



Research Paper

## The Iowa Car Crop: Challenging Conventional Views on Trade Efficiency

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**ABSTRACT:** Economic transactions between countries comprise international trade, including consumer goods, capital goods, and services. As explained in the Iowa Car Crop"chapter in Steven E. Landsburg's book *The Armchair Economist*, international trade is nothing but a form of technology. Countries will only export the product it has comparative advantage with and import other goods from other countries. Implementing trade barriers controls the pattern of free international trade. It helps achieve macroeconomic objectives like reducing unemployment, balance payments, price stability, and sustainable economic growth. The hotly debated relationship between inflation and unemployment since the mid-20th century initially thought that there was an inverse relationship between the two economic variables.

**KEYWORDS:** international trade, GDP, competitive advantage, capital goods, trade barriers

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International trade is the sale and purchase of goods between different countries. International trade is always an essential factor in promoting the economic growth of a nation since it provides profit and improves technology. Imports and exports are a necessary process of international trade, and they are significant components that count in a country's Gross Domestic Product (GDP) [1]. GDP per capita, goods and services produced divided by population, decides the living standard of citizens. Therefore, promoting GDP growth is a goal for every country to increase productivity and wealth [2]. International trade's underlying logic is comparative advantage and specialization. Governments will only export the product it has comparative advantage with and import other goods from other countries. Hence, the idealized result of international trade is when one country only produces and exports the product it has a comparative advantage over. It will then import other goods from other countries [3]. With international trade, a country can consume beyond its production possibility curve, increasing consumption. It is essential to note that international trade is a way to reduce production costs and increase GDP, but countries with lower productivity will likely experience unemployment. When countries export a product, they will have relatively lower prices for the exports because they produce at lower costs than others. When import prices are lower, the public will prefer to buy imports rather than domestic products, leading to a decline in domestic industries and jobs. Thus, trade barriers are required to promote economic stability.

Trade barriers can take many forms and restrict imports by increasing import costs. For example, tariffs and quotas are typical types of trade barriers. Tariffs require extra taxes for importing. Quotas limit the quantity of imported products [4]. These trade barriers increase the cost of imports and change the pattern of free international trade.

For evaluating international trade, it is crucial to understand the concept of comparative advantage. In an economic model, a country has a comparative advantage when it can produce a specific product with lower opportunity costs. David Ricardo developed the theory of comparative advantage after Adam Smith introduced the idea of international trade and absolute advantage [5]. Absolute advantage, different from comparative advantage, is the advantage over one product's quantity [6]. Ricardo presumed the existence of two countries in his model, England, and Portugal. Portugal is more productive and efficient in the assumption that its production possibility curve (PPC) is more prominent than English [7]. Even though Portugal can produce more quantity with the same labor, its opportunity costs differ for each country's production. If Portugal could produce 100 capital goods and eighty consumer goods with an amount of labor, England could produce eighty and sixty consumer goods with the same amount. In this case, for Portugal, the cost to produce one capital good is  $\frac{5}{4}$  of consumer goods, and for producing one consumer good, it costs  $\frac{4}{5}$  capital goods. For England, the cost for one capital good is  $\frac{4}{3}$  of the consumer good, and the cost for one consumer good is  $\frac{3}{4}$  capital good (View Appendix 1). If

international trade exists, England will export consumer goods and import capital goods from Portugal according to opportunity costs. Since England has relatively lower opportunity costs for producing consumer goods, they will be incentivized to produce more. With trading with Portugal, the world economy can achieve productive efficiency. Just as David Friedman's example "Iowa Car Crop" stated, America has two ways to produce automobiles: one is to manufacture them in Detroit, second is to trade with Japan [8]. This example shows the operating mode and benefits of international trade.

However, international trade is more complex. There are more than 200 countries worldwide, and the productivity and resources of different countries vary. For instance, in 2023, Luxembourg had the highest GDP per capita so far, which means it has a higher productivity [9]. While some countries have increased productivity, others have lower productivity, for example, Nigeria. Since the reality is that only two countries compose the world economy, countries with lower productivity will not be able to export while they still need to import. The profit that they earn from free trade will be meager.

Therefore, the main reason why governments enforce trade barriers is protectionism. The three primary goals of macroeconomics are to minimize unemployment, to increase productivity, and to control inflation [10]. Free trade, while bringing more products and consumptions, affects the country's unemployment and thus leads to the enforcement of trade barriers. Imported goods will have lower prices since other countries produce them at lower prices. If imported goods prices are lower than domestic ones, people will prefer to buy imported goods. This phenomenon will cause a decline in domestic industries and jobs since the demand for domestic products decreases. When trade barriers appear, the imports fall. Also, trade restrictions provide a market for domestic production, which the government intends to promote economic stability by controlling trade. Even though exports can lead to growth in GDP, countries prefer to set up trade barriers to protect their country's production. When enacting a tariff or quota on a particular product, the supply of the product will decrease, so the product's price will rise and lower the quantity demanded (View Appendix 2) [11] [12]. When imported goods' prices are not competitive or not lower than domestic goods' prices, domestic goods can occupy their market, which secures jobs. According to Theory and Evidence Linking International Trade to Unemployment Rates, Trefler found that traffic reduction led to a five percent decrease in Canadian manufacturing employment, which shows the impact on unemployment caused by free trade [13].

Another vital factor that advances the act of protectionism is national security concerns. Since national security includes economic security, governments may impose trade barriers on goods or resources deemed critical for national security [14]. They may restrict imports of certain goods or technologies to avoid dependence on foreign sources during conflict or geopolitical tensions. Governments might impose trade barriers with defense-related technologies, dual-used goods, and infrastructure protection [15] [16]. Defense-related technologies are technologies like guns. Even though some, like Griswold from Discourse Magazine, argued that fewer trade barriers would bring more benefit than harm to the country, the potential safety hazards should not be ignored [17]. For instance, the World Trade Organization (WTO) Agreement is an agreement that enforces trade restrictions for national safety.<sup>[18]</sup>

Even though free trade can bring more benefits than harm, such as increased consumption and efficiency, protectionism and national security concerns led to the necessary enforcement of trade barriers. Undeniably, international trade can lead to more exports and increased productivity, but domestic production weighs more for a country.

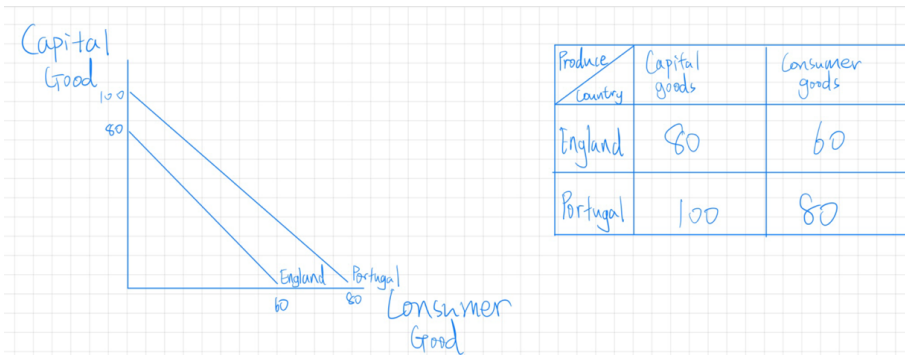
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**Appendix**

**Appendix 1**



**Appendix 2**

