“Shrimp-omics”

Overview
The North Carolina shrimping industry is in peril due to foreign competition. Claims of dumping have been leveled against China, Vietnam and the Asian realm. What should we as individual consumers do about this? What should the government do? Is the country willing to support the local shrimp industry, even if it means paying more? Students will explore these economic questions and more in this lesson on North Carolina’s shrimping industry then apply their understanding by creating a marketing campaign for North Carolina shrimpers.

Grade
10

Essential Questions
• How can the government intervene in the economy?
• When should the government intervene?
• What role do foreign imports play in the economy?
• What are niche markets and their role in our capitalist economy?
• What is the role of competition?

Key Terms
• Free trade
• Tariff
• Quota
• Embargo
• Import/export license
• Standards
• Subsidies
• Strategic industry
• Market Niche
• Value-added product

Materials
• Trade Restrictions and Their Effects handout, attached
• Shrimp Economics: Coastal Tradition and the Global Economy Converge, attached

Duration
One class period

Procedure
1. As a warm-up, present students with the following situation:
   • Imagine your family lives in Manteo, NC, and that you have been in the shrimping business for generations. For the last several decades, your family has done very well financially thanks to the abundance of shrimp off the North Carolina coast, an increase in demand for shrimp nationwide, and little competition. Recently, however, the United States, and North Carolina in particular, dramatically increased the amount of shrimp imported from other countries. The imported shrimp, though not as high in quality as the shrimp your family catches, is far cheaper and even more abundant than North Carolina shrimp. Your family is beginning to feel the effects of competition and you are worried that soon you will not longer make enough money in the shrimping business to pay the bills.
2. Facilitate a discussion with students about the scenario. Ask them some of the following questions:
   - Who “wins” in this situation?
   - Who “loses?”
   - What should your family do?
   - What would you do if you were a typical shrimp consumer?
   - Is there anything that can be done to assist your family and other North Carolina shrimpers?

3. Inform students that there are many potential costs and benefits with regard to free trade—there are also winners and losers. When overall costs outweigh benefits, the government can take a variety of measures to restrict trade.

4. Distribute “Trade Restrictions and Their Effects” handout. Read over the handout with students and explain each of the restrictions governments can impose on imports and exports and their implications. Discuss the options in the context of the scenario presenting above.

5. Either in partners or individually, instruct students to read the attached article Shrimp Economics: Coastal Tradition and the Global Economy Converge.

6. Once students have finished the article, handout the attached response sheet and instruct them to answer the questions. Once complete, allow students to share their thoughts and answers in a class discussion. Given the information presented in the article, also ask students to reconsider the possible trade restrictions the government could impose and whether they think any such restrictions should be applied to the situation with North Carolina shrimpers.

7. Divide students into small groups of and instruct them to focus on the “Finding a Niche” section of the article. Ask them to consider Doug Cross’s advice in “Finding a Niche,” and use it to design a marketing campaign for North Carolina shrimpers. The goal of the campaign is to increase the sales of NC shrimp, decreasing reliance on imported shrimp.

   Each groups’ marketing campaign must include a 1-minute commercial for NC cable stations, as well as a paper ad (billboard, newspaper insert, or poster) that includes an appropriate, catchy slogan. Each group member must be involved in the production and presentation of the commercial and advertisement. Once groups have had ample time to prepare, allow them to present to the class.

Culminating Activities

- Hold a Socratic Seminar or debate on the impact of foreign goods on the U.S. economy. Discuss when the government should intervene and when it should not. Possible topics could include the Great Depression, NAFTA, minimum wage, and immigration.
- For additional reading on the importing shrimp and its affect on US industry, have the students read the article Curbing the Import Appetite: Selling American Shrimp in the U.S. Market, available at http://www.ncseagrant.org/home/coastwatch/coastwatch-articles?task=showArticle&id=459
Trade Restrictions and Their Effects

Companies produce for foreign markets as well as domestic markets (markets in the home country). Exports are the goods and services sold in foreign markets. Imports are goods or services bought from foreign producers.

In spite of the benefits of international trade, many nations put limits on trade for various reasons. The main types of trade restrictions are tariffs, quotas, embargoes, licensing requirements, standards, and subsidies:

- A **tariff** is a tax put on goods imported from abroad. The effect of a tariff is to raise the price of the imported product. It helps domestic producers of similar products to sell them at higher prices. The money received from the tariff is collected by the domestic government.

- A **quota** is a limit on the amount of goods that can be imported. Putting a quota on a good creates a shortage, which causes the price of the good to rise and allows domestic producers to raise their prices and to expand their production. A quota on shoes, for example, might limit foreign-made shoes to 10,000,000 pairs a year. If Americans buy 200,000,000 pairs of shoes each year, this would leave most of the market to American producers.

