天津外国语大学（天外）
Tianjin Foreign Studies University (TFSU)

Global Economics

Online class starts at 08:00 (Beijing Time, GMT+8)

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Agenda for the online class

1. Lecture on the Analysis of a Tariff.
2. Questions and Q&A session

Analysis of a Tariff

- Most economists favor letting nations trade freely, with few tariffs or other barriers to trade. Indeed, economists have tended to be even more critical of trade barriers than have other groups in society, even though economists have taken great care to list the exceptional cases in which they feel trade barriers can be justified. Such agreement among economists is rare. Why should they agree on this one issue?
- The striking consensus in favor of free trade is based primarily on a body of economic analysis demonstrating that there are usually net gains from freer trade, both for nations and for the world. The main task of this chapter and Chapters 9–14 is to compare freetrade policies with a wide range of trade barriers, barriers that do not necessarily shut out all international trade. It is mainly on this more detailed analysis of trade policies that economists have based their view that free trade is generally better than partial restrictions on trade, with a list of exceptions. This analysis makes it easier to understand what divides the majority of economists from groups calling for restrictions on trade.

Glossary

A tariff, as the term is used in international trade, is a tax on importing a good or service into a country, usually collected by customs officials at the place of entry. Tariffs come in two main types. A specific tariff is stipulated as a money amount per unit of import, such as dollars per ton of steel bars or dollars per eight-cylinder two-door sports car. An ad valorem (on the value) tariff is a percentage of the estimated market value of the goods when they reach the importing country. We will not pay much attention to this distinction because it makes almost no difference to our conclusions.

Tarif rates

In 2016, tariff rates averaged 2.2 to 4.2 percent on nonagricultural products imported into the United States, Canada, the European Union, and Japan. But tariffs on some individual nonagricultural products are much higher, up to 55 percent in the United States, 25 percent in Canada, 26 percent in the European Union, and 385 percent in Japan. And countries sometimes make large increases in tariff rates, as the United States did in 2018. After finding that imports of steel and aluminum threatened the country's national security, President Trump decided to increase tariffs on imported steel by 25 percentage points, and tariffs on aluminum imports by 10 percentage points.

A PREVIEW OF CONCLUSIONS

- A tariff almost always lowers world well-being.
- A tariff usually lowers the well-being of the nation imposing the tariff.
- The “nationally optimal” tariff discussed near the end of this lecture is a possible exception to the case for free trade. When a nation can affect the prices at which it trades with foreigners, it can gain from its own tariff. (The world as a whole loses, however.)
- A tariff absolutely helps those groups tied closely to the production of import substitutes, even when the tariff is bad for the nation as a whole.
- You may wish to review these conclusions after we have completed the analysis of import barriers in this lecture.

THE EFFECT OF A TARIFF ON DOMESTIC PRODUCERS

Intuition suggests that domestic producers that compete against imports will benefit from a tariff. If the government places a tax on imports of the product, the domestic price of the imported product will rise. Domestic producers can then expand their own production and sales, raise the price they charge, or both. The tariff, by taxing imports to make imports less competitive in the domestic market, should make domestic producers better off.

