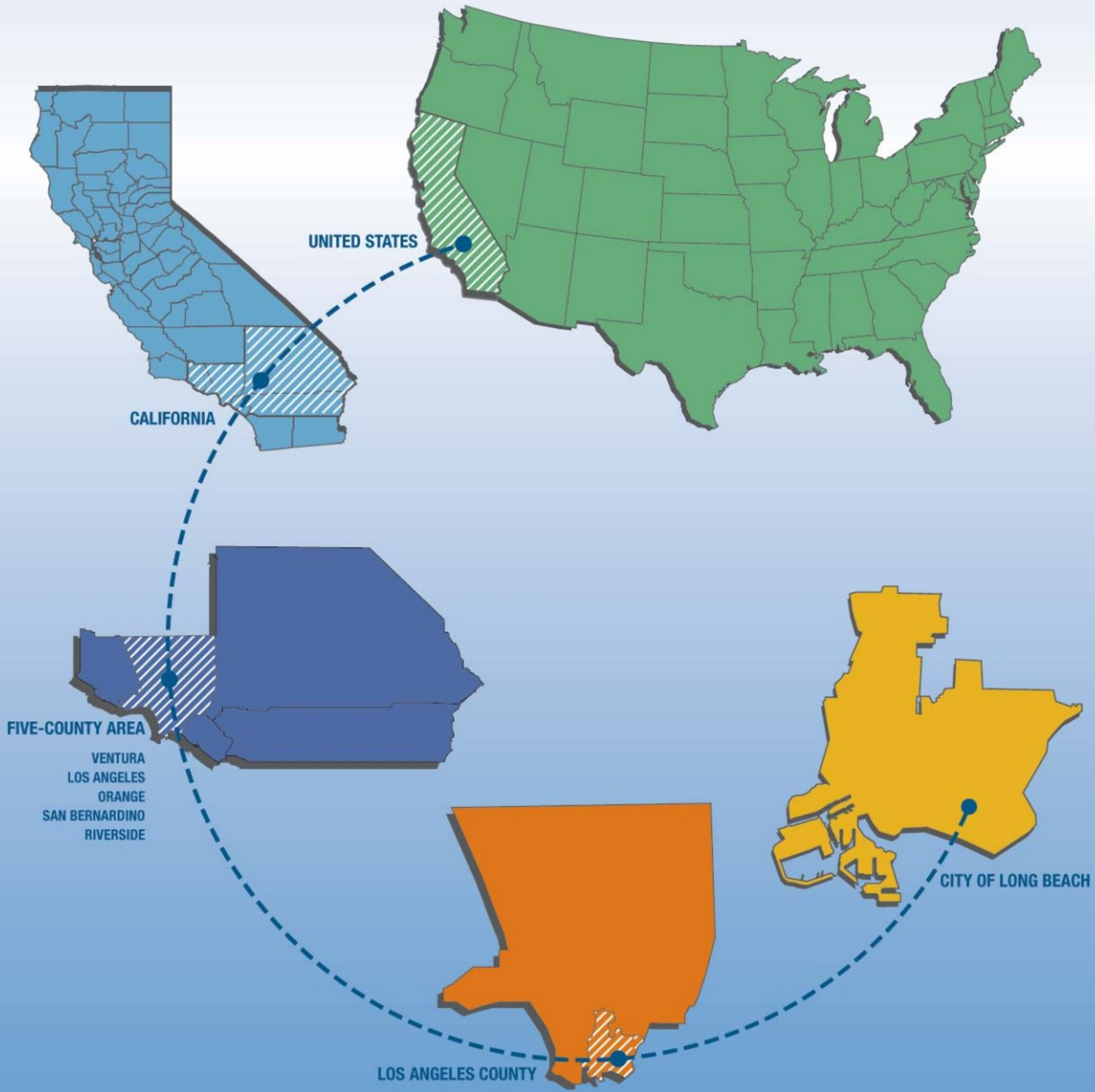
THE PORT OF LONG BEACH

ECONOMIC IMPACTS

Contributing to the Local, State & National Economies

REGIONS OF ECONOMIC BENEFITS

This publication presents the latest estimates of the economic benefits of the Port of Long Beach. Port operations generate benefits for the City of Long Beach, Los Angeles County, the five-county Southern California Region, California and the nation. These benefits are measured in terms of port-related jobs, wages and salaries, and business sales.



THE PORT OF LONG BEACH
ECONOMIC IMPACT ANALYSIS PROGRAM

BACKGROUND

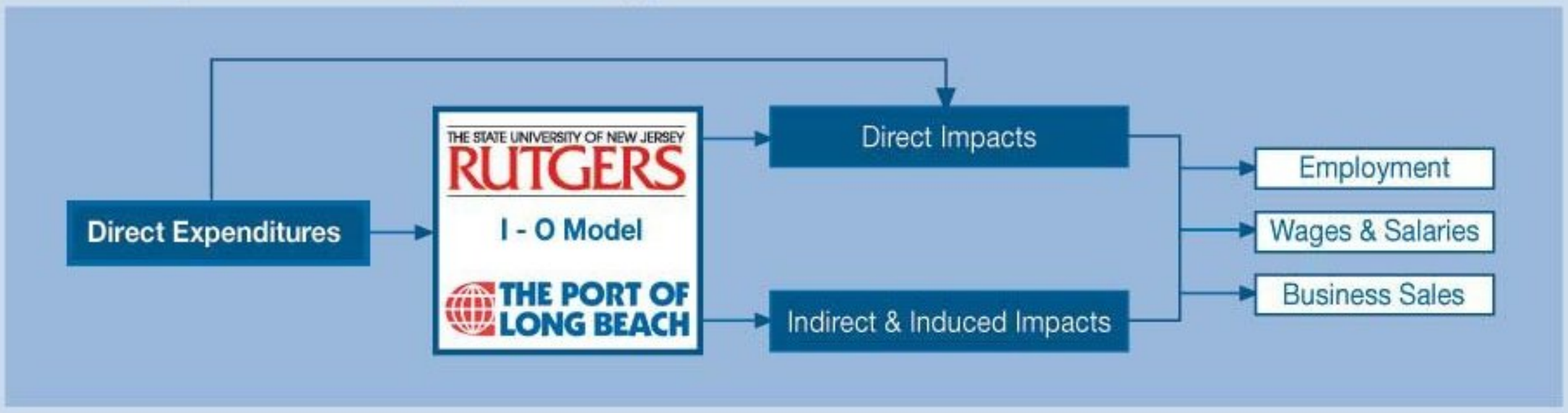
The Port of Long Beach has been preparing economic impact estimates utilizing the current methodology for nearly 15 years. In its first effort, the port hired a consulting team to design a systematic, quantitative method for assessing port impacts patterned after an approach recommended by the United States Maritime Administration (MARAD). The computer model produced in 1988 established the foundation for how the port estimates economic impacts today.

The port's model has been refined over the years. In 2002, after MARAD updated its research on economic impact analyses, the port embarked on a comprehensive revision of its modeling system. The port retained Rutgers University to enhance the MARAD work and provide guidance in collecting data for the model and interpreting its results. The port-related impacts described in this folder are products of this effort.

METHODOLOGY OVERVIEW

The port's new economic impact modeling system does not differ from the previous one in terms of its basic approach to calculating port impacts. At the core is an input-output (I-O) model that is designed primarily to estimate the ripple effects in the economy from various port-related activities. The figure below is a simple diagram of the system.

Economic Impact Model - Development And Application



Direct expenditures, representing what businesses spend to move cargo, manufacture exports or distribute imports, are first estimated. These expenditures are, in effect, the direct impacts measured in terms of business sales. They are entered into the model for purposes of calculating the spin-off effects or the indirect and induced impacts. The model estimates the indirect and induced business sales as well as direct and spin-off employment, wages and salaries.

The port's model contains a set of tables that traces the purchasing and sales patterns for groups of industries in each of the areas analyzed. The model converts these transactions into industry multipliers that account for all of the buying and selling triggered by the direct expenditures. Impacts from the direct expenditures, as well as multiplier effects calculated by the model, are reported in the summary section of each enclosed area insert.

A separate insert titled Technical Support Information, is included in this folder. It provides more detailed information on the development of the I-O model and the information required to run it for this study.

GLOSSARY

The following terms are used extensively in this study and are defined in the context of economic impact analyses.

DIRECT IMPACTS: Initial effects stemming from the demand for port services, export goods, wholesale distribution services and other port-related activities. These impacts are oftentimes estimated from survey data.

