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**PART**  
AND THE LOCAL ECONOMY

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Y O U  
**P O R T**  
AND THE LOCAL ECONOMY

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Frederick J. Smith  
Extension Marine Economist  
Oregon State University  
EM 8395  
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Ports in the United States have a special relationship to their local economies. They frequently have more economic development authority than other municipalities and are significantly affected by international and national as well as local economic events. This publication is intended to help you understand your port's role in your local economy and your local economy's relationship to the larger economy.

## Ports Defined

### *International gateways*

One expert, J. G. Baudelaire, defines ports as international gateways, sheltered places where suitable facilities and organizations cater to the transfer of cargoes between ships and land conveyances, or between ships operating on long-distance runs and other activities of a more regional nature.

The Maritime Administration (MARAD) defines ports as those locations that have a minimum depth alongside of 25 feet, except in the Great Lakes where the minimum is 18 feet. According to MARAD, the United States has 188 seaports and 157 inland waterway and river ports.

These are geophysical definitions that define ports according to geographical, physical, or technical characteristics. Ports can also be statutorily defined.

### *Statutory Ports*

Most states have statutes that define ports and outline their authority and responsibility. In these states, ports can be, and are, statutorily created without regard to their geophysical characteristics. Sheltered water or even navigable water is not an essential requirement for these statutory ports.

By statute there are 75 and 23 ports in Washington and Oregon respectively. The MARAD definition covers only 26 of them, while Baudelaire's definition applies to no more than 12.

**Unique authority.** Statutory ports have authority and responsibilities resulting in significant local economic impact. They are different from other local municipalities with similar authority and responsibilities because of their focus on commerce and industry—often but not always with a maritime flavor. In many cases a port's economic impact is not derived from cargo handling.

Frequently, ports have more statutory authority for economic development than cities, counties, economic development districts, or even states. While statutory authority varies greatly from state to state and even within a state,

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ports may have authority to issue tax exempt bonds, incur other types of debt, collect taxes, condemn property, and enter into any type of enterprise or activity that will improve commerce and trade.

In addition to having independent statutory authority, ports can be a part of a local municipality (for example the Port of Los Angeles) or may cover more than one municipality (for example the Port of Portland and Port of New York/New Jersey). There are even statewide ports (for example, The Alabama Port Authority).

**Port activities.** In the United States, the Army Corps of Engineers and the Coast Guard have special roles in developing, maintaining, and regulating navigation. While this excludes ports from many navigation-related activities, some ports charge for the use of the waterway, navigation systems, locks, breakwaters, jetties, and other navigation aids.

Ports own and charge for the use of wharves, docks, slips, undeveloped land, developed land, equipment, buildings, and recreation and business facilities. Ports provide and charge for the use of labor, management, financial services, marketing services, public relations, and technical services. In addition to handling cargo, ports also own and operate industrial parks, recreational and commercial fishing marinas, railroads, bridges, canals, shipyards, recreational vehicle parks, warehouses, and airports.

**The port in the local economy.** Ports have an exceptional variety of methods for contributing to local economic activity and development. The best methods for your port will depend upon its specific authority and responsibility, the general economic situation, and your local economic structure.

### **Your Local Economy**

The relationship between your port and your local economy is largely determined by the local economic structure. If you understand this structure, you will see more clearly your port's role in the local economy.

### ***Money Flows***

The local economic structure is best understood by looking at the flow of money. New money flows into your local economy when goods or services are sold to customers outside your local economy. For example, a local manufacturer ships a \$50,000 carload of furniture to Milwaukee, your port arranges a \$15,000 lease of warehouse space to a St. Louis fertilizer distributor, and your local food processing plant puts a \$70,000

container load of potato chips on a Hong Kong-bound ship. Because your port provided seed money to the furniture manufacturer, constructed a new warehouse, and provided cargo handling facilities to a shipping line, a total of \$135,000 has been brought into your local economy.

Money also flows out of the local economy when payments are made to people and organizations outside the area. For example, your port contracts with a dredging firm from Philadelphia for a \$250,000 channel deepening project, the local furniture manufacturer purchases a new \$3,000 planer from a Chicago distributor, and the local basketball team takes a \$15,000 trip to Hawaii for the Pacific Tournament. A total of \$268,000 has left your local economy.

These money flows are illustrated in Figure 1.