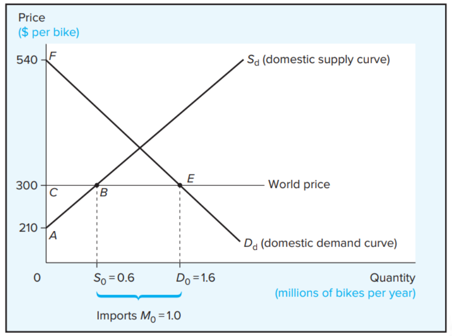


FIGURE 1. The U.S. Market for Bicycles with Free Trade

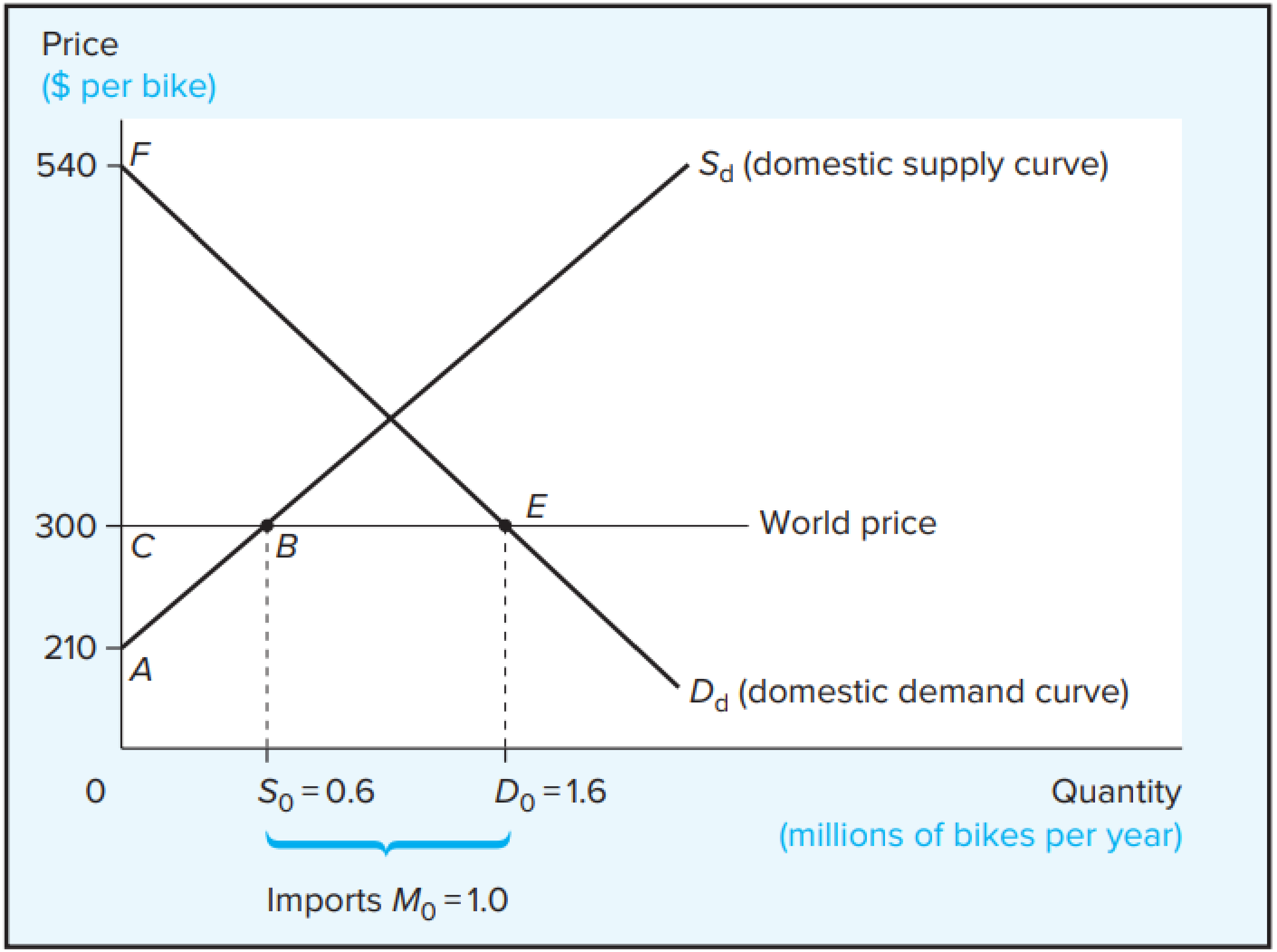
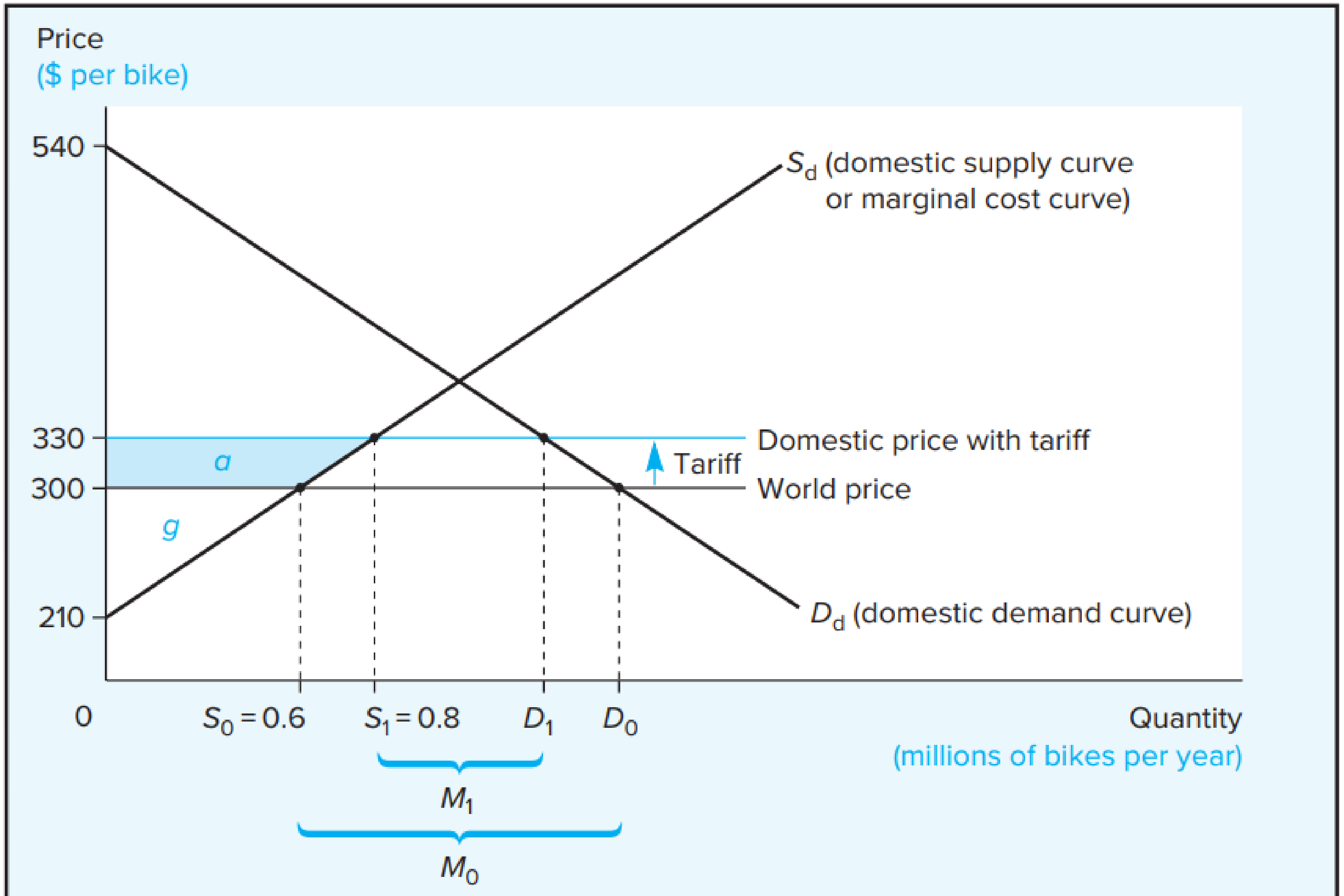