INDIRECT IMPACTS: Spin-off effects that result from the purchases made by port-related businesses and their suppliers of goods and services. Sometimes referred to as secondary or ripple effects.

INDUCED IMPACTS: Spin-off effects that result from the purchases made by the employees of port-related businesses and their suppliers of goods and services. Sometimes referred to as secondary or ripple effects.

I-O MODEL: A mathematical framework for calculating indirect and induced impacts. An I-O table depicts the purchasing and sales patterns for industry groupings in a given area.

PORT INDUSTRY: Businesses involved in moving and handling cargo. They include such activities as marine terminal operations, trade services, vessel services and inland transportation. Many of these activities occur beyond the Port District.

PORT USERS: A collection of businesses consisting of export manufacturers, import wholesalers, import retailers and processors of inbound crude oil.

JOBS: Full - and part-time employment by place of work.

WAGES & SALARIES: Employee and proprietor income. It does not include non-wage compensation, transfer payments or unearned income.

BUSINESS SALES: The dollar value of industry production or output. Business sales, as measured by the I-O model, exclude the cost of goods sold for retail and wholesale businesses.

Economic Impact Long Beach

THE PORT OF LONG BEACH

SUMMARY

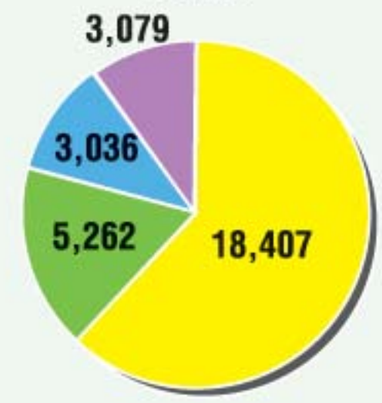
The impact of the port on the City of Long Beach (city) is largely the result of activities involving cargo handling. Nearly 30,000 jobs are supported, directly and indirectly, by the port, representing roughly one of every eight in the city. Over 60% of these jobs are directly related to the port industry, a majority of which involve terminal operations and cargo packing. Wholesalers and retailers of imports make up most of the rest of the port-related jobs in the city. The charts at right break down these effects by major activity.

The source of these impacts is the billions of dollars spent annually by transportation companies, importers and exporters who are responding to consumer demand and the needs of other businesses. Some of the highlights of this spending are listed below:

- Nearly $1.9 billion a year is spent in the city for port industry services. These services are purchased primarily by foreign and domestic shippers and steamship companies.
- Over $800 million annually is spent on wholesale distribution services in the city for goods imported through the port.
- Retailers in the city spend over $190 million annually selling household goods and other finished products imported through the port.
- Port construction and sales by visitor-serving activities in the vicinity of the Queen Mary Hotel generate annual expenditures of about $260 million.

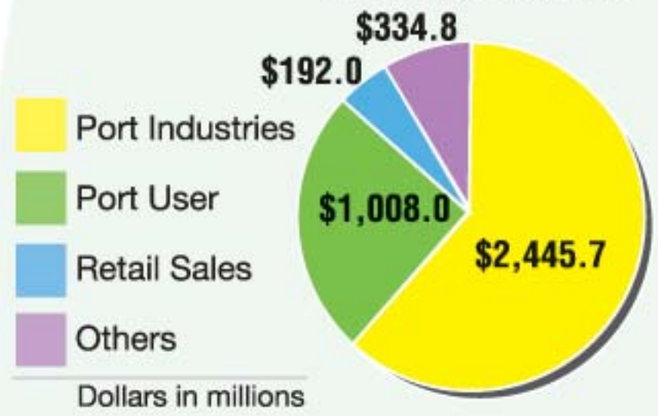
IMPACT SUMMARY	LONG BEACH (Impact 2001)
Jobs	29,784
Wages/Salaries	$1.54 billion
Business Sales	$3.98 billion

JOBS



WAGES/SALARIES

BUSINESS SALES



AN IN-DEPTH LOOK

The information below, and on the reverse side of this card, elaborates on this spending and its economic impacts on the city.

PORT INDUSTRY - These effects reflect the economic activity of businesses involved in moving and handling cargo. For the City of Long Beach, this activity generates more port-related impacts than any other impact category. Major categories of these businesses are listed in the table to the right along with what was spent for services in 2001. Some of the more important activities included terminal operations (including longshore labor services), cargo packing and trucking services. Altogether, about $1.9 billion was spent for these services in the city, nearly two-thirds of which was associated with container cargo. Each container handled at the port generated an average of nearly $430 in local business revenues—most of it within the Port District itself.

Expenditures for port industry services, in turn, triggered spending by these businesses and their suppliers and by the employees of these firms, amounting to about $560 million. This combination of direct and spin-off spending provided for over 18,400 jobs and about $934 million in wages and salaries.

PORT INDUSTRY - DIRECT SALES	
Terminal Operations	$ 770.2
Cargo Packing	$ 286.2
Trucking	$ 269.1
Misc. Construction	$ 110.5
Ship Repair	$ 101.7
Banking/Insurance	$ 67.6
Storage	$ 59.6
Vessel Fueling	$ 46.5
Freight Forwarding	$ 25.4
Other	$ 151.6
Dollars in millions Total	$ 1,888.4

PORT USERS – As a group, port users are companies (or individuals) that use port facilities for importing or exporting cargo, but are not located within the port. Examples include manufacturing companies that export to foreign markets and wholesalers that distribute imported goods. Impacts from export manufacturers in the city have not been quantified because the proprietary trade data available to the port is ambiguous with respect to the true origins of local manufacturing. Research by port staff revealed that most of the city's exporters listed in its data were found to be transportation companies. It was not known whether these companies were handling goods manufactured within the city or some other location in the region. Port staff plans to conduct surveys to obtain this information. In the meantime, conservative port impact numbers, that exclude export producers, will be used for the city.

The total value of goods imported to the city via the port in 2001 was approximately $2.6 billion. The measurable effects from these imports stem from their distribution. It is estimated that port users spent about $818 million on wholesale distribution services in the city. Another $190 million was created in spin-off spending. Total expenditures provided for more than 5,200 jobs and $396 million in wages and salaries in the city.

RETAIL SALES – The retail sale of imported goods supports over 3,000 jobs within the city. These jobs, and the related impacts on wages, and business sales, reflect the expenditures needed for companies to sell imported finished goods moving through the Port of Long Beach.

OTHER IMPACTS – Although relatively small on the regional level, estimates for the impact of port construction and visitors to the Harbor District are significant to the City of Long Beach. The combined impacts for these two categories include nearly 3,100 jobs and over $140 million in wages and salaries. In 2001, construction expenditures for the port exceeded $260 million. The portion spent within the city, including the Port District, was about $215 million, supporting over 2,300 jobs and generating roughly $275 million in direct and secondary business revenues. Visitors to the Queen Mary and shops and restaurants within the Harbor District support about 760 jobs within the city. The direct expenditures in the Harbor District were estimated to be roughly $47 million in 2001.

The port also generates tax revenues for the city. In addition to the sales taxes paid by port industries, port users and their workers who make purchases in the city, the port's lessees also pay a type of property tax called possessory interest tax. In 2002 port tenants paid about $6.8 million in possessory interest tax. The city received a portion of these tax revenues, including nearly $1.5 million for the city's redevelopment agency.

IMPACTS BY AREA – The port's impacts in the region are concentrated in Los Angeles County. Most of the impacts in the City of Long Beach are linked to port industries, or firms involved in moving and handling cargo. Impacts in the balance of Los Angeles County are concentrated more in port users, particularly wholesale distributors. Impacts in the region outside of Los Angeles County are due primarily to the re-spending of wages by commuters who work for export producers and importers in Los Angeles County, and firms in these areas that supply goods and services to manufacturers and distributors in Los Angeles County. The distribution of impacts in the region is shown at right.

PORT USERS

Export manufacturing jobs in the City of Long Beach have not been calculated for this study.

