Worksheet 20.2

Comparative Advantage Practice Payoff Matrices and PPFs

In this activity, you will practice the determination of comparative advantage in two-country scenarios.

1. Use the payoff matrix below to determine the comparative advantage in these markets. This example shows relative output amounts for each country.

\[
\begin{array}{|c|c|c|}
\hline
\text{Country/Product} & \text{Coffee} & \text{Potatoes} \\
\hline
\text{Country P} & 12 & 10 \\
\hline
\text{Country Z} & 20 & 30 \\
\hline
\end{array}
\]

Output Model

a. Calculate the domestic opportunity cost for Country P
   1 coffee has an opportunity cost of:
   1 potato has an opportunity cost of:

b. Calculate the domestic opportunity cost for Country Z:
   1 coffee has an opportunity cost of:
   1 potato has an opportunity cost of:

c. Therefore, in the market for coffee, Country ___ has the comparative advantage.
   Therefore, in the market for potatoes, Country ___ has the comparative advantage.

   Country P and Country Z should specialize and trade. They can negotiate a coffee-for-potato exchange rate that is beneficial for them both.

d. Such a rate could be ____ coffee for ____ potato. This could also be expressed as ____ potato for ____ coffee.
Production Possibility Frontiers and Comparative Advantage

Using the original output values above, draw an accurate PPF for each country.

![Diagram of Production Possibility Frontier](image)

Based on the diagram, can you determine which country has comparative advantage in each product? Why?

2. Use the input matrix below to determine the comparative advantage in these markets. This example shows relative input amounts for each product and country.

*Input Model, Hours of labour*

<table>
<thead>
<tr>
<th>Country/Product</th>
<th>Sugar</th>
<th>Tyres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country N</td>
<td>6 hours</td>
<td>12 hours</td>
</tr>
<tr>
<td>Country S</td>
<td>10 hours</td>
<td>15 hours</td>
</tr>
</tbody>
</table>

a. Calculate the domestic opportunity cost for Country N:
   1 sugar has an opportunity cost of:
   1 tyre has an opportunity cost of:
b. Calculate the domestic opportunity cost for Country S:
   1 sugar has an opportunity cost of:
   1 tyre has an opportunity cost of:

c. Therefore, in the market for sugar, Country ___ has the comparative advantage.
   Therefore, in the market for tyres, Country ___ has the comparative advantage.
   Country N and Country S should specialize and trade. They can negotiate a coffee-for-potato exchange rate that is beneficial for them both.

d. Such a rate could be ____ sugar for ____ tyres. This could also be expressed as ____ tyres for ____ sugar.