FIGURE 2 The Effect of a Tariff on Domestic Producers



Shaded area a = Producer's gain from tariff = $21 million

THE EFFECT OF A TARIFF ON DOMESTIC CONSUMERS

Intuition also suggests that buyers of a good imported from abroad will be hurt by a tariff. Domestic consumers end up paying a higher price, buying less of the product, or both. Again, we can use demand and supply analysis to calculate the consumer loss.

https://pixabay.com/photos/trade-shipping-world-shipping-route-1963518/

5-minute break till 08:58
FIGURE 1. The U.S. Market for Bicycles with Free Trade

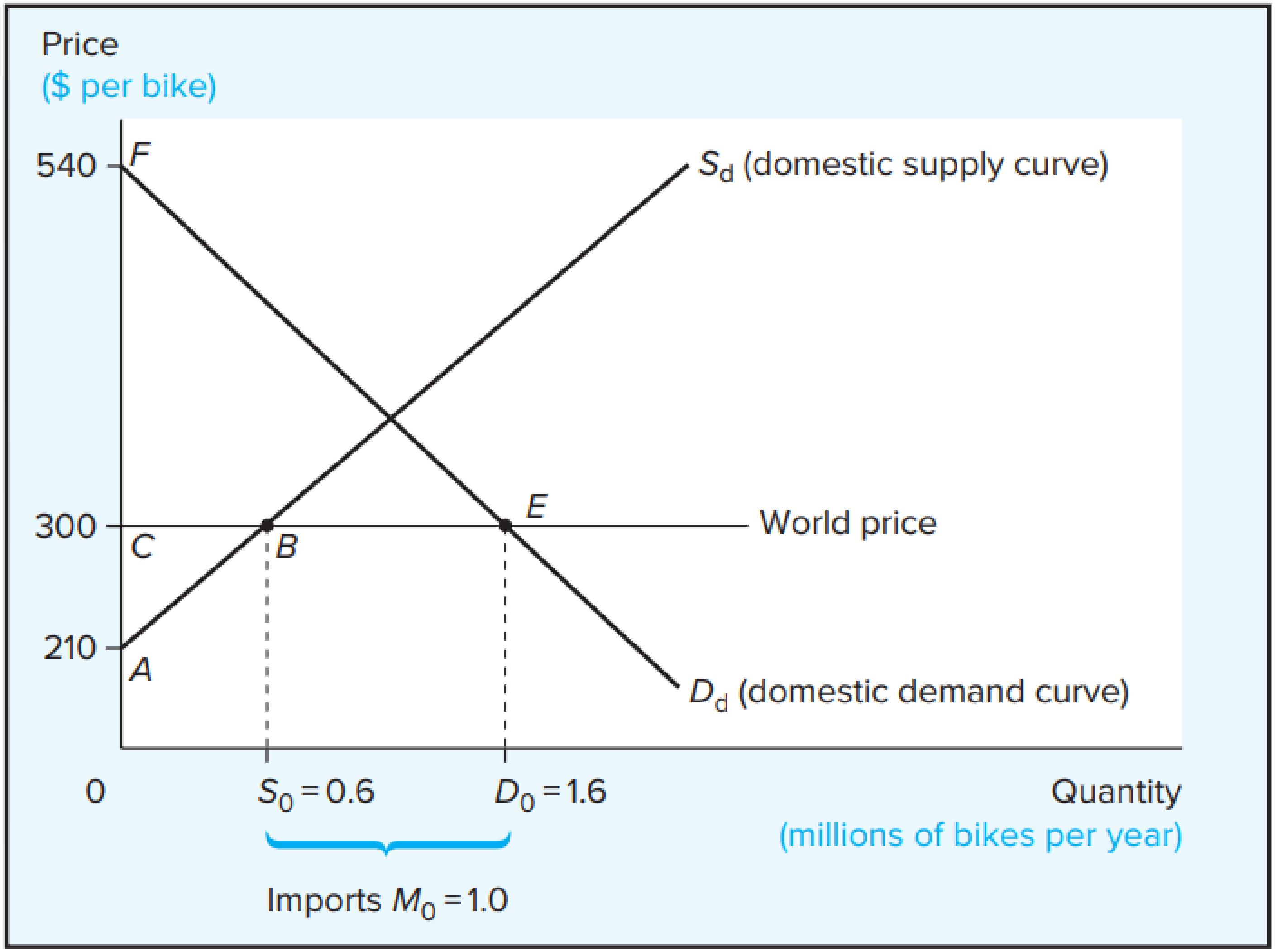