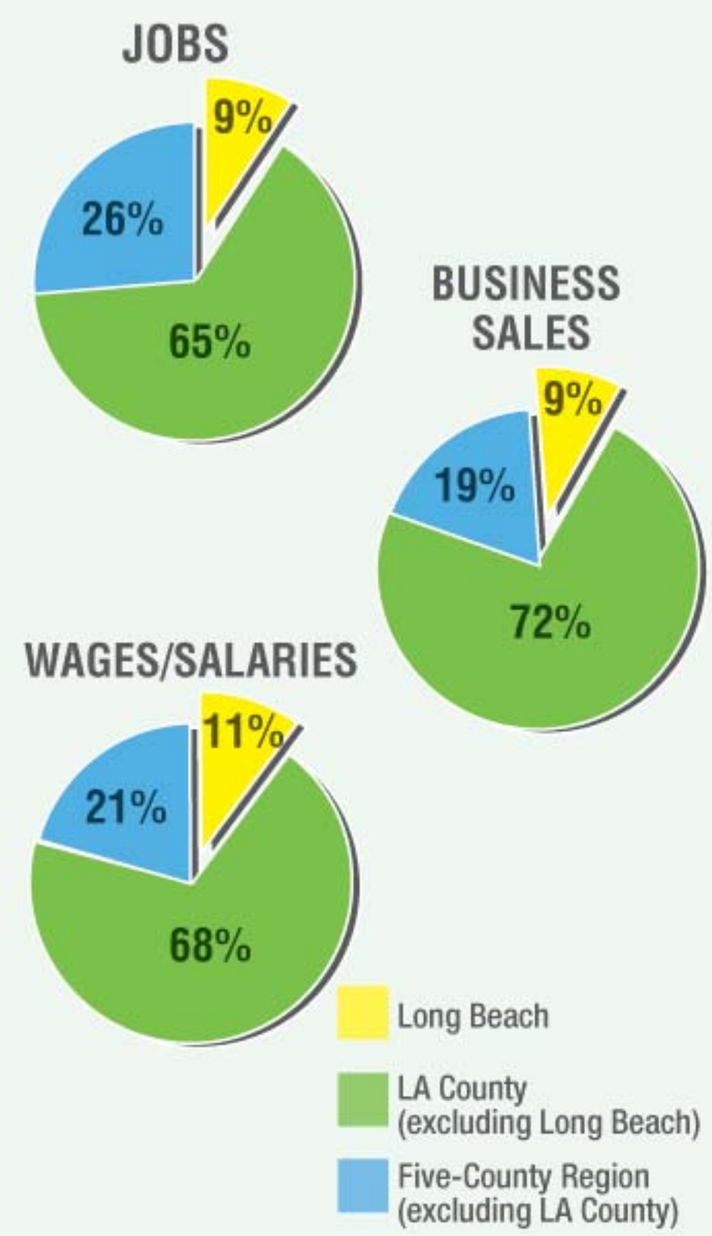
RETAIL SALES

The full-time equivalent retail jobs supported by imported goods to the region = 10% of all retail jobs in Long Beach.

AREA IMPACTS

AREA	JOBS	WAGES & SALARIES	BUSINESS SALES
L.B.	29,784	$1.5	$ 4.0
L.A. County	202,209	$9.8	$33.8
Region	83,618	$3.0	$ 9.0

Dollars in billions



Economic Impact LA County

THE PORT OF LONG BEACH

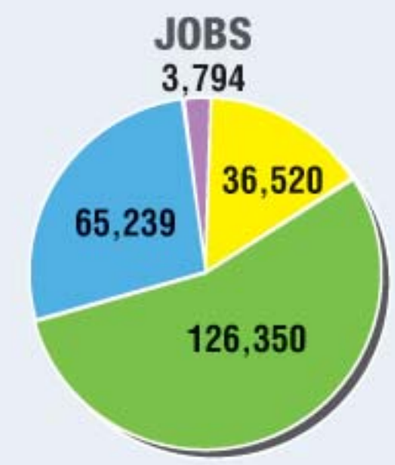
SUMMARY

Most of the port's impact in the region is concentrated in Los Angeles County (county). More than 230,000 jobs in the county are supported, directly and indirectly, by port operations, representing roughly one of every 24 jobs in the county. Similarly, the $11.4 billion in wages and salaries supported by port activity represent slightly more than 5% of all wages and salaries countywide. The charts at right break down these effects by major activity.

The source of these impacts is the billions of dollars spent annually by transportation companies, importers and exporters responding to consumer demand and the needs of other businesses. Some of the highlights of this spending are listed below:

- Nearly $3.3 billion a year is spent in the county for port industry services. These services are purchased primarily by foreign and domestic shippers and steamship companies.
- Foreign consumers purchase about $5.1 billion annually in goods manufactured in the county before being shipped through the port.
- More than $9.3 billion annually is spent on wholesale distribution services in the county for goods imported through the port.
- Retailers in the county spend about $4.1 billion annually selling household goods and other finished products imported through the port.

IMPACT SUMMARY	LA COUNTY (Impact 2001)
Jobs	231,993
Wages/Salaries	$11.4 billion
Business Sales	$37.8 billion



AN IN-DEPTH LOOK

The information below, and on the reverse side of this card, elaborates on this spending and its economic impacts on the county.

PORT INDUSTRY - These effects reflect the economic activity of businesses involved in moving and handling cargo. Major categories of these businesses are listed in the table at right along with what was spent for their services in 2001. Some of the more important activities included terminal operations (including longshore labor services), inland transportation and vessel services. Altogether, nearly $3.3 billion was spent for these services in the county, over 70% of which was associated with container cargo. Each container handled at the port generated about $950 in county business revenues.

Expenditures for port industry services, in turn, triggered spending by these businesses and their suppliers, and by the employees of these firms, amounting to about $1.9 billion throughout the county. This combination of direct and spin-off spending provided for over 36,500 jobs and $1.7 billion in wages and salaries.

PORT INDUSTRY - DIRECT SALES		
Terminal Operations	$	771.4
Trucking	$	562.3
Vessel Fueling	$	459.8
Rail Services	$	362.2
Cargo Packing	$	286.2
Freight Forwarding	$	220.2
Storage	$	128.7
Misc. Construction	$	110.5
Ship Repair	$	101.7
Banking/Insurance	$	71.0
Other	$	220.7
Dollars in millions Total	$	3,294.8

PORT USERS – As a group, port users are companies (or individuals) that use port facilities for importing or exporting cargo, but are not located within the port. Examples include manufacturing companies that export to foreign markets and wholesalers who distribute imported goods. The impacts from the activities of these companies account for at least one-half of the effects (jobs, wages, sales, etc.) for the county.

The total value of county exports handled by the Port of Long Beach was about $5.4 billion. By value, commodities like cotton fabric, vehicle parts, aircraft parts and computer equipment are among the most important manufactured goods being exported from the county. Non-manufactured goods like beef and scrap steel are also important exports. Industry sales for goods manufactured in the county and exported through the port totaled roughly $5.1 billion in 2001. The multiplier effect of this production (i.e. the re-spending by businesses and their employees) added another $2.6 billion in county expenditures. This aggregate spending created about 40,000 jobs, paying $2.1 billion in wages within the county. The table to the right lists the top manufacturing sectors in the county that produce for export and the jobs directly connected with that production.

The total value of goods imported to the county via the port in 2001 was approximately $29 billion. The measurable effects from these imports stem from their distribution. It is estimated that port users spent over $9.3 billion on wholesale distribution services in the county. Another $4.6 billion was created in spin-off spending by wholesale distributors. Total expenditures provided for more than 77,000 jobs and $5.3 billion in wages and salaries in the county. Additionally, close to $2 billion in crude oil was imported to the county in 2001. Distributing and refining imported oil supports over 9,400 jobs paying about $659 million in wages and salaries.

RETAIL SALES – The retail sale of imported goods provides over 65,000 jobs within the county, or about 28% of all port-dependent and port-related county jobs. These jobs, and the related impacts on wages and sales, reflect the expenditures needed for companies to sell imported finished goods moving through the Port of Long Beach.

OTHER IMPACTS – Estimates for the impact of port construction and visitors to the Harbor District are included in the total impacts for the port. The combined county impacts for these two categories include nearly 3,800 jobs and about $180 million in wages and salaries. In 2001, construction expenditures for the port exceeded $260 million, supporting over 2,900 jobs and generating roughly $395 million in direct, indirect and induced business revenues within the county. Visitors to the Queen Mary and shops and restaurants within the Harbor District support about 850 jobs within the county. The direct expenditures in the Harbor District for these visitor-serving activities were estimated to be roughly $47 million in 2001.

IMPACTS BY AREA – The port's impacts in the region are concentrated in Los Angeles County. Impacts in the region outside of Los Angeles County are due primarily to the re-spending of wages by commuters who work for export producers and importers in Los Angeles County and firms in these areas that supply goods and services to manufacturers and distributors in Los Angeles County. The distribution of impacts in the region is shown at right.