- An **embargo** stops exports or imports of a product or group of products to or from another country. Sometimes all trade with a country is stopped, usually for political reasons.

- Some countries require import or export **licenses**. When domestic importers of foreign goods are required to get licenses, imports can be restricted by not issuing many licenses. Export licenses have been used to restrict trade with certain countries or to keep domestic prices on agricultural products from rising.

- **Standards** are laws or regulations that nations use to restrict imports. Sometimes nations establish health and safety standards for imported goods that are higher than those for goods produced domestically. These have become a major form of trade restriction and are used in different amounts by many countries.

- **Subsidies** can be thought of as tariffs in reverse. Instead of taxing the foreign import, the government gives grants of money to domestic producers to encourage exports. Those who receive such subsidies can use them to pay production costs and can charge less for their goods than foreign producers. A tariff is paid for by the buyers of the foreign goods and the buyers of domestic goods who pay higher prices. But subsidies are paid for by taxpayers who may or may not use the good. What are the effects of these trade restrictions?

All of these restrictions limit world trade, which means a reduction in the total number of goods and services produced. They shift production from more effective exporting producers to less effective domestic producers.

When production is lowered, there are fewer workers earning income. Trade restrictions also raise prices, which is usually their main purpose.

Trade limits in one country, moreover, usually lead to limits being imposed in other countries. If the United States places a high tariff on cars made in Japan, for example, Japan may then put tariffs on American goods sold in Japan.

In spite of these disadvantages, countries are tempted to use trade restrictions to protect their own industries. Countries that are just getting started use tariffs, quota, and subsidies to protect their industries until they can compete without government help. The difficulty with this infant industry argument in support of trade restrictions is that it is not always possible to predict which industries will succeed. Protection frequently lasts long after the industry has matured.
Governments are eager to protect what are called **strategic industries**. These have included industries, such as steel, cars, chemicals, and munitions that are imported during a war. Today, they are more often the high tech, high wage industries like commercial aircraft production. One way of insuring that they remain strong is to protect them from foreign competition. Agriculture is another area that many governments try to protect. Tariffs and subsidies help make sure that domestic farmers can earn enough profits to continue farming.

The decision to use trade restrictions like tariffs is an important one. Tariffs help some domestic industries, but they mean higher prices for buyers. They help the owners and workers in the protected industries. They hurt the people who have to pay higher prices for the goods those industries make. Reducing imports reduces the income of foreigners. They will reduce their foreign purchases, hurting exporting industries and workers in the nation that put the tariff on the imports. Without much competition, companies may also use less efficient production methods. This can lead to poorer quality as well.

It is in the best interest of the world economy for each nation to trade freely with all other nations. However, this practice does not always benefit every nation. For example, exporters who control a large part of the world's supply of a product can use trade restrictions to change the terms of trade, reducing the amount of their goods and services they must give up to obtain imports. This was done by the Organizations of Petroleum Exporting Countries (OPEC) when they restricted their output of oil in the 1970s. By driving up the price of oil they were able to get more imports for less oil.

Most arguments for trade restriction benefit protected industries and their workers. They also create much greater losses for a nation's economy. In the long run, a nation must import to export.

Coastwatch Winter 2005:  
Shrimp Economics: Coastal Tradition and Global Economy Converge

Ocean creatures have provided a way of life for the Hopkins family for many generations. "This is my heritage," explains Glenn Hopkins, who lives in the small, Pamlico County shrimping town of Vandemere. "This is what my dad, and my granddad, and my great-granddad did. I was born and raised into this."

But, times are changing along the coast. As domestic shrimp prices plummet to compete with imported supplies, and the cost of gas and insurance continue to rise, Hopkins and other North Carolina shrimpers are struggling to maintain tradition.

Hopkins has known no other life. By the time he was 6 years old, he was going out with his dad on their trawler. The boat was an entertaining place for the curious youth — he would cause all sorts of trouble talking on the radio and playing with his dad's catch.

Now he recalls watching his dad work. "It just seemed natural, like what you were supposed to do. There's no other way to describe it."

It wasn't long before Hopkins was going out on his dad's boat by himself. And not long after that he had his own boat — a 25-foot schooner — on which he still prefers to work solo.

Why?

Freedom.

"It's the freedom of being out on the water by yourself, doing your own thing, making your own way," says Hopkins.

For that reason, Hopkins continues crabbing and shrimping — not because it pays the bills. He drives a gas truck in the winter to make ends meet.

"I don't want to do it no more, but I have to," laments Hopkins, who has tried to find a better job to no avail.

Last spring Hopkins sat in the lobby of a nursing home. He was there to apply for a maintenance job. Hopkins, who never finished high school, was told that the three people who applied in front of him had college degrees. Hopkins, frustrated and discouraged, turned in a blank application and went home.