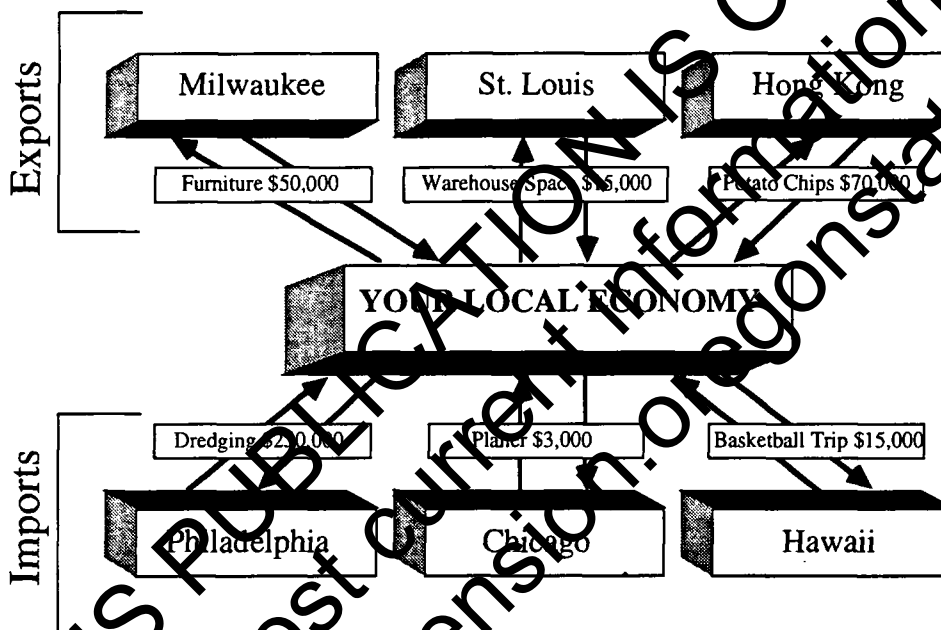


Figure 1.—How money flows into and out of a local economy.

What determines the money flow between your local economy and the rest of the world? In general terms, when a good or service provided from within the local economy can be purchased by someone from outside the local economy for a better price, money will flow in. When a good or service needed by someone inside the local economy is not provided by the local economy, or cannot be purchased from inside the local economy for a better price, it will be purchased outside the local area and money will flow out.

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The furniture manufactured locally is attractive to the Milwaukee buyer because that buyer can obtain it at a better price and therefore sell it at a profit. Port warehouse space is rented by the St. Louis distributor because the price is right and the location is convenient.

The port pays the Philadelphia dredge company because no dredging service is available inside the local economy. The basketball team spends its money in Hawaii because the tournament is there.

### *Economic Conditions*

The demand for goods and services from within your local economy and the purchases made outside your local economy are influenced by the general conditions of the national and international economy. For example, if the national economy is depressed, consumers will reduce purchases of durable goods and shipments of furniture to Milwaukee are likely to decrease.

International trade is a bit more complex because all purchases must be made in U.S. dollars. If the value of the U.S. dollar goes up relative to the value of the Hong Kong dollar, it takes more Hong Kong dollars to buy U.S. dollars. If the two currencies were equal in value (\$1-US equals \$1-Hong Kong), the Hong Kong food chain purchased that \$70,000 container load of potato chips by exchanging \$70,000-Hong Kong for \$70,000-US. Now suppose that the value of the U.S. dollar goes up 50% in relation to the Hong Kong dollar (\$1-US equals \$1.50-Hong Kong). The Hong Kong firm must now spend \$105,000-Hong Kong to obtain \$70,000-US. It will cost the Hong Kong food chain \$35,000 more in its own currency to buy the same container load of potato chips. When this situation exists, the Hong Kong food chain is likely to reduce its purchases of potato chips from your local area.

If the Federal government reduces waterway and navigation funding in an attempt to balance the budget, the channel deepening project may be cancelled. If local voters revolt over high school taxes, the basketball team may forego the trip to Hawaii.

### *Imports and Exports*

Any activity that brings new money into the local economy is called an export. Don't let this confuse you. Just remember, it is the good or service that is being exported, not the money. Any activity that takes money out of the local economy is called an import. Again, it is the good or service that is being imported, not the money.

In Figure 1, the exports are shown above the box labeled "YOUR LOCAL ECONOMY" and the imports are shown below the box.



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## Economic Sectors

Some parts of your local economy bring in more new money than they send out. These are called *export* sectors. Some parts of your local economy bring in less money than they send out. These are called *local* sectors. Export and local sectors can also be divided into many smaller sectors.

