relatively small stores with little dining space?

- a. Because this reduces the costs of production by lowering rent.
- b. Because the small dining space creates a unique experience for Domino's customers.
- c. Because delivery costs are lower than the price of renting a bigger store.
- d. There is no specific reason for the small stores and dining space.

Answer: A.

7. What are some of Domino's production costs? List at least three.

Answer: Some of Domino's costs include the cost of ingredients, ovens, delivery vehicles, fuel, labor costs, rent, electricity, etc.

8. What type of cost is Domino's rent?
- a. Fixed cost.
 - b. Variable cost.
 - c. Implicit cost.
 - d. Marginal cost.

Answer: A. The rent is fixed regardless of the number of pizzas Domino's makes and delivers.

9. What type of cost is the cost of one of Domino's delivery vehicles?
- a. Fixed cost.
 - b. Variable cost.
 - c. Implicit cost.
 - d. Marginal cost.

Answer: A. The cost of one of Domino's delivery vehicles does not depend on the number of pizza deliveries this vehicle would be used for.

10. The video explains that Domino's utilizes a strategy called fortressing to fulfill orders rapidly. Which of the following statements correctly explains what this strategy means?
- a. Hiring more than the optimal number of workers to make sure that there is a worker who is able to start fulfilling an order as soon as the order has been placed.
 - b. Locating Domino's pizza shops in such a way that there is at least one store in a certain mile radius.
 - c. Opening more than the optimal number of Domino's pizza shops to make sure that there is no queue at any store at any time.
 - d. Cooperating with competitors' pizza shops to make sure that any order could be fulfilled within 30 minutes.

Answer: B. According to the video, there are more than 6,500 Domino's stores in the US that are located in a way such that there is at least one store in a certain mile radius. This makes it possible for at least one store to be able to fulfil an order (make the pizza and deliver it) quickly.

11. According to the video, there has been a shortage of delivery drivers. Consumers have started to order pizzas from apps with more flexible hours than those of Domino's, Pizza Hut and Papa John's. Which of the following statements about the response of these pizza shops is correct?

- a. Pizza Hut and Papa John's have started to work with these apps to deliver their pizzas.
- b. Domino's has refused to work with these apps because paying for an outside service to deliver pizzas is costly and distances Domino's from its customers.
- c. Domino's has started to offer customers a \$3 carryout tip if they pick up their order.
- d. All of the above.

Answer: D.

12. What is the expected effect of the increase in the number of competitors such as Uber Eats, GrubHut, and DoorDash on Domino's pizzas?

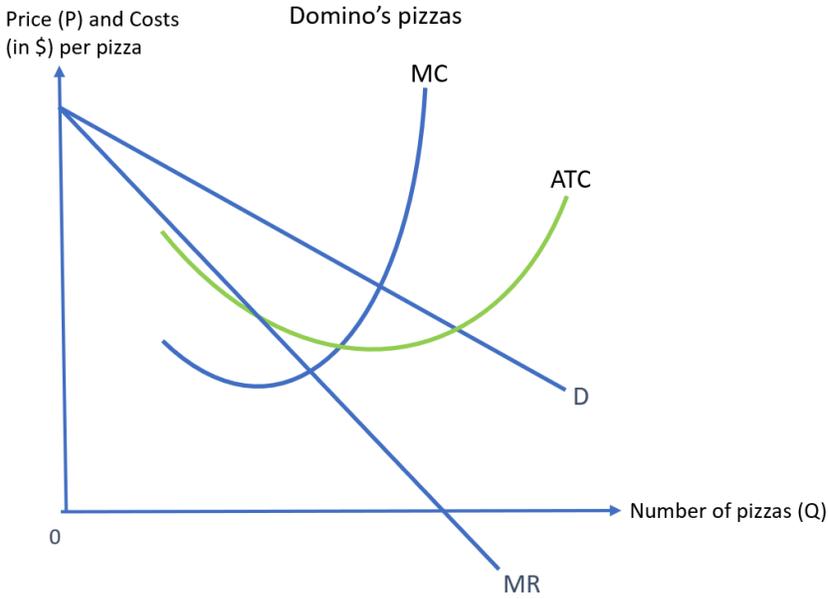
- a. Demand shifts to the right.
- b. Demand shifts to the left.
- c. Supply shifts to the right.
- d. Supply shifts to the left.

Answer: B.

13. True or False? Domino's is trying to differentiate its product from the product of its competitors in order to increase the degree of competition it experiences.

Answer: False. By differentiating its product, Domino's reduces the level of competition.

14. The following graph shows Domino's pizzas' demand (D), marginal revenue (MR), marginal cost (MC), and average total cost (ATC) curves. Provided that Domino's is maximizing its profit, shade the area on the graph that shows this profit. Label the profit-maximizing quantity of pizzas and the price Domino's chooses.



Answer: Profit = Total revenue – Total cost = $Q^*(P - ATC)$. The profit-maximizing number of pizzas is found by setting $MR = MC$, and the price could be found from the demand curve at the profit-maximizing quantity. The shaded area on the following graph shows Domino's profit.

