

# Two Country Trade Examples

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## Example 1. Benefits of Trade

Once upon a time there were two countries -- Zog and Aragon. The residents of these countries lived a carefree life. The only thing they needed was food. The people in these countries lived on greasy chips and vegetarian mix.

Both countries can produce both crops -- greasy chips and vegetarian mix. Also, both countries have only two acres on which to produce food. Zog has an advantage in producing greasy chips (200 units per acre versus 100 units per acre of vegetarian mix) and Aragon has an advantage in producing vegetarian mix (200 units per acre versus 100 units per acre of greasy chips).

### *Without Trade*

#### Production and Supply before Specialization and Trade

If both countries produce an acre of each crop, each country will produce a total of 300 units of food.

|                | <b>Zog</b>                  |                | <b>Aragon</b>               | Total     |
|----------------|-----------------------------|----------------|-----------------------------|-----------|
| Greasy chips   | <b>200 units<br/>1 acre</b> | Greasy Chips   | <b>100 units<br/>1 acre</b> | 300 units |
| Vegetarian mix | <b>100 units<br/>1 acre</b> | Vegetarian Mix | <b>200 units<br/>1 acre</b> | 300 units |
| Total          | 300 units                   |                | 300 units                   | 600 units |

## Implement Trade and Specialize

### Specialize Production

The people of Zog and Aragon have a meeting to find ways of increasing the amount of food available to their people.

Each country decides to specialize in one crop. Zog uses all of its land to produce greasy chips and Aragon uses all of its land to produce vegetarian mix.

|                | Zog       | Aragon    | Total     |
|----------------|-----------|-----------|-----------|
| Greasy chips   | 400 units |           | 400 units |
| Vegetarian Mix |           | 400 units | 400 units |
| Total          | 400 units | 400 units | 800 units |

### Specialize Production and Trade

However, the people of both countries want to consumer both crops. So Zog imports its vegetarian mix from Aragon and Aragon imports its greasy chips from Zog.

|                | Zog       | Aragon    | Total     |
|----------------|-----------|-----------|-----------|
| Greasy chips   | 400 units |           | 400 units |
| Vegetarian Mix |           | 400 units | 400 units |
| Total          | 400 units | 400 units | 800 units |

Trade flows: 200 units of Greasy chips from Zog to Aragon; 200 units of Vegetarian Mix from Aragon to Zog.

## Supply after Specialization and Trade

The total amount of food available to both countries increases from 600 units to 800 units.

|                | <b>Zog</b>       |                | <b>Aragon</b>    |  | Total     |
|----------------|------------------|----------------|------------------|--|-----------|
| Greasy chips   | <b>200 units</b> | Greasy chips   | <b>200 units</b> |  | 400 units |
| Vegetarian mix | <b>200 units</b> | Vegetarian mix | <b>200 units</b> |  | 400 units |
| <b>Total</b>   | 400 units        |                | 400 units        |  | 800 units |

### Summary

|                            | <b>Zog</b> |  | <b>Aragon</b> |  | Total     |
|----------------------------|------------|--|---------------|--|-----------|
| <b>Supply Before Trade</b> |            |  |               |  |           |
| Greasy Chips               | 200 units  |  | 100 units     |  | 300 units |
| Vegetarian Mix             | 100 units  |  | 200 units     |  | 300 units |
| <b>Total</b>               | 300 units  |  | 300 units     |  | 600 units |
| <b>Supply After Trade</b>  |            |  |               |  |           |
| Greasy Chips               | 200 units  |  | 200 units     |  | 400 units |
| Vegetarian Mix             | 200 units  |  | 200 units     |  | 400 units |
| <b>Total</b>               | 400 units  |  | 400 units     |  | 800 units |
| <b>Increase of</b>         | 100 units  |  | 100 units     |  | 200 units |

## **Winners and Losers from Trade**

### **Winners**

Zog Consumers. Why? \_\_\_\_\_

Aragon Consumers. Why? \_\_\_\_\_

Zog Greasy Chip Farmers. Why? \_\_\_\_\_

Aragon Vegetarian Mix Farmers. Why? \_\_\_\_\_

### **Losers**

Zog Vegetarian Mix Farmers. Why? \_\_\_\_\_

Aragon Greasy Chip Farmers. Why? \_\_\_\_\_

How may these farmers respond. \_\_\_\_\_

The consumers of both countries are pleased because they now have more food.

The Zogonian greasy chip farmers and the Aragonian vegetarian mix farmers are pleased because they now farm all of the land in their respective countries.

However, the Zogonian vegetarian mix farmers and the Aragonian greasy chip farmers are put out of business.