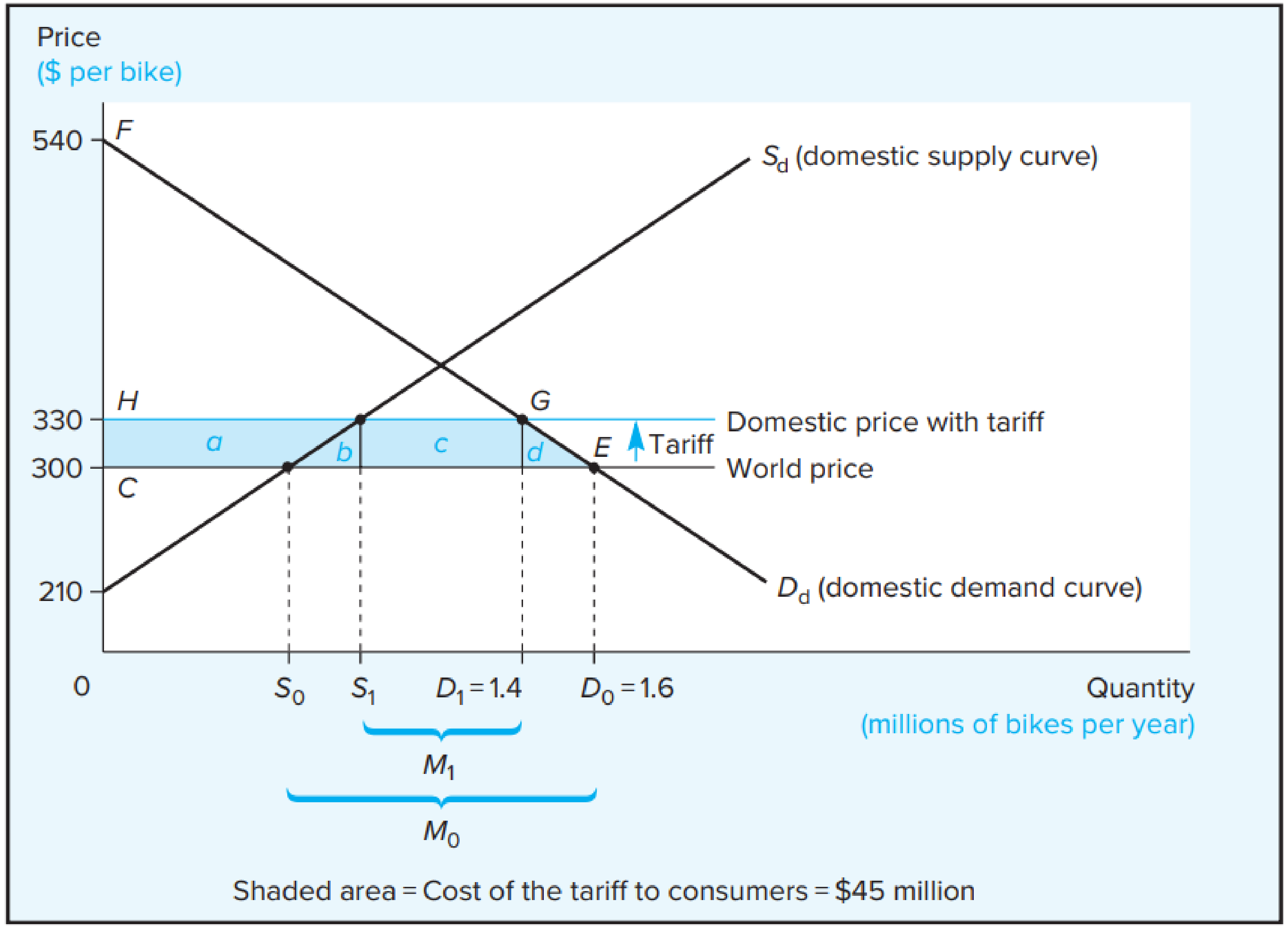


FIGURE 3. The Effect of a Tariff on Domestic Consumers



THE TARIFF AS GOVERNMENT REVENUE

The effects of a tariff on the well-being of consumers and producers do not exhaust its effects on the importing country. As long as the tariff is not so high as to prohibit all imports, it also brings revenue to the country’s government. This revenue equals the unit amount of the tariff times the volume of imports with the tariff. In Figure 8.3 the total government revenue from collecting the tariff is area c, equal to \$18 million per year (the tariff of \$30 times the imports of M1 = 0.6 million).