Daunting Issues

What challenges do shrimpers like Hopkins face? The issue is complicated, but industry and government officials often point to the global economy that brings increasing amounts of imported shrimp to the United States.

"We are not a player in the market anymore," says Doug Cross, co-owner of Pamlico Packing. "The days of being able to compete on a commodity level are over."

Shrimp consumption in the United States has almost tripled since 1980, and imports have accommodated the expansion in the market, according to a report by the Trade Adjustment Assistance for Farmers (TAA) program.

A survey conducted by the National Fisheries Institute (NFT) indicates that for the first time in 2002, American consumption of shrimp, at 4 pounds per person, exceeded canned tuna consumption, at 3.1 pounds per person.
To meet consumer demands, shrimp imports not only have been part of the U.S. market, but also have dominated for more than two decades. An unprecedented increase in the supply of imported shrimp occurred between 2001 and 2003 — such that foreign shrimp now account for 90 percent of the market, according to the TAA report.

Several factors — mainly an increase in European Union tariffs and food safety requirements, along with a weak U.S. dollar — caused shrimp exporters all over the world to become more focused on the U.S. market, says Scott Baker, a North Carolina Sea Grant fisheries specialist based in Wilmington.

When adjusted for inflation, shrimp prices are at a 30-year low, according to statistics from the N.C. Division of Marine Fisheries (DMF). The dock price in 2001 of $2.27 per pound adjusts to only 53 cents per pound in 1972 dollars. By 2003, the price dropped even farther — $1.77 per pound dockside or 40 cents per pound in 1972 dollars.

While he cannot statistically prove that the increase in foreign shrimp directly caused the domestic price to drop, it certainly looks like a primary factor, says Brian Cheuvront, a DMF economist.

Lagging Supplies
The majority of shrimp imports are farm-raised, whereas most domestic shrimp are wild-caught.

Imported farm-raised shrimp are desired in some market sectors because of the uniformity of the product and its consistent availability. As domestic catches often are subject to nature's whims, the U.S. market is simply unable to offer a competitive product on an international scale, says DMF Director Preston Pate.

"You can order popcorn shrimp at Red Lobster," Pate explains. 'And when you get your dinner, it's 30 little shrimp — and they are all exactly the same size."

International competitors also have the economic advantage of low production and labor costs, according to South Atlantic Fishery Management Council fisheries anthropologist Kathi Kitner.

Many shrimpers in the South Atlantic and Gulf of Mexico find it is not cost effective to fuel up their boats, repair their nets and go out on the water, Kitner adds. Other costs, including insurance and boat maintenance also are on the rise. Markets and restaurants have been able to make profits as wholesale shrimp prices have dropped, but prices to the consumer stay steady, according to Cheuvront. Thus, domestic shrimpers have felt the brunt of the price drop impact.

But others are affected by rising costs as well.

Fish markets, packers and restaurants face high property taxes on their prime waterfront property, Kitner explains. As more people move to the coastal regions, the cost of real estate rises. In turn, the property taxes increase. Many fisheries-related business owners on the waterfronts seriously consider offers that they are receiving for their property.

Here in North Carolina, Cross has received inquiries about his property from developers of marinas and condominiums. Potential buyers are not looking for the business, but rather for the land. "There is no doubt that the land we sit on is worth more for other applications, but as of now I haven't accepted any offers," Cross says.
Keeping Afloat
The future of North Carolina shrimping is not all grim. People like Cross and those at DMF and Sea Grant are exploring solutions to the difficulties facing the industry. Several plans are already in the works.

In response to falling prices, Congress allocated $35 million in disaster relief for U.S. shrimpers in February 2004. The TAA program, which was approved by the U.S. Department of Agriculture (USDA) Foreign Agricultural Service, provided monetary relief for North Carolina shrimpers — 5 cents per pound harvested in 2002 for those who could prove that they were economically impacted by the increased imports.

About 900 North Carolina commercial shrimpers sold their catches in 2002, but only about 90 met the initial TAA requirements, applied and attended workshops. Even fewer met final reviews to receive the assistance. The TAA program also provided free training for the participants. Organized in North Carolina by Sea Grant, the training program gave an overview of the world market, along with general business education to assist shrimpers in dealing with recent changes — how to address problems, cut costs or possibly exit the business if they choose.

The North Carolina shrimp fishery also has been certified for the TAA program for shrimp landings in 2003. Now individual shrimpers must reapply for the new round of assistance by mid-February.

On another front, in January 2004 the Southern Shrimp Alliance (SSA) filed a petition to federal regulators accusing six large exporting countries of illegal "dumping" on the shrimp market. That includes imports that are sold substantially below market price or are given price advantages through foreign government subsidies.

The SSA petition is especially important because it has turned into the largest trade action in American history, says Kenny Lewis, North Carolina representative to the SSA Board of Directors.