Relationships among imports and exports, and the relationships among the various sectors can be more easily understood by using an economic model. MARAD has developed just such a model to estimate the economic impact of port cargo activities. In this model, MARAD divides the local port economy into 13 sectors:

- Agriculture
- Agricultural services, forestry and fisheries
- Mining
- Construction
- Manufacturing
- Transportation and public utilities
- Wholesale
- Retail trade
- Finance, insurance and real estate
- Services
- Government
- Auxiliary administration
- Special industry

In a University of California study the Napa County economy was divided into 24 sectors with agriculture broken out into crops, such as livestock, dairy, poultry, grapes, etc. An Oregon State University study divided the Clatsop County economy into 27 sectors, including four different fisheries sectors.

Agriculture was important in Napa County and fisheries were important in Clatsop County. Also, they are most frequently export sectors. Dividing agriculture and fisheries into several economic sectors provided more useful economic information.

### *Economic Relationships*

As indicated earlier, the structure of your local economy is best understood by looking at the flow of money. The flow of money within your local economy and between your local economy and the rest of the world is also a good way to illustrate economic relationships. This is most often shown in a table which depicts the amount of purchases made by one sector from all other local economy sectors.

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For example, a study of the local economy may reveal that in the past year the manufacturing sector purchased \$3 million in services from the household sector, \$1,800,000 in goods and services from the construction sector, and \$200,000 in goods and services from the transportation sector. (The household sector provides labor for the manufacturing sector.)

This shows the specific economic relationship between the manufacturing sector and other sectors. For example, we can see that the manufacturing sector paid more to households than to construction, and more to construction than to transportation.

Furthermore, the study might show that the manufacturing sector sold \$8 million in goods and services outside the local economy during the past year and purchased \$5 million in goods and services within the local economy. Three of the \$8 million in sales leaked out of the local economy in the first round of spending while \$5 million stayed in the local economy to be respent. Fortunately, the \$5 million that was spent in the local economy was from an export sector, and therefore, "new" money.

Other sectors, such as the county government, export very little. Taxes and fees are collected locally and services are provided locally. Even though 95 percent of county government purchases might be from local economy sectors, it is not based on new money resulting from exports.

**Economic impacts.** The economic impact of your port can be measured by changes in economic output, employment, or income. These impacts are most commonly estimated by studying the flow of money through your local economy, as described above.

**Money flows.** When your port brings new money into the local economy through increased cargo volume, new industrial park tenants, or some other export activity, that money will flow to other local economy sectors and back outside to the rest of the world. If most of the new money flows first to other local economy sectors, the economic impact of increased cargo volume or new industrial park tenants will be greater than if most of the money flows *directly* back out to the rest of the world.

Some sectors tend to purchase more locally than others. Therefore, their local economic impact will be greater for each dollar of sales.

**Respending new money.** A Chicago exporter may ship 10 containers through your port, purchasing local stevedoring, renting your cargo handling equipment, buying services from local shipping agents, and paying

you wharfage. This is new money in your local economy. The economic impact will depend upon how the stevedores, your port, and the local shipping agents respend this new money.

For example, assume that the stevedores receive \$10,000 in wages. They, in turn, may use \$4,000 for gasoline, for apartment rent, and for family food—all purchased within the local economy. The other \$6,000 may go for purchases of life insurance, air travel and a new mail order rifle, all from outside the local economy. Therefore, the leakage outside the local economy is \$6,000.

The proportion of the new money spent inside versus outside the local economy by your port or local shipping agents may be quite different from this. However, let's continue with the stevedore example and see what happens with this new money after spending by the stevedores.

The spending and respending is illustrated in Figure 2 beginning with the original \$10,000 (column A). Of the initial \$10,000 received by the stevedores, \$4,000 is respent locally and \$6,000 leaks out of the local economy (column B). Of the \$4,000 respent locally, \$1,600 is again respent locally and \$2,400 leaks out (column C). From the \$1,600 respent locally in the previous round, \$600 is again respent locally and \$1,000 leaks out (column D). These cycles continue until the respending becomes too small to measure.