## Example 2. Economic Benefits of Trade

### *Without Trade*

#### Supply Before Specialization and Trade

Lets examine the trade example using the cost of producing each crop. The cost of producing greasy chips and vegetarian mix is \$100 per acre. This is true regardless of whether the yield is 100 units or 200 units per acre. So the cost per unit of unit of producing 100 units per acre is \$1 per unit ( $\$100 / 100$  units), and the cost of producing 200 units per acre is \$.5 per unit ( $\$100 / 200$  units).

|                | <b>Zog</b>                          |                | <b>Aragon</b>                       | Total           |
|----------------|-------------------------------------|----------------|-------------------------------------|-----------------|
| Greasy chips   | <b>200 units<br/>\$.50 per unit</b> | Greasy chips   | <b>100 units<br/>\$1 per unit</b>   | 300 units \$200 |
| Vegetarian mix | <b>100 units<br/>\$1 per unit</b>   | Vegetarian mix | <b>200 units<br/>\$.50 per unit</b> | 300 units \$200 |
| Total          | 300 units \$200                     |                | 300 units \$200                     | 600 units \$400 |

## **Implement Trade and Specialize**

### **Specialize Production and Trade**

Specialization will occur automatically if trade is implemented. Aragon consumers will buy imported greasy chips from Zog because they cost only \$.50 per unit compared to \$1.00 for locally grown chips. Aragon greasy chip farmers cannot compete and will be forced out of business. Also, Zog consumers will buy imported vegetarian mix from Aragon because they cost only \$.50 per unit compared to \$1.00 for locally grown vegetarian mix. Zog vegetarian mix farmers will be forced out of business.

|                | <b>Zog</b>   |               | <b>Aragon</b>  |  | <b>Total</b> |
|----------------|--|---------------|--|--|--------------|
| Greasy chips   | <b>400 units</b><br><b>\$200 cost</b><br><b>\$.50 per unit</b> | → 200 units → | <b>400 units</b><br><b>\$200 cost</b><br><b>\$.50 per unit</b> |  | 400 units    |
| Vegetarian Mix |  | ← 200 units ← |  |  | 400 units    |
| <b>Total</b>   | 400 units  |               | 400 units  |  | 800 units    |

### **Supply and Cost after Specialization and Trade**

The total amount of food available to both countries increases from 600 units to 800 units, with no increase in the cost of food. The cost per unit of food declines.

|                      | <b>Zog</b>   |                | <b>Aragon</b>  |  | <b>Total</b> |
|----------------------|--|----------------|--|--|--------------|
| Greasy chips         | <b>200 units</b><br><b>\$100 cost</b><br><b>\$.50 per unit</b> | Greasy chips   | <b>200 units</b><br><b>\$100 cost</b><br><b>\$.50 per unit</b> |  | 400 units    |
| Vegetarian mix       | <b>200 units</b><br><b>\$100 cost</b><br><b>\$.50 per unit</b> | Vegetarian mix | <b>200 units</b><br><b>\$100 cost</b><br><b>\$.50 per unit</b> |  | 400 units    |
| <b>Total Supply</b>  | 400 units  |                | 400 units  |  | 800 units    |
| <b>Total Cost</b>    | \$200  |                | \$200  |  | \$400        |
| <b>Cost per Unit</b> | \$.50  |                | \$.50  |  | \$.50        |

## Summary

|                                     | <b>Zog</b> | <b>Aragon</b> | Total     |
|-------------------------------------|------------|---------------|-----------|
| <b>Supply and Cost Before Trade</b> |            |               |           |
| Total Supply                        | 300 units  | 300 units     | 600 units |
| Total Cost                          | \$200      | \$200         | \$400     |
| Cost per Unit                       | \$0.75     | \$0.75        | \$0.75    |
| <b>Supply and Cost After Trade</b>  |            |               |           |
| Total Supply                        | 400 units  | 400 units     | 800 units |
| Total Cost                          | \$200      | \$200         | \$400     |
| Cost per Unit                       | \$0.50     | \$0.50        | \$0.50    |
| <b>Supply Increase</b>              | 100 units  | 100 units     | 200 units |
| <b>Cost Increase</b>                | \$0        | \$0           | \$0       |

## **Winners and Losers from Trade**

### **Winners**

Zog Consumers. Why? \_\_\_\_\_

Aragon Consumers. Why? \_\_\_\_\_

Zog Greasy Chip Farmers. Why? \_\_\_\_\_

Aragon Vegetarian Mix Farmers. Why? \_\_\_\_\_

### **Losers**

Zog Vegetarian Mix Farmers. Why? \_\_\_\_\_

Aragon Greasy Chip Farmers. Why? \_\_\_\_\_

How may these farmers respond. \_\_\_\_\_

The consumers of both countries were pleased because they now have more food at the same total cost. Cost per unit of food declined.

The Zogonian greasy chip farmers and the Aragonian vegetarian mix farmers are pleased because they can sell their product at a price below that of the farmers in the other country.