PORT USERS

TOP 10 EXPORT MANUFACTURING JOBS	
Textile Mill Prod.	3,581
Food & Kindred Prod.	2,799
Machinery, Except Elec.	2,457
Transportation Equipment	2,060
Electric & Electrical Equip.	1,150
Fabricated Metal Prod.	1,128
Chemicals & Allied Prod.	1,126
Leather & Leather Prod.	994
Fruits & Nuts	981
Rubber & Misc. Plastics	940

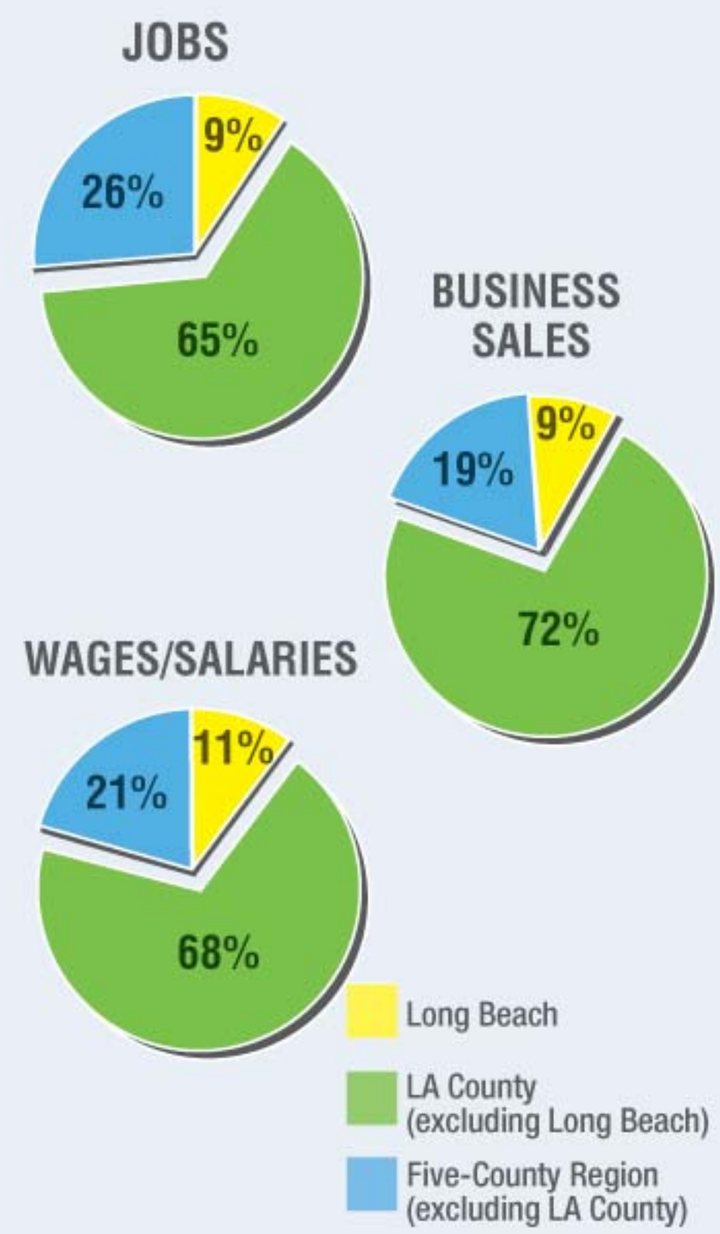
RETAIL SALES

The full-time equivalent retail jobs supported by imported goods to the region = 10% of all retail jobs in the LA County.

AREA IMPACTS

AREA	JOBS	WAGES & SALARIES	BUSINESS SALES
L.B.	29,784	$1.5	$ 4.0
L.A. County	202,209	$9.8	$33.8
Region	83,618	$3.0	$ 9.0

Dollars in billions



Economic Impact Five-County Region

THE PORT OF LONG BEACH

SUMMARY

The impact of port operations on the five-county metropolitan area (region) is substantial. More than 315,000 jobs are supported, directly and indirectly, by port operations, representing roughly one of every 29 jobs in the region. Similarly, the $14.3 billion in wages and salaries supported by port activity represent slightly more than 4% of all wages and salaries paid within the region. The charts at right break down these effects by major activity.

The source of these impacts is the billions of dollars spent annually by transportation companies, importers and exporters responding to consumer demand and the needs of other businesses. Some of the highlights of this spending are listed below:

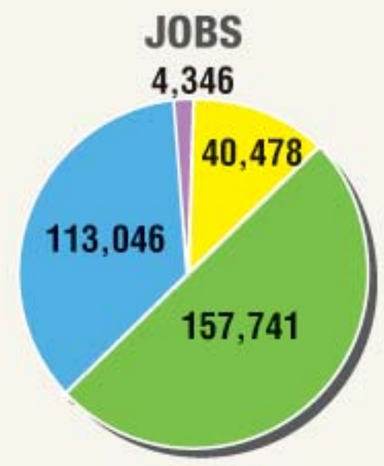
- Nearly $3.3 billion a year is spent in the region for port-industry services. These services are purchased primarily by foreign and domestic shippers and steamship companies. All of this direct spending in the region occurs in Los Angeles County.

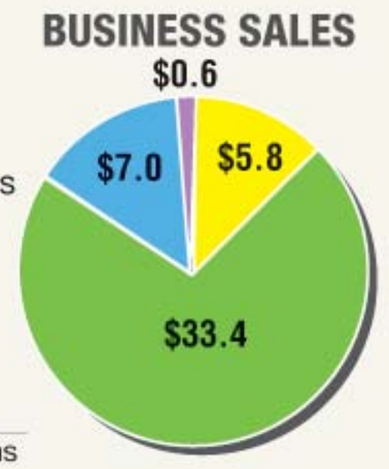
- Foreign consumers purchase about $5.4 billion annually in goods manufactured in the region before being shipped through the port.

- Over $10 billion annually is spent on wholesale distribution services in the region for goods imported through the port.

- Retailers in the region spend about $7 billion annually selling household goods and other finished products imported through the port.

IMPACT SUMMARY	FIVE-COUNTY (Impact 2001)
Jobs	315,611
Wages/Salaries	$14.3 billion
Business Sales	$46.8 billion





Port Industries
Port User
Retail Sales
Others

Dollars in billions

AN IN-DEPTH LOOK

The information below, and on the reverse side of this card, elaborates on this spending and its economic impacts on the region.

PORT INDUSTRY - These effects reflect the economic activity of businesses involved in moving and handling cargo. Major categories of these businesses are listed in the table to the right, along with what was spent for their services in 2001. Some of the more important activities included terminal operations (including longshore labor services), inland transportation and vessel services. Altogether, nearly $3.3 billion was spent for these services in the region, over 70% of which was associated with container cargo. Each container handled at the port generated about $950 in regional business revenues.

Expenditures for port-industry services, all of which occurred in Los Angeles County, in turn triggered spending by these businesses and their suppliers, and by the employees of these firms, amounting to about $2.5 billion regionally. This combination of direct and spin-off spending provided more than 40,000 jobs and nearly $2 billion in wages and salaries.

PORT INDUSTRY - DIRECT SALES	
Terminal Operations	$ 771.4
Trucking	$ 562.3
Vessel Fueling	$ 459.8
Rail Services	$ 362.2
Cargo Packing	$ 286.2
Freight Forwarding	$ 220.2
Storage	$ 128.7
Misc. Construction	$ 110.5
Ship Repair	$ 101.7
Banking/Insurance	$ 71.0
Other	$ 220.7
Dollars in millions Total	$3,294.8

Economic Impact Five-County Region

PORT USERS – As a group, port users are companies (or individuals) that use port facilities for importing or exporting cargo, but are not located within the port. Examples include manufacturing companies that export to foreign markets and wholesalers that distribute imported goods. Within the region, the impacts from the activities of these companies account for at least one-half of the total effects (jobs, wages, sales, etc.) for the region.

The total value of regional exports handled by the Port of Long Beach is $5.7 billion. By value, commodities like cotton fabric, vehicle parts, aircraft parts and computer equipment are among the most important manufactured goods being exported from the region. Non-manufactured goods like beef and scrap steel are also important exports. Total industry sales for goods manufactured in the region and exported through the port were roughly $5.4 billion in 2001. The multiplier effect of this production (i.e. the re-spending by businesses and their employees) added another $4 billion in expenditures. This aggregate spending created over 49,000 jobs, paying more than $2.5 billion in wages, within the five-county metropolitan area. The table to the right lists the top manufacturing sectors in the region that produce for export and the jobs directly connected with that production.