THE NET NATIONAL LOSS FROM A TARIFF

By combining the effects of the tariff on consumers, producers, and the government, we can determine the net effect of the tariff on the importing country as a whole.

The first key step is to impose a social value judgment. How much do you really care about each group's gains or losses? If one group gains and another loses, how big must the gain be to outweigh the other group's loss?

Answer is the one-dollar, one-vote metric:

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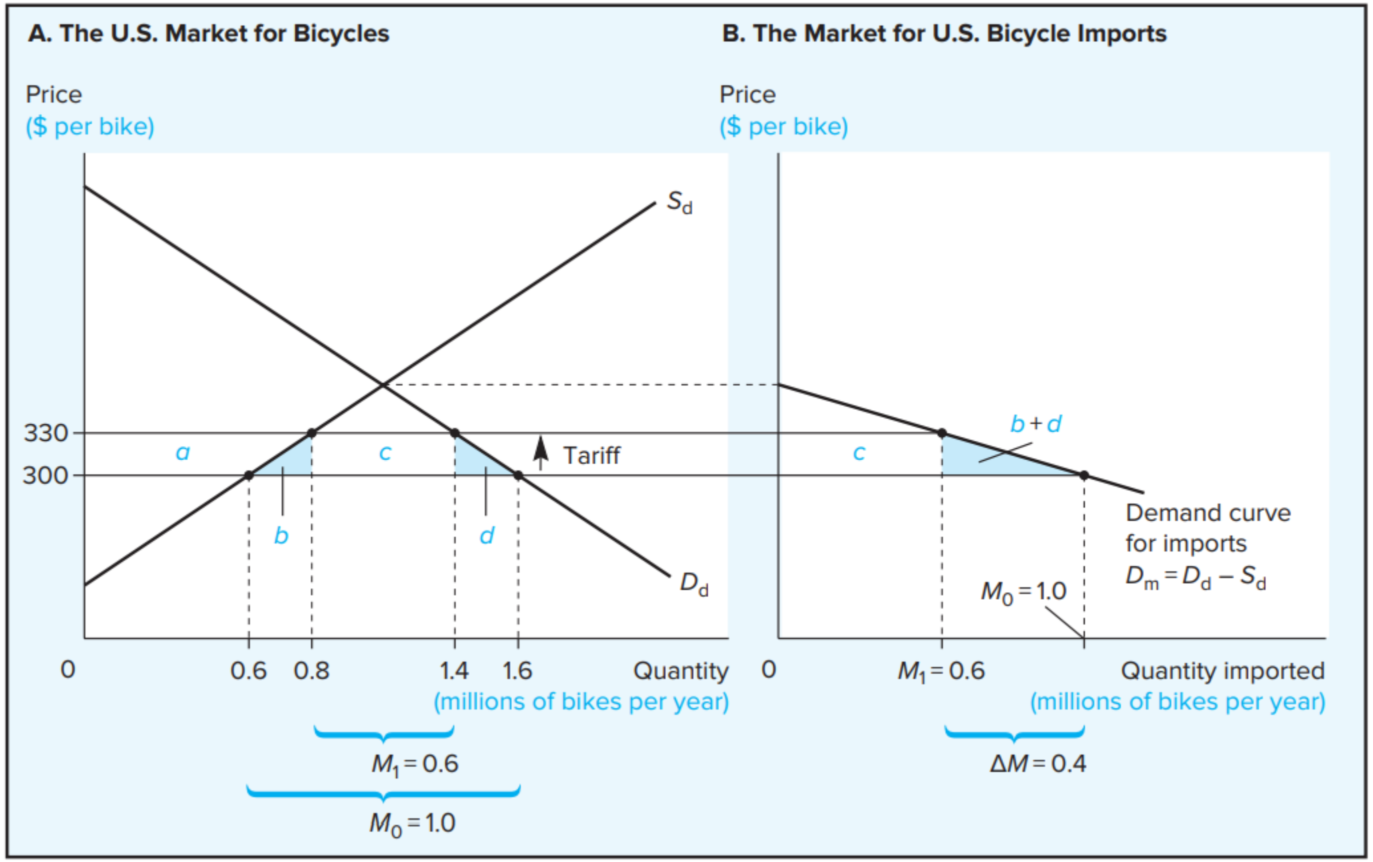
FIGURE 4 The Net National Loss from a Tariff in Two Equivalent Diagrams