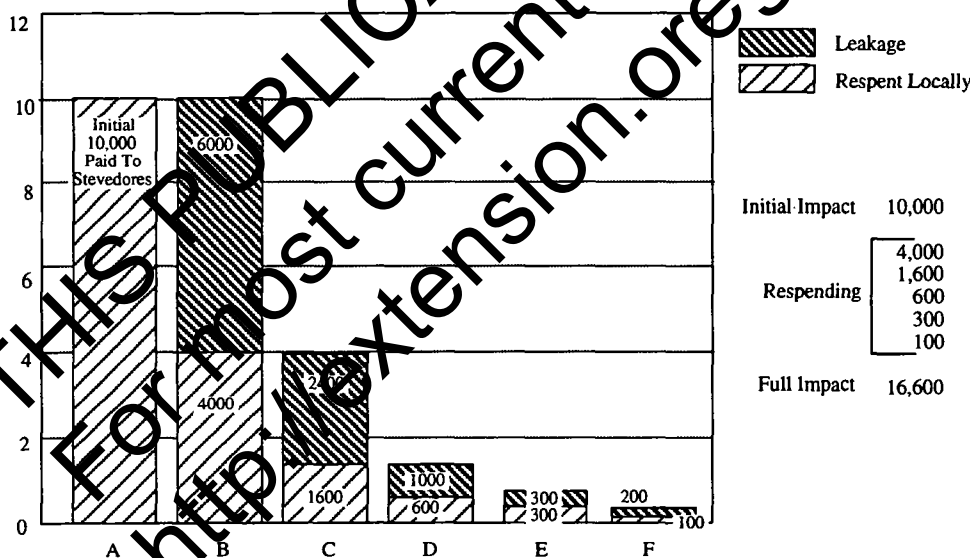


Figure 2.—Economic impact created by respending of stevedore wages in your local economy.

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Adding the amounts respent locally in each cycle to the original \$10,000 provides a measure of the economic impact. That is,  $\$10,000 + \$4,000 + \$1,600 + \$600 + \$300 + \$100 = \$16,600$ . Therefore, for each dollar that enters the local economy in this manner, \$1.66 of local economic activity will be generated.

This example illustrates economic impact by measuring the change in economic output. Economic impact can also be measured by calculating the change in employment or income.

### *Applications*

In recent years, economic impact has been estimated with the aid of input-output models such as MARAD's Port Economic Impact Kit. The use of such computer-based models can provide your port with economic impact information that can help you decide among various economic development opportunities. These models can also help you justify investment of public funds in a new enterprise, obtain public support for continuing a current enterprise or simply to improve citizen understanding and support of the port.

### *Understanding Your Port*

Because your port has some characteristics of both the public and private sectors, understanding your port's relationship to the local economy and estimating the economic impact of your port is a complex task. One of the most complex jobs involves classifying your port as an export sector versus a local sector.

Exporting 100,000 tons of grain, 250,000 tons of oil, or 10,000 containers per year doesn't necessarily make your port an export port in the economic sense. For example, if most of the port revenue comes from property leases and taxes, and if all the stevedores live outside the port district, the tug assist comes from another port, and other financial and technical services are from outside the port district, your port is likely to be a local sector. Furthermore, if you bring in services such as dredging, dock and wharf maintenance, and accounting from outside the community, you may actually be sending out more money than you bring in.

Perhaps the greatest economic impact of your port is providing otherwise unavailable services. Moorage for the fishing fleet, industrial property for new firms, and recreational vehicle parks for tourists may be services that only the port can provide. Because the port provides these services, there is an export of seafood products, an export of manufactured products and services, and an export of tourist services (tourists bring in new money).

These export sectors exist because of services and facilities provided by the port, even though the port itself may not be an export sector.

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## Summary

A port may be primarily involved in the transfer of cargoes, or may be a special statutory authority focusing on local economic development. Whether your port fits these or other categories, it has a special role in local economic activity. Understanding that role requires an understanding of your local economy.

When goods and services are exported from your local economy, new money is brought into the local economy and can contribute to economic growth and development. When goods and services are imported into your local economy, money flows out and is no longer available for local economic growth.

Local economy sectors that bring in more new money than they spend outside the local economy are called export sectors. They are important to the health of your local economy. If the majority of this new money is respent in your local economy, then the export sector has an even greater economic impact.

The actual economic impact can be estimated by various computer-based analytical tools. One of the most commonly used tools is referred to as an input-output model. The Maritime Administration provides a specially designed input-output model that estimates the economic impact of a port. It estimates the amount of new money generated by export sectors and the full impact of this new money on the local economy.

Better knowledge of your local economic structure, your port's relationship to the local economy, and port economic impact information can be used when choosing new tenants, developing capital projects, assisting current tenants, promoting new port activities, changing tariffs and rates, and making other important port decisions. This information will also be beneficial to citizens of your port community when they are called upon to pay taxes, to approve permits, to vote for new commissioners, and to support favorable legislation.

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The Extension Sea Grant Program, a component of the OSU Extension Service, provides education, training, and technical assistance to people with ocean-related needs and interests.



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