The total value of goods imported to the region via the port in 2001 was approximately $32.3 billion. The measurable effects from these imports stem from their distribution. It is estimated that port users spent over $10.4 billion on wholesale distribution services in the region. Another $6.9 billion was created in spin-off spending by wholesale distributors. Total expenditures provided for more than 97,200 jobs and $6.4 billion in wages and salaries in the region. Additionally, close to $2 billion in crude oil was imported to the region in 2001. Distributing and refining imported oil supports over 11,400 jobs paying about $759 million in wages and salaries.

RETAIL SALES – The retail sale of imported goods provided over 110,000 jobs within the region, or about 36% of all port-dependent and port-related regional jobs. These jobs, and the related impacts on wages and sales, reflect the expenditures needed for companies to sell imported finished goods moving through the Port of Long Beach.

OTHER IMPACTS – Estimates for the impact of port construction and visitors to the Harbor District are included in the total impacts for the port. The combined regional impacts for these two categories included nearly 4,400 jobs and over $200 million in wages and salaries. In 2001, construction expenditures for the port exceeded $260 million, supporting over 3,400 jobs and generating roughly $475 million in direct, indirect and induced business revenues within the region. Visitors to the Queen Mary and shops and restaurants within the Harbor District supported nearly 1,000 jobs within the region. The direct expenditures in the Harbor District for these visitor-serving activities were estimated to be roughly $47 million in 2001.

IMPACTS BY AREA – The port's impacts in the region are concentrated in Los Angeles County. Impacts in the region outside of the county are due primarily to the re-spending of wages by commuters who work for export producers and importers in the county and firms in these areas that supply goods and services to manufacturers and distributors in Los Angeles County. The distribution of impacts in the region is shown at right.

PORT USERS

TOP 10 EXPORT MANUFACTURING JOBS	
Textile Mill Prod.	3,839
Food & Kindred Prod.	3,007
Machinery, Except Elec.	2,610
Transportation Equipment	2,174
Fabricated Metal Prod.	1,248
Electric & Electrical Equip.	1,230
Chemicals & Allied Prod.	1,192
Leather & Leather Prod.	1,004
Rubber & Misc. Plastics	998
Fruits & Nuts	984

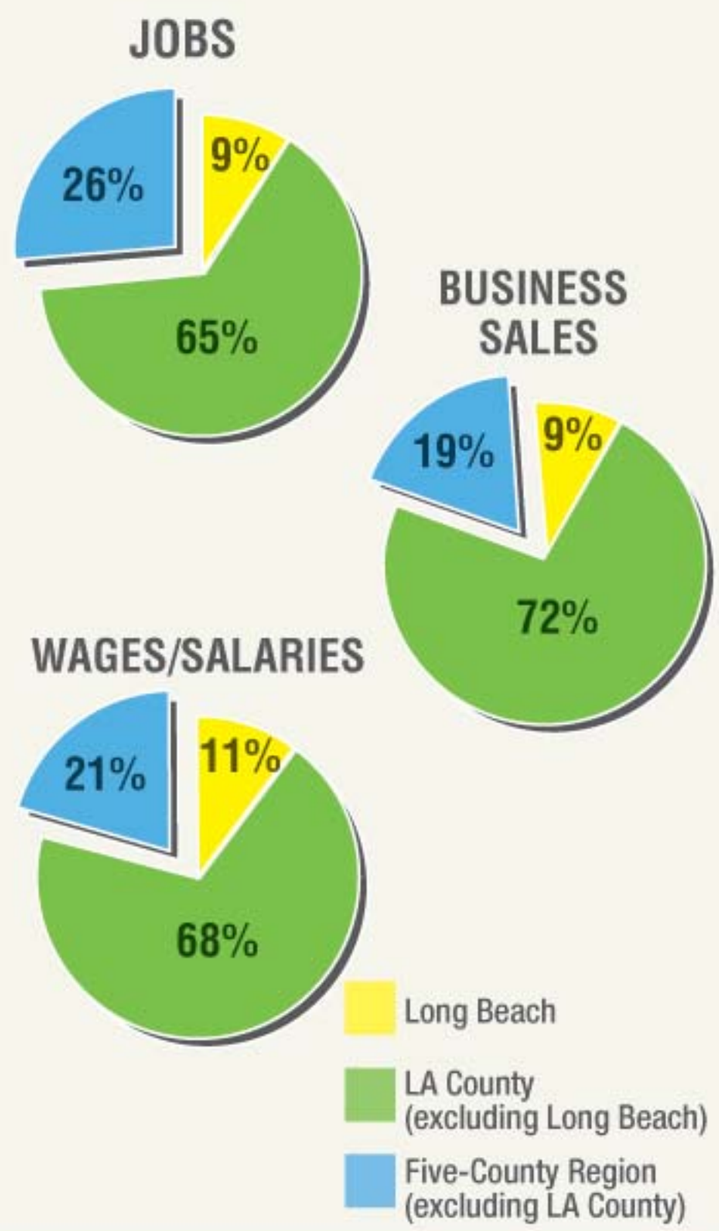
RETAIL SALES

The full-time equivalent retail jobs supported by imported goods to the region = 10% of all retail jobs in the region.

AREA IMPACTS

AREA	JOBS	WAGES & SALARIES	BUSINESS SALES
L.B.	29,784	$1.5	$ 4.0
L.A. County	202,209	$9.8	$33.8
Region	83,618	$3.0	$ 9.0

Dollars in billions



Economic Impact California

THE PORT OF LONG BEACH

SUMMARY

The impact of port operations on California (state) is concentrated in the five-county, Southern California region. Approximately 371,000 jobs in the state are supported, directly and indirectly, by port operations. About 85% of these jobs are within the Southern California region. Similarly, nearly 88% of the $16.3 billion in wages and salaries supported by port activity is earned within Southern California. The charts at right break down these effects by major activity.

The source of these impacts is the billions of dollars spent annually by transportation companies, importers and exporters responding to consumer demand and the needs of other businesses. Some of the highlights of this spending are listed below:

- Nearly $3.3 billion a year is spent in the state for port-industry services. These services are purchased primarily by foreign and domestic shippers and steamship companies. All of this spending occurs in Los Angeles County.

- Foreign consumers purchase about $6.5 billion annually in goods manufactured in the state that are shipped from the port.

- Over $11 billion annually is spent on wholesale distribution services in the state for goods imported through the port.

- Retailers spend nearly $8 billion selling household goods and other finished products imported through the port.

AN IN-DEPTH LOOK

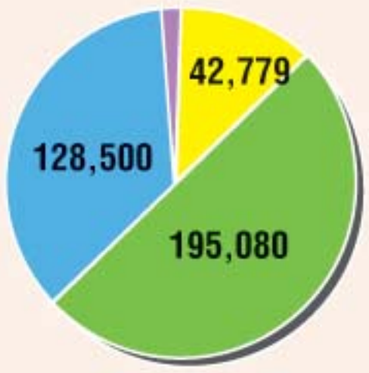
The information below, and on the reverse side of this card, elaborates on this spending and its economic impacts on the state.

PORT INDUSTRY- These effects reflect the economic activity of businesses involved in moving and handling cargo. Major categories of these businesses are listed in the table to the right along with what was spent for their services in 2001. Some of the more important activities included terminal operations (including longshore labor services), inland transportation and vessel services. Altogether nearly $3.3 billion was spent for these services in the state, over 70% of which was associated with container cargo. Each container handled at the port generated about $950 in state business revenues.

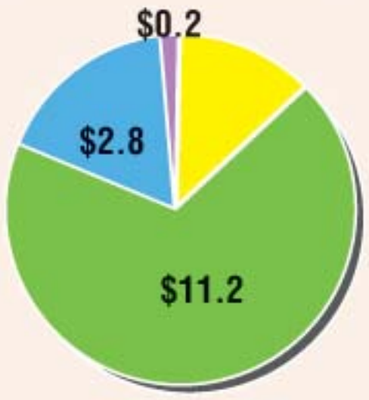
Expenditures for port-industry services, in turn, triggered spending by these businesses and their suppliers, and by the employees of these firms, amounting to about $2.8 billion throughout the state. This combination of direct and spin-off spending provided for nearly 43,000 jobs and over $2 billion in wages and salaries.