The International Trade Commission (ITC) can impose tariffs on countries that they find to be in violation of anti-dumping provisions of U.S. trade law. Responding to the SSA petition, the ITC ruled that the U.S. shrimp industry has been harmed by imports. The final ruling, expected in mid-January, could result in shrimp import tariffs.

If tariffs are imposed, Lewis anticipates importers likely will absorb most of the cost.

The tariffs would cause shrimp prices to stabilize during the next few years, to just above current levels, Cross says. "It will not offer permanent relief. Some see it as the savior of the industry, but it isn't. Other things have to be done if this industry is going to survive."

Finding a Niche
So what does Cross suggest be done? "We have to reinvent the wheel on marketing," he says, adding that shrimpers must be willing to help market their product on a consistent supply and price basis.

As Pate sees it, most of the imports are fairly low-value, small shrimp, while the strength of North Carolina shrimp lies in the taste, quality and size.

For that reason, North Carolina shrimp could be marketed towards higher quality, niche markets — such as high-end restaurants and caterers. To reach these markets, shrimpers and processors are looking at ways to provide specialized and "value-added" products to the consumer.

The overall goal is to increase the visibility of — and an interest in — local products, says Barry Nash, Sea Grant seafood technologist. "Market research indicates that consumers want to buy locally grown foods and are
willing to pay a premium for regional commodities if these products satisfy consumers' expectations for quality, consistency, healthfulness, taste appeal or uniqueness," Nash explains.

There are several programs in the works that will address quality and consistency.

A "Mark of Quality" program has been proposed as a cooperative effort among Sea Grant professionals in eight southeastern states with viable shrimp industries. The program would establish quantifiable quality standards.

"The standards would include measures for product attributes such as piece size, salinity, water content, aroma, appearance, flavor and color," Nash explains. "The program's objective would be to harness measurable quality standards that reinforce a recognizable brand image for wild-caught shrimp — similar to what has been done for the Vidalia Onion or the Angus Beef marketing programs."

North Carolina Sea Grant specialists also hope to work with local captains and processors to test the handling methods advocated by the TAA curriculum for enhancing the quality of shrimp at the time of harvest.

They are developing a proposal to compare batch-process handling methods recommended by the TAA program to conventional on-board handling and product transportation techniques. The batches would be evaluated by a trained panel who would look for statistically significant sensory differences between the two handling regimes.

If results indicate that the quality of wild-caught shrimp can be enhanced with improved handling practices, the next step would be to access its price potential in the marketplace. If shrimp perceived as higher quality can command a higher price than farm-raised shrimp, North Carolina shrimpers would realize greater revenue for their harvests, Nash explains.

North Carolina Sea Grant also is participating in a community-based seafood branding effort, where restaurants in Carteret County will be encouraged to buy — and highlight on their menus — a variety of locally caught seafood, including shrimp. The project is funded in part by a Rural Community College Initiative grant from Carteret Community College and support from North Carolina Sea Grant.

"The project team comprised of community volunteers is working to establish a group of local fishermen, dealers and restaurants who will develop a business relationship to sell and promote local seafood commodities," Nash says.

**Future Prospects**

Many shrimpers along the North Carolina coast will fight for their livelihood — fitting into whatever niche market here or value-added product there that they can, all the while holding out hope that things will get better.

Others are not so sure. Glenn Hopkins doesn't expect his traditional livelihood will continue for his children, who were just youngsters when they first came on his boat. "They could swim before they could walk," he recalls. Yet, he doesn't want them to go into the family business because there's "no future in it."

Doug Cross believes that the next generation of shrimpers will have to be willing to adapt and change. So, too, will the processors.

Cross already has adjusted to the new marketplace by developing value-added product lines and looking for niche marketing opportunities. Yet, he doesn't anticipate his children will take over the business.
"It has sustained me, but it will not sustain them," he says. "There is no Forrest Gump' story" for the North Carolina shrimping industry, he adds.

Part of the cultural heritage of the East Coast may be dying as people and industries struggle to meet the demands of a global economy.

"Some consider the changes on the coast progress," Cross says. "Part of me hates to see it go, but part of me knows it's inevitable."

Shrimp Economics: Coastal Tradition and Global Economy Converge – RESPONSE SHEET

1. Why are domestic shrimp prices plummeting?

2. What is causing the North Carolina shrimp industry to struggle?

3. Why has the amount of shrimp the US imports risen?

4. What caused the domestic price of shrimp to drop?

5. What are the advantages of imported shrimp? What are the disadvantages?

6. Describe the USDA’s means of assisting North Carolina shrimpers. Is this an effective solution in your opinion? Why or why not?

7. Why did the Southern Shrimp Alliance file a petition with federal regulators?

8. In your opinion, what role should the North Carolina government and/or US government play in this situation?