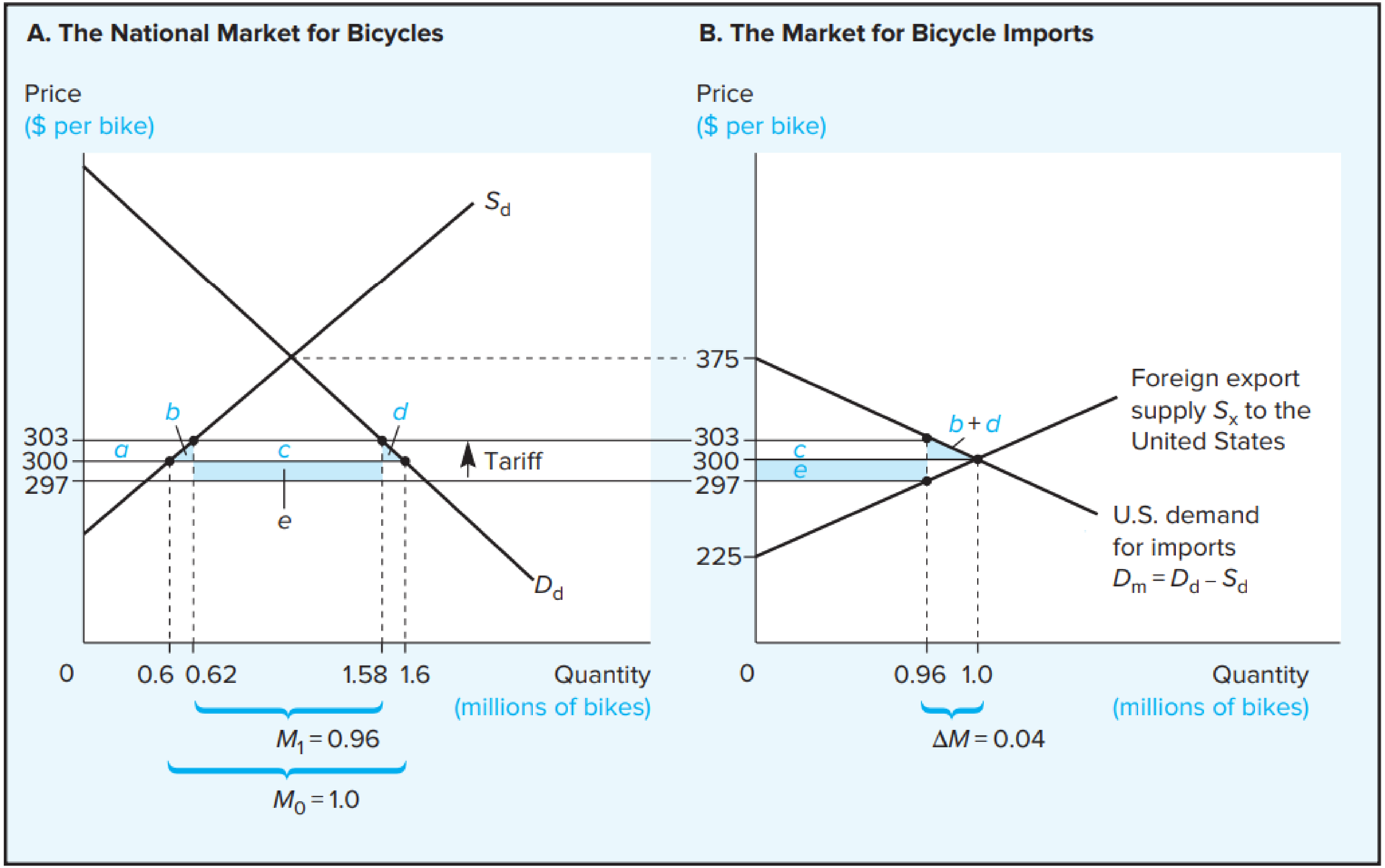
Consumers lose	Area $a + b + c + d$	= \$45 million (loss)
Producers gain	Area a	= \$21 million
Government collects	Area c in tariff revenue	= \$18 million
Net national loss from the tariff =	Area $b + d$	= \$6 million

THE TERMS-OF-TRADE EFFECT AND A NATIONALLY OPTIMAL TARIFF

It is time to relax a key assumption we have been making. So far, this lecture has used the small-country assumption: We have assumed that the importing nation, here the United States, cannot affect the world price of the imported good. In particular, the tariff on bicycle imports did not affect the world price of bicycles, which stood fixed at $300, tariff or no tariff.

Yet in other cases a nation has a large enough share of the world market for one of its import products that the country's buying can affect the world price unilaterally. A nation collectively can have this monopsony power even in cases in which no individual buyer within the nation has it. For example, the United States looms large in the world auto market

FIGURE 5 A Large Country Imposes a Small Tariff



10-minute break

FIGURE 5 A Large Country Imposes a Small Tariff

Is there a “best” tariff rate for the large importing country to impose, if it is purely driven by its own national well-being? The answer is yes, assuming that the rest of the world is passive. This best tariff is called the nationally optimal tariff, the tariff that creates the largest net gain for the country imposing it. For a large country, this optimal tariff lies between no tariff and a prohibitively high one.