IMPACT SUMMARY	CA (Impact 2001)
Jobs	371,000
Wages/Salaries	$16.3 billion
Business Sales	$53.0 billion

JOBS



WAGES/SALARIES



BUSINESS SALES

Port Industries
Port User
Retail Sales
Others

Dollars in billions

PORT INDUSTRY - DIRECT SALES	
Terminal Operations	$ 771.4
Trucking	$ 562.3
Vessel Fueling	$ 459.8
Rail Services	$ 362.2
Cargo Packing	$ 286.2
Freight Forwarding	$ 220.2
Storage	$ 128.7
Misc. Construction	$ 110.5
Ship Repair	$ 101.7
Banking/Insurance	$ 74.2
Other	$ 221.2
Dollars in millions Total	$3,298.6

PORT USERS – As a group, port users are companies (or individuals) that use port facilities for importing or exporting cargo, but are not located within the port. Examples include manufacturing companies that export to foreign markets and wholesalers who distribute imported goods. The impacts from the activities of these companies account for at least one-half of the total effects (jobs, wages, sales, etc.) for the state.

The total value of state exports handled by the Port of Long Beach is about $6.8 billion. By value, commodities like cotton fabric, vehicle parts, aircraft parts and computer equipment are among the most important manufactured goods being exported from the state. Non-manufactured goods like raw cotton, beef and scrap steel are also important exports. Companies in the state spent almost $6.5 billion producing for export markets. The multiplier effect of this production (i.e. the re-spending by businesses and their employees) added another $5.2 billion in state expenditures. This aggregate spending created over 66,000 jobs, paying nearly $3.2 billion in wages within the state. The table to the right lists the top manufacturing sectors in the state that produce for export and the jobs directly connected with that production.

The total value of goods imported to the state via the port in 2001 was $35.1 billion. The measurable effects from these imports stem from their distribution. It is estimated that port users spent about $11.4 billion on wholesale distribution services in the state. Another $8.3 billion was created in spin-off spending. Total expenditures provided for more than 116,000 jobs and $7.3 billion in wages and salaries in the state. Additionally, close to $2 billion in crude oil was imported to the state in 2001. Distributing and refining imported oil supports about 13,000 jobs paying about $833 million in wages and salaries.

RETAIL SALES – The retail sale of imported goods provides nearly 130,000 jobs within the state, or about 35% of all port-dependent and port-related state jobs. These jobs, and the related impacts on wages and sales, reflect the expenditures needed for companies to sell imported finished goods moving through the Port of Long Beach.

OTHER IMPACTS – Estimates for the impact of port construction and visitors to the Harbor District are included in the total impacts for the port. The combined state impacts for these two categories include over 4,600 jobs and more than $210 million in wages and salaries. In 2001, construction expenditures for the port exceeded $260 million, supporting about 3,700 jobs and generating roughly $511 million in direct, indirect and induced business revenues within the state. Visitors to the Queen Mary, shops and restaurants within the Harbor District support nearly 1,000 jobs within the state. The direct expenditures from visitor-serving uses in the Harbor District were estimated to be roughly $47 million in 2001. These impact totals are slightly higher for the state than the local area because of purchases made by local port-related businesses from California firms outside of the Southern California region.

IMPACTS BY AREA – Although the port generates more impacts in the State of California than in any other state, the majority of impacts actually occur beyond the state boundaries. Most of the job impacts outside of California are connected with the distribution and sale of imports. In terms of business revenues, however, export manufacturing emerges as a major beneficiary. The comparison of impacts of California to the rest of the nation is shown at right.

PORT USERS

TOP 10 EXPORT MANUFACTURING JOBS	
Textile Mill Prod.	9,159
Food & Kindred Prod.	3,351
Machinery, Except Elec.	2,948
Transportation Equipment	2,356
Fabricated Metal Prod.	1,448
Fruits & Nuts	1,363
Chemicals & Allied Prod.	1,361
Electric & Electrical Equip.	1,347
Rubber & Misc. Plastics	1,174
Leather & Leather Prod.	1,101

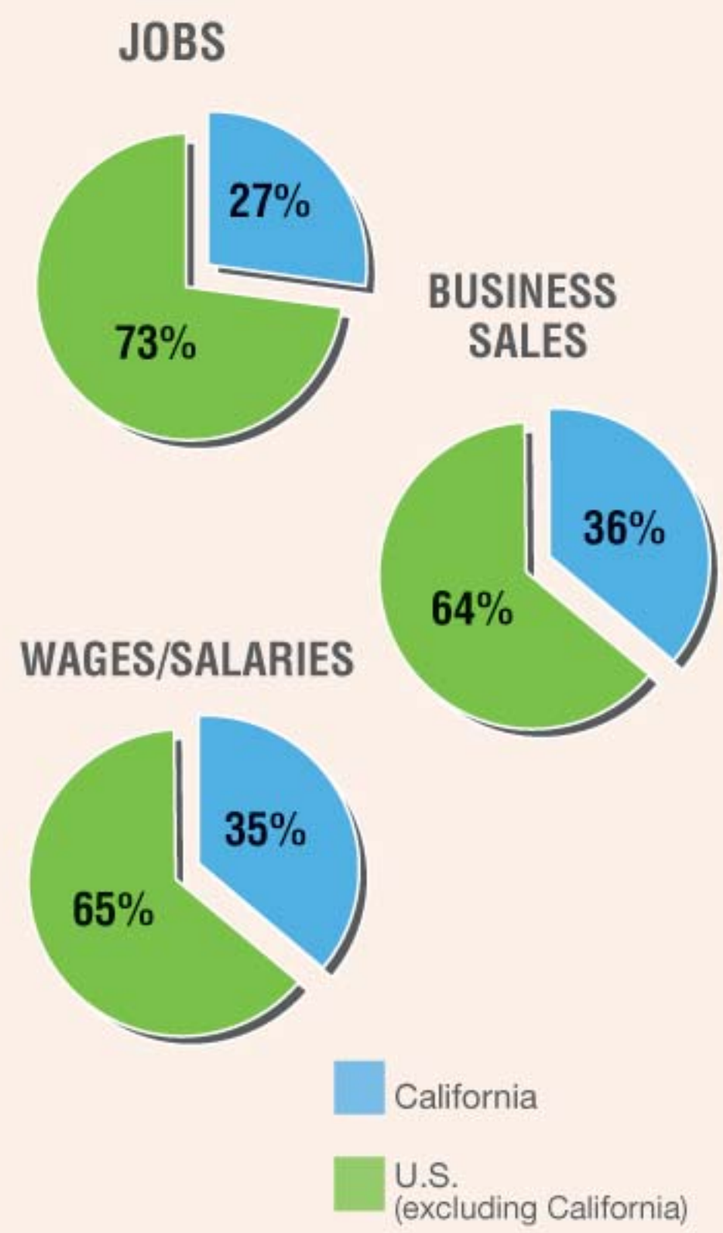
RETAIL SALES

The full-time equivalent retail jobs supported by imported goods to the region = 5% of all retail jobs in California.

AREA IMPACTS

AREA	JOBS	WAGES & SALARIES	BUSINESS SALES
California	371,000	$16.3	$53.0
U.S.	1,028,997	$30.6	$93.6

Dollars in billions



Economic Impact United States

THE PORT OF LONG BEACH

SUMMARY

The impact of port operations on the nation is considerable. More port-related impacts occur outside California than within the state. About 1.4 million jobs in the U.S. are supported, directly and indirectly, by port operations. Only 370,000 of these jobs are located in California. Similarly, about two-thirds of the $47 billion in total wages and salaries supported by port activity is earned beyond the state. The reason for this is that most of the port's users are located in other parts of the country. The charts at right break down these effects by major activity.

The source of these impacts is the billions of dollars spent annually by transportation companies, importers and exporters responding to consumer demand and the needs of other businesses. Some of the highlights of this spending are listed below:

- Nearly $3.9 billion a year is spent in the United States for port-industry services. These services are purchased primarily by foreign and domestic shippers and steamship companies. Most of these expenditures occur in Los Angeles County.

- Foreign consumers purchase almost $18 billion annually in American-made goods shipped through the port.

- More than $32 billion annually is spent on wholesale distribution services in the U.S. for goods imported through the port.

- Retailers in the country spend more than $25 billion annually selling household goods and other finished products imported through the port.