However, the Zogonian vegetarian mix farmers and the Aragonian greasy chip farmers are put out of business because they cannot compete on price.

### Example 3. Benefits of Trade -- Comparative Advantage

What if Zog has an advantage in the production of both greasy chips and vegetarian mix? What if Aragon can only produce 80 units of vegetarian mix versus Zog's ability to produce 200 units per acre, and Aragon can only produce 50 units of greasy chips versus Zog's ability to produce 100 units per acre. Is there an advantage of trade?

Yes, Aragon has a **comparative** advantage in the production of vegetarian mix. Aragon's yield of vegetarian mix is 80 percent of Zog's (80/100). However, Aragon's yield of greasy chips is only 25 percent of Zog's (50/200). So, Aragon has a comparative advantage in the production of vegetarian mix versus greasy chips.

#### *Without Trade*

#### Production and Supply Before Specialization and Trade

If both countries produce an acre of each crop, Zog will produce 300 units and Aragon will produce 130 units for a total of 430 for both countries.

|                | Zog                 |                | Aragon             | Total     |
|----------------|---------------------|----------------|--------------------|-----------|
| Greasy chips   | 200 units<br>1 acre | Greasy chips   | 50 units<br>1 acre | 250 units |
| Vegetarian mix | 100 units<br>1 acre | Vegetarian mix | 80 units<br>1 acre | 180 units |
| Total          | 300 units           |                | 130 units          | 430 units |

## Implement Trade and Specialize

### Specialize Production

Zog uses all of its land to produce greasy chips and Aragon uses all of its land to produce vegetarian mix.

|                | <b>Zog</b> | <b>Aragon</b> | Total     |
|----------------|------------|---------------|-----------|
| Greasy chips   | 400 units  |               | 400 units |
| Vegetarian Mix |            | 160 units     | 160 units |
| Total          | 400 units  | 160 units     | 560 units |

### Specialize Production and Trade

The people of both countries want to consume both crops. So Zog imports its vegetarian mix from Aragon and Aragon imports its greasy chips from Zog.

|                | <b>Zog</b> | <b>Aragon</b> | Total     |
|----------------|------------|---------------|-----------|
| Greasy chips   | 400 units  | 100 units     | 400 units |
| Vegetarian mix | 80 units   | 160 units     | 160 units |
| Total          | 400 units  | 160 units     | 560 units |

## Supply and Cost after Specialization and Trade

The total amount of food in both countries increases from 430 units to 560 units.

The amount of food in Zog increases from 300 to 380 units.

The amount of food in Aragon increases from 130 to 180 units.

|                | <b>Zog</b>       |                | <b>Aragon</b>    | Total            |
|----------------|------------------|----------------|------------------|------------------|
| Greasy chips   | <b>300 units</b> | Greasy chips   | <b>100 units</b> | 400 units        |
| Vegetarian mix | <b>80 units</b>  | Vegetarian mix | <b>80 units</b>  | 160 units        |
| <b>Total</b>   | <b>380 units</b> |                | <b>180 units</b> | <b>560 units</b> |

### *Summary*

|                            | <b>Zog</b>       |  | <b>Aragon</b>    | Total            |
|----------------------------|------------------|--|------------------|------------------|
| <b><i>Before Trade</i></b> |                  |  |                  |                  |
| Greasy Chips               | 200 units        |  | 50 units         | 250 units        |
| Vegetarian Mix             | 100 units        |  | 80 units         | 180 units        |
| <b>Total</b>               | <b>300 units</b> |  | <b>130 units</b> | <b>430 units</b> |
| <b><i>After Trade</i></b>  |                  |  |                  |                  |
| Greasy Chips               | 300 units        |  | 100 units        | 400 units        |
| Vegetarian Mix             | 80 units         |  | 80 units         | 160 units        |
| <b>Total</b>               | <b>380 units</b> |  | <b>180 units</b> | <b>560 units</b> |
| <b><i>Increase of</i></b>  |                  |  |                  |                  |
|                            | 80 units         |  | 50 units         | 130 units        |

## **Winners and Losers from Trade**

### **Winners**

Zog Consumers. Why? \_\_\_\_\_

Aragon Consumers. Why? \_\_\_\_\_

Zog Greasy Chip Farmers. Why? \_\_\_\_\_

Aragon Vegetarian Mix Farmers. Why? \_\_\_\_\_

### **Losers**

Zog Vegetarian Mix Farmers. Why? \_\_\_\_\_

Aragon Greasy Chip Farmers. Why? \_\_\_\_\_

How may these farmers respond. \_\_\_\_\_

The consumers of both countries are pleased because they now have more food.

The Zogonian greasy chip farmers and the Aragonian vegetarian mix farmers are pleased because they now farm all of the land in their respective countries.

However, the Zogonian vegetarian mix farmers and the Aragonian greasy chip farmers are put out of business.