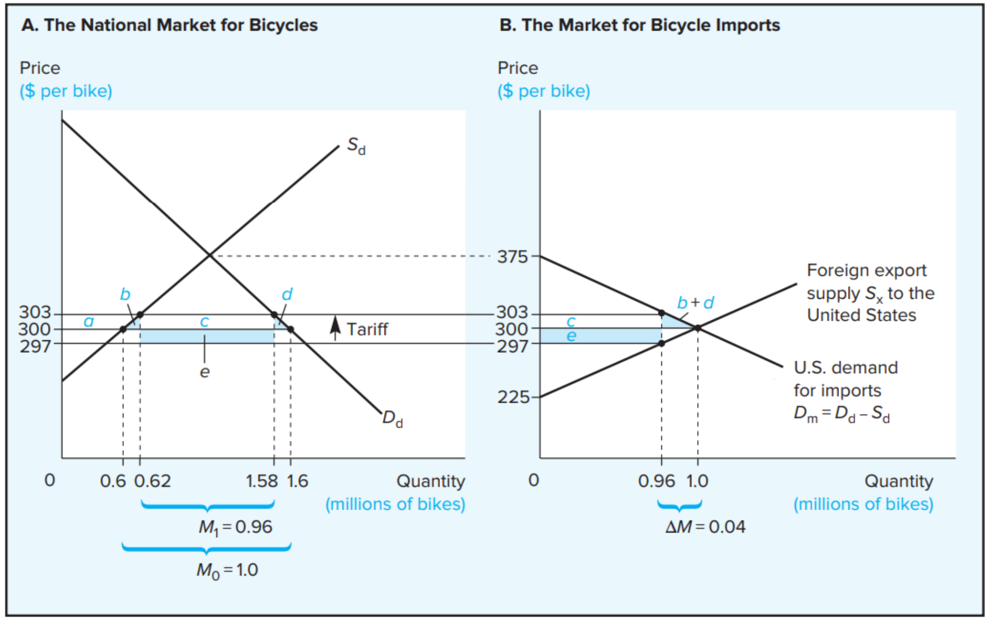
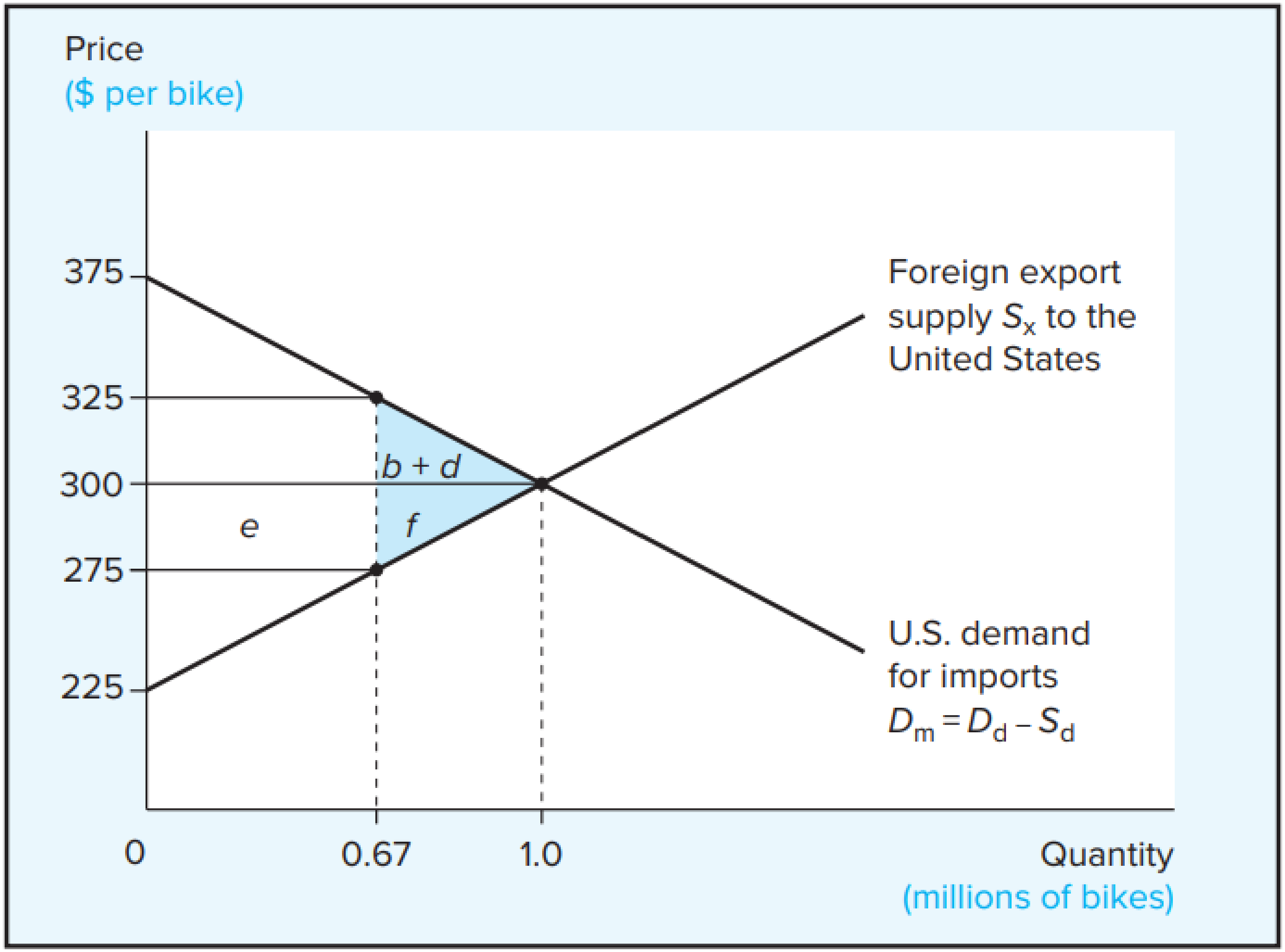