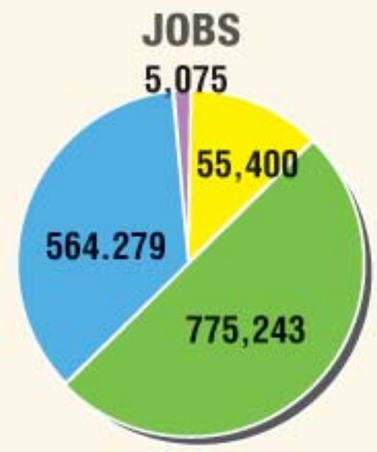
AN IN-DEPTH LOOK

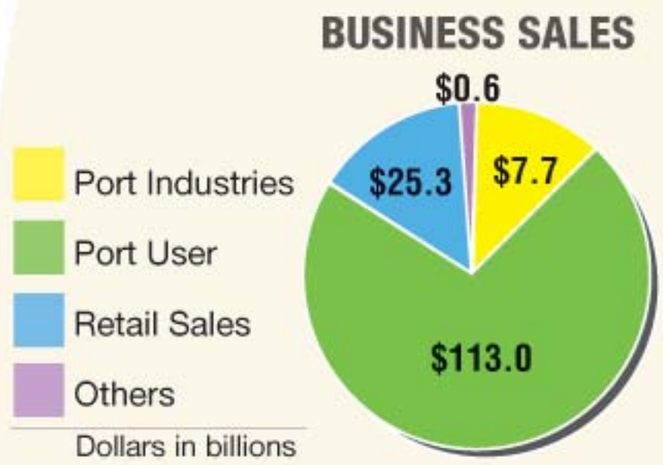
The information below, and on the reverse side of this card, elaborates on this spending and its economic impacts on the nation.

PORT INDUSTRY - These effects reflect the economic activity of businesses involved in moving and handling cargo. Major categories of these businesses are listed in the table to the right along with what was spent for their services in 2001. Some of the more important activities included terminal operations (including longshore labor services), inland transportation and vessel services. Altogether, nearly $3.9 billion was spent for these services domestically, about 74% of which was associated with container cargo. Each container handled at the port generated nearly $1,200 nationally in business revenues.

Expenditures for port-industry services, most of which occurred in California, in turn triggered additional spending by these businesses and their suppliers, and by the employees of these firms, amounting to about $3.8 billion. This combination of direct and spin-off spending provided for more than 55,000 jobs and about $2.5 billion in wages and salaries.

IMPACT SUMMARY	U.S. (Impact 2001)
Jobs	1,399,997
Wages/Salaries	$46.9 billion
Business Sales	$146.5 billion





PORT INDUSTRY - DIRECT SALES	
Rail Services	$ 902.7
Terminal Operations	$ 771.4
Trucking	$ 604.5
Vessel Fueling	$ 459.8
Cargo Packing	$ 286.2
Freight Forwarding	$ 220.2
Storage	$ 128.7
Misc. Construction	$ 110.5
Ship Repair	$ 101.7
Banking/Insurance	$ 74.3
Other	$ 221.2
Dollars in millions Total	$3,881.4

Economic Impact United States

PORT USERS – As a group, port users are companies (or individuals) that use port facilities for importing or exporting cargo, but are not located within the port. Examples include manufacturing companies that export to foreign markets and wholesalers who distribute imported goods. The impacts from the activities of these companies account for at least one-half of the total effects (jobs, wages, sales, etc.) for the country.

Exports handled by the Port of Long Beach totaled about $18.6 billion. By value, commodities like cotton fabric, vehicle parts, petrochemical resins, aircraft parts and computer equipment are among the most important manufactured goods being exported from the country. Non-manufactured goods like raw cotton, beef and animal hides are also important exports. Total industry sales for goods manufactured in the U.S. and exported through the port were almost $17.8 billion in 2001. The multiplier effect of this production (i.e. the re-spending by businesses and their employees) added another $22.8 billion in expenditures throughout the nation. This aggregate spending created 255,000 jobs, paying more than $10.7 billion in wages and salaries. The table at right lists the top manufacturing sectors in the U.S. that produce for export and the jobs directly connected with that production.

The total value of goods imported to the U.S. via the port in 2001 was about $97.7 billion. The measurable effects from these imports stem from their distribution. It is estimated that port users spent about $32.4 billion on wholesale distribution services in the country. Another $32.7 billion was created in spin-off spending by wholesale distributors. Total expenditures provided for more than 505,000 jobs and $23.4 billion in wages and salaries nationwide. Additionally, close to $2 billion in crude oil was imported to the U.S. in 2001. Distributing and refining imported oil supports about 14,600 jobs, paying about $887 million in wages and salaries. About 90% of these crude oil impacts are confined to California.

RETAIL SALES – The retail sale of imported goods supports more than 564,000 jobs within the U.S., or about 40% of all port-dependent and port-related national jobs. These jobs, and the related impacts on wages and sales, reflect the expenditures needed for companies to sell imported finished goods moving through the Port of Long Beach. In terms of jobs, this is the largest port-related impact category. Direct retail impacts lag export producers and import distributors with respect to income and business revenues.

OTHER IMPACTS – The remaining port impacts are associated with port construction and visitor-serving activities. At the national level, they represent less than one percent of the impacts.

IMPACTS BY AREA – Although the port generates more impacts in the State of California than in any other state, the majority of impacts actually occur beyond the state boundaries. Most of the job impacts outside of California are connected with the distribution and sale of imports. In terms of business revenues, however, export manufacturing emerges as a major beneficiary. The comparison of impacts for California to the rest of the nation is shown at right.

PORT USERS

TOP 10 EXPORT MANUFACTURING JOBS	
Textile Mill Prod.	14,942
Machinery, Except Elec.	13,116
Food & Kindred Prod.	7,913
Chemicals & Allied Prod.	6,938
Transportation Equipment	5,684
Electric & Electrical Equip.	4,938
Fabricated Metal Prod.	4,197
Rubber & Misc. Plastics	4,187
Instruments & Related Prod.	2,793
Leather & Leather Prod.	2,496

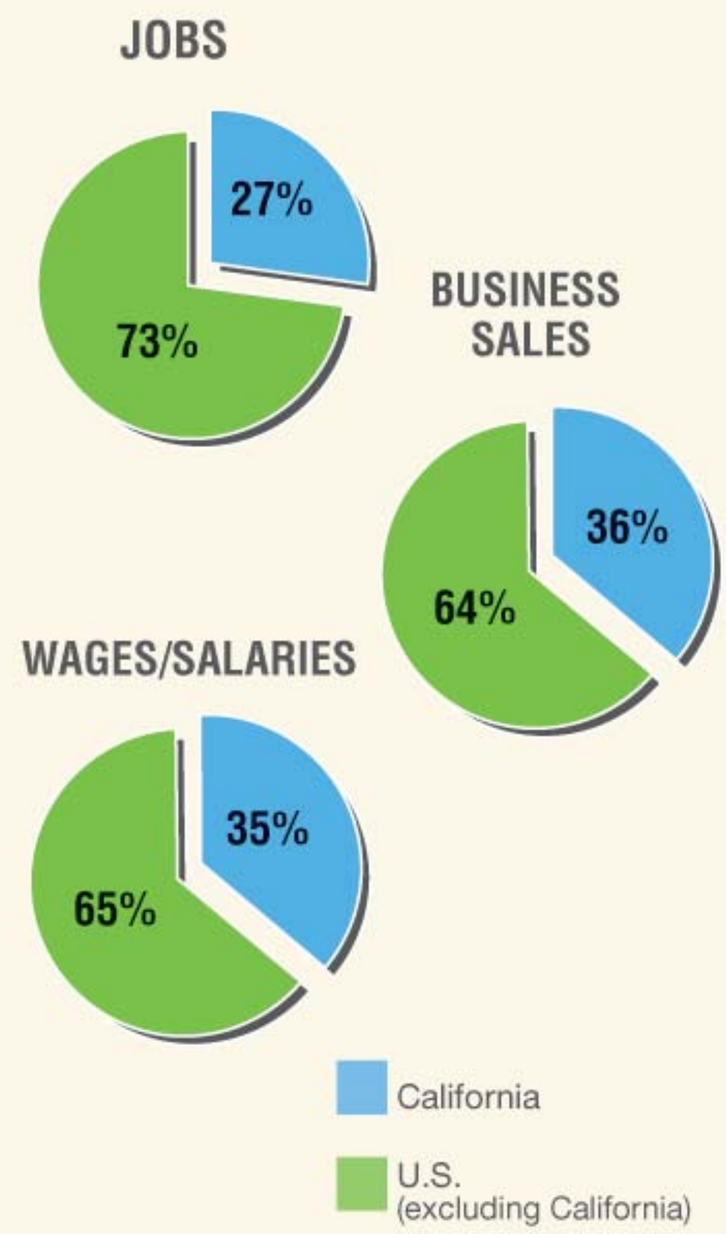
RETAIL SALES

The full-time equivalent retail jobs supported by imported goods to the region = 2% of all retail jobs in the U.S.

AREA IMPACTS

AREA	JOBS	WAGES & SALARIES	BUSINESS SALES
California	371,000	$16.3	$53.0
U.S.	1,028,997	$30.6	$93.6

Dollars in billions



Technical Support Information
Economic Impact Analysis Program

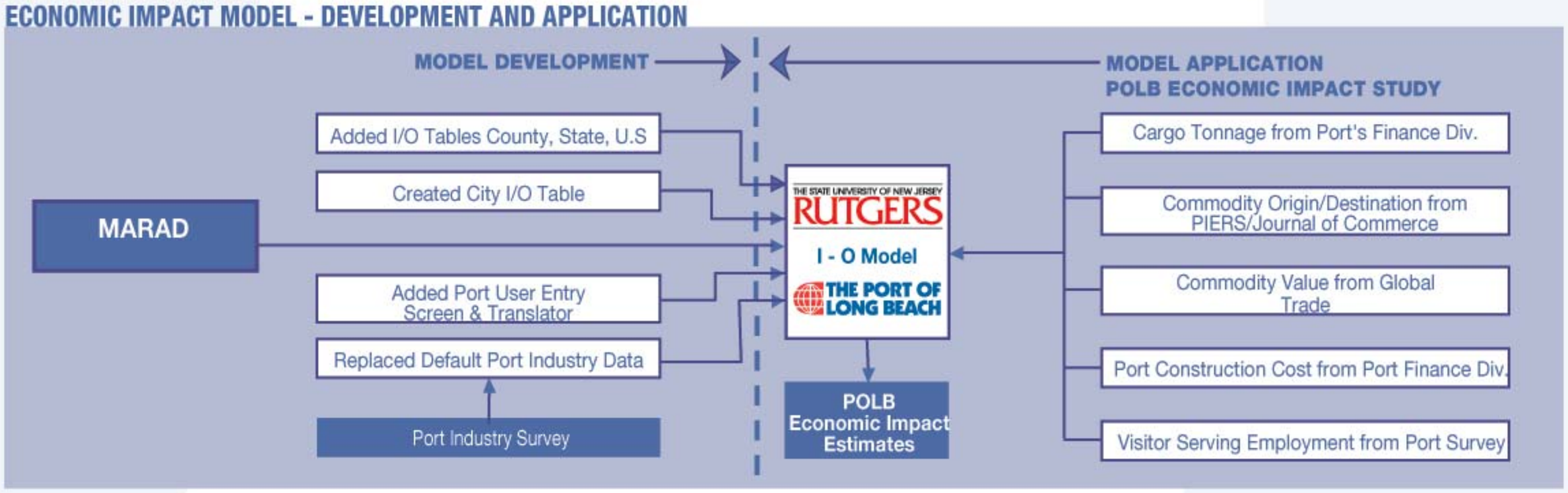
THE PORT OF LONG BEACH

MODEL DEVELOPMENT AND APPLICATION

There were two primary phases to the calculation of impact numbers contained in this folder. The first phase involved a complete update of the port's economic impact modeling system, which was performed by Rutgers University and based on specifications outlined by port staff. The second phase involved port staff using the new system to assess the economic effects of port operations. The figure below summarizes the major components of both efforts.

The latest MARAD impact model provided the platform for the port's model. The modifications to the MARAD model made by Rutgers are listed on the "model development" side of the figure above and explained in the following text. The model data required to do this study, listed on the "model application" side of the figure, are also described below.

ECONOMIC IMPACT MODEL - DEVELOPMENT AND APPLICATION



NEW MODEL FEATURES

A number of important improvements that have been made to the port's economic impact model enhance accuracy and capabilities. The most significant changes are identified below:

- **Updated I-O Tables.** The I-O tables are used to calculate the indirect and induced effects by tracing the purchases and sales of various industries. The updated tables contain the latest (1998) information on industrial transactions provided by the U.S. Bureau of Labor Statistics. They replaced older tables for Los Angeles County, the five-county region, California and the United States.

- **A New City of Long Beach I-O Table.** This is a new table added by Rutgers University to improve the estimation of port impacts on the city.

- **Better Commodity Detail.** The new model analyzes the impacts of more than 1,000 commodities handled at the port based on codes defined by the U.S. Department of Commerce. The old model had fewer commodity categories. An important result of this improvement is that specific imported consumer goods were isolated so that their effects on the economy's retail sector could be estimated.

- **More Localized Port Industry Data.** More than 550 local port industry firms were surveyed by Martin Associates, a subcontractor for the study, to determine how much shippers and steamship companies spend to move and handle port cargo. This data replaced the MARAD model's default data, which was based on national averages.

MODEL DATA INPUTS

The list below identifies the major sources of data for the model:

- **Port of Long Beach Data.** Data on cargo throughput was obtained from port records and included the number of containers and automobiles, metric tons of dry bulk, liquid bulk and neo-break-bulk cargo.

- **U.S. Commerce Department/MARAD.** This is the source of the port's commodity data. Import and export tonnage and value were collected for more than 1,000 commodities. These data represented part of the inputs for calculating the port user impacts.

- **Port Import/Export Reporting Service (PIERS).** This is a proprietary database to which the port subscribes that provides information on the origin and destination of exports and imports. PIERS prepared a special computer run for the port that organized cargo data by impact area. These data were also used to calculate port-user impacts.

- **City of Long Beach.** The City provided detailed construction cost information through its computerized accounting system used to estimate construction-related port impacts.

- **Port of Long Beach Job Survey.** The port conducted a telephone survey of hotel, retail and restaurant uses in the port to obtain employment data to assess the effects of visitor-serving uses.

Frequently asked questions

Over the years, a number of questions have been raised about the way trade impacts are measured and what they really mean. Here are some common questions and how we have responded to them:

1. Aren't you counting the same dockworkers and truck drivers that the Port of Los Angeles counts in its analysis? While it is true that a driver or crane operator may work in both ports in a given year, we are not over-counting the number of workers required to handle the cargo in the Port of Long Beach. Our computer model estimates these port industry jobs based on cargo volume. There is, however, a legitimate, related issue regarding double-counting impacts. The problem can happen when an activity is analyzed in terms of its component parts, and the impact estimate is derived from the sum of the parts. In this case, the direct impacts from distributing and selling imports overlap the spin-off wholesale and retail sector impacts from the other activities analyzed (port industry, export manufacturers, etc.). The port's impact estimates are adjusted for this double counting.

2. Why are some of the economic impact numbers that other ports calculate significantly different from yours? Since the impacts stem from the cargo handled by the port, the difference simply could be due to a different mix and/or volume of cargo. If the other port is similar in terms of the cargo handled, there are several other possibilities. First, the other port may be examining only one or a few types of impacts. A common practice for some ports is to assess only the port-industry impacts. Second, the other port may not be calculating the spin-off effects of direct impacts. They may not have the resources or expertise to use an I-O model. Finally, the other port may be calculating impacts for a larger or smaller geographic area. When comparing impact numbers, it is always advisable to review the background material.

3. Are there any other port impacts you haven't counted? Yes, there is basically one type of port user activity that we have not fully explored. Except for crude oil processing, we have not quantified the impacts of imported raw materials, semi-finished goods or component parts for domestic assembly. The difficulty with doing this kind of analysis is that we do not usually know exactly how these imports are being used. For example, semi-finished steel (sheets, coils, etc.) is used locally in construction and for making many different products. Quantifying such impacts would involve tracking these imports so that we could identify the appropriate industries to analyze.

4. Will economic impacts keep increasing with port growth? Yes, but the increase will probably not be proportional to cargo growth. This has been the case for as long as the port has been doing these kinds of studies. It simply takes fewer people to deliver a product or service than before. Productivity gains have been particularly impressive in the transportation sector. The expectation is that even more productivity gains will occur in the future.

5. Would all of the jobs attributable to the port be lost if the port disappears? This is obviously a hypothetical question, but the answer helps explain an important concept about port-dependent versus port-related jobs. Activities involving handling port cargo and manufacturing products for foreign markets clearly depend on the port. On the other hand, most port-related retailers selling foreign goods will presumably remain in business, with or without the port, if domestic consumption remains the same. To a lesser degree, the same is true for the wholesale distribution of imports. The difference is that some local wholesale businesses would not exist without the port because they are linked to the area's logistics activities that serve large parts of the nation. The question of what jobs are, or are not, dependent on the port is a complicated one that has defied quantification to this point. In concept, we can say that many of the retail jobs, and some of the wholesale distribution jobs, are port-related, but perhaps not port-dependent.

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