FIGURE 6 The Nationally Optimal Tariff



Summary

A tariff is a tax on imports. It redistributes well-being from domestic consumers of the product to domestic producers and the government, which collects the tariff revenue. For a small country (one that cannot affect world prices), a tariff on imports lowers national well-being. It costs consumers more than it benefits producers and the government.

Summary, part 02

1. "By raising the price on strictly domestic sales, a tariff redistributes incomes from consumers to producers. The amount redistributed is the price increase times the average quantity of domestic sales." (This describes area a.)
2. "A tariff shifts some purchases from foreign products to home products. This costs more resources to make at home than to buy abroad." (This describes area b, the production effect.)
3. "A tariff makes consumers pay tax revenue directly to the government." (This describes area c.)
4. "A tariff discourages some purchases that were worth more than they cost the nation." (This describes area d, the consumption effect.)
5. "Both by shifting some purchases toward costly home products and by discouraging some purchases worth more than they cost the nation, the tariff costs the nation as a whole. The cost equals one-half the tariff amount times the drop in our imports." (This describes area b + d, the net national loss.)

Summary part 03

- The effects of tariffs on producer interests are further clarified by the concept of the effective rate of protection, which measures the percent effect of the entire tariff structure on the value added per unit of output in each industry. This concept incorporates the point that incomes in any one industry are affected by the tariffs on many products.
- When a country as a whole can affect the price at which foreigners supply imports, the country has monopsony power. For such a large country, a positive tariff can increase national well-being because the tariff has a beneficial terms-of-trade effect. The nationally optimal tariff yields the largest possible gain. However, this tariff is optimal only if foreign governments do not retaliate with tariffs on our exports. With or without retaliation, the nationally optimal tariff is still bad for the world as a whole.

Summary part 03

- The World Trade Organization (WTO) was formed in 1995 as the successor to the General Agreement on Tariffs and Trade (GATT). The WTO oversees the global rules of government policies toward trade and provides a forum for negotiating global agreements to reduce barriers to trade. Beginning as the GATT, created in 1947, rounds of multilateral trade negotiations have been especially successful in reducing the tariffs that industrialized countries impose on their imports of nonagricultural goods.

Vocabulary

Key Terms

- Tariff
- Specific tariff
- Ad valorem tariff
- General Agreement on Tariffs and Trade (GATT)
- World Trade Organization (WTO)
- Small country
- Producer surplus
- Consumer surplus
- One-dollar, one-vote metric
- Consumption effect
- Production effect
- Effective rate of protection
- Monopsony power
- Large country
- Terms-of-trade effect
- Nationally optimal tariff

Suggested Reading

For summary information on countries' tariffs, see the annual *World Tariff Profiles* issued by the World Trade Organization. Greenaway and Milner (2003) discuss the concept of the effective rate of protection and its uses. Broda et al. (2008) provide a technical empirical analysis that finds support for optimal-tariff influences on tariff rates in countries that are not members of the WTO. Organization for Economic Cooperation and Development (2010) surveys export taxes and other restrictions. Laborde et al. (2013) present a technical analysis that concludes that export taxes lower world well-being by about $130 billion per year.

Questions and Problems

- What is the minimum quantitative information you would need to calculate the net national loss from a tariff in a small price-taking country?
- What is the production effect of a tariff ? How would you describe it in words, without reference to any diagram or numbers? How would you show it on a diagram, and how would you compute its value?
- What is the production effect of a tariff ? How would you describe it in words, without reference to any diagram or numbers? How would you show it on a diagram, and how would you compute its value?
- “A good way to understand why a large country can gain by imposing a tariff is that the country gets foreigners to pay some of its taxes.” Do you agree or disagree? Why?

Thank you