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The Regional economic impact of Cleveland's Maritime Operation: An Update

Ziona Austrian

Cleveland State University, z.austrian@csuohio.edu


Charles Post

Cleveland State University, c.post@csuohio.edu

Adina Swirski Wolf

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MAXINE GOODMAN LEVIN
COLLEGE OF URBAN AFFAIRS

Cleveland State University

Prepared for:
**THE CLEVELAND-CUYAHOGA COUNTY
PORT AUTHORITY**

Prepared by:
Dr. Ziona Austrian
Charlie Post
Adina Wolf

November 3, 1999

**THE REGIONAL
ECONOMIC
IMPACT OF
THE PORT OF
CLEVELAND'S
MARITIME
OPERATION:
AN UPDATE**

**Center for
Economic
Development**

2121 Euclid Avenue Cleveland, Ohio 44115
<http://urban.csuohio.edu>



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Economic Development Program
Dr. Ziona Austrian
Charlie Post
Adina Wolf

The Urban Center
The Maxine Goodman Levin College of Urban Affairs
Cleveland State University

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EXECUTIVE SUMMARY

INTRODUCTION

This report describes the economic impact of the Port of Cleveland on the Northeast Ohio economy during the year 1998. The Port includes the facilities of the Cleveland-Cuyahoga County Port Authority and nearby private waterborne cargo handling facilities. This report updates an earlier study released in March 1997. The earlier report, *Measuring the Regional Economic Impact of the Port of Cleveland's Maritime Operation*, provides a detailed description of the Port's history and the methodology used to estimate its economic impact. This report only includes a discussion on the Port's economic impacts, which are measured in terms of employment, spending, personal income, and tax revenues.

MAJOR FINDINGS

ECONOMIC IMPACT OF THE PORT

- In 1998, the Cleveland port industry generated a total of 4,813 jobs in Northeast Ohio, 6.5 percent more than in 1995 and almost one percent more than in 1996. 2,615 of these jobs are attributed to direct impacts and 2,198 are created by indirect and induced impacts.

The transportation and public utility industries accounted for 76 percent of these direct employment impacts, with shipping company headquarters and trucking and warehousing constituting the largest sources.

Service and retail jobs accounted for 57 percent of the indirect and induced impact.

- The Cleveland port industry generated \$440.9 million of goods and services as a result of maritime operations of the Port of Cleveland in 1998. Of this spending, \$272.9 million was due to the direct impact and \$168.0 million reflected the indirect and induced impacts.

The transportation and public utilities sector was the largest sector impacted by both direct and indirect spending, accounting for 85 percent and 59 percent respectively.

- The Cleveland port industry generated \$156.0 million of personal income in Northeast Ohio in 1998, with \$98.1 million due to the direct impact and \$57.9 million as a result of the indirect and induced impacts.

Again, the direct impacts were concentrated in the transportation and public utilities industries (82 percent). While indirect and induced impacts were more evenly distributed, transportation and public utilities industries still accounted for 56 percent, followed by services with 18 percent.

TAX IMPACT

- Maritime operations at the Port resulted in additional tax revenues of \$65.9 million. These include \$9.7 million in local taxes, \$11.3 million in state taxes, and \$44.9 million in federal taxes.

CONCLUSIONS

The estimates of economic impact indicate that the maritime operations of the Cleveland-Cuyahoga Port Authority and the various private shipping docks located nearby make a significant ongoing contribution to the regional economy.

STATEMENT OF PURPOSE

This report describes the economic impact of the Port of Cleveland on the Northeast Ohio economy. More specifically, the report discusses the economic impact of the Port's maritime operation during the year 1998. The Port includes the facilities of the Cleveland-Cuyahoga County Port Authority and nearby private waterborne cargo handling facilities.

This report updates an earlier study released in March 1997 that measured the Port's economic impact in 1996. The earlier report, *Measuring the Regional Economic Impact of the Port of Cleveland's Maritime Operation*, provides a detailed description of the Port's history and the methodology used to estimate its economic impact. This report only includes a discussion on the Port's economic impacts, which are measured in terms of employment, spending, personal income, and tax revenues.

This study, as well as the earlier one, was conducted for the Cleveland-Cuyahoga County Port Authority by the Urban Center in the Levin College of Urban Affairs, Cleveland State University. The Urban Center's researchers have conducted economic impact studies for several institutions in Northeast Ohio as well as for a statewide technology and economic development organization and tax incentive programs.

ECONOMIC IMPACTS

Total economic impact is divided into direct impact and indirect and induced impact.¹ Total impacts are measured in terms of employment, spending, jobs, and taxes. The main input used in the model to estimate the economic impacts is number of tons shipped through the port by commodity (Table 1).

Table 1: Number of Shipped Tons by Industry

Commodity	1995 Tonnage	1998 Tonnage
Steel	739,259	1,172,792
General	6,294	10,000
Containers	1,563	176
Bulk: International	32,198	0
Bulk: Interlake	14,050,985	15,750,024
Number of Shipping Companies Employees	714	726

EMPLOYMENT IMPACT

The Cleveland port industry generated a total of 4,813 jobs in Northeast Ohio in 1998, 6.5 percent more than the port industry's job impact in 1995 and almost one percent higher than in 1996. Of the total job impact, 2,615 jobs reflected direct impact, while the other 2,198 jobs were created by the indirect and induced impacts.

¹ Direct impacts are defined as the first-round impacts of the waterborne cargo-handling industry, including spending and jobs created by companies directly related to that industry. Indirect impacts include the spending and jobs created by companies that supply the direct activities, creating second-round activities, and the spending and jobs created by companies that supply the second-round activities, and so on. Induced impacts include the spending and jobs created by additional households' earnings resulting from the activities created by the direct and indirect impact.

Table 2 shows the employment direct and indirect impacts for all major industries and selected detailed industries. The direct employment impacts were primarily concentrated in the transportation and public utilities industries, which accounted for over three-fourths (76 percent) of all direct employment impacts. Shipping company headquarters employment constituted the largest source of direct employment (799 jobs), followed closely by trucking and warehousing (713 jobs). The only other industry that benefited significantly from the port in terms of jobs is business services (396 jobs), which accounted for 15 percent of the direct job impact.

The indirect and induced effects, as expected, are more evenly distributed among the industries. Service and retail jobs accounted for more than half (57 percent) of the indirect and induced jobs created due to maritime activities in the port industry.

Of the total employment impact of 4,813 jobs, the transportation and public utilities industry accounted for 45 percent, followed by services, which accounted for one-fourth of the total employment impact. The other two large sectors that benefited from port activities, although mostly through indirect and induced effects, are retail trade and finance, insurance, and real estate.

Table 2: Employment Impact of the Port of Cleveland on Northeast Ohio, 1998

(Number of Jobs)	Indirect &		
	Direct	Induced	Impact
<u>Transportation & Public Utilities</u>	1,995	155	2,150
Railroad transportation	256	5	261
Trucking & warehousing	713	47	760
Water transportation	166	21	187
Shipping company headquarters	799	0	799
Transportation services	57	28	86
<u>Agriculture & Mining</u>	0	10	10
<u>Construction</u>	0	155	155
Special trade contractors	0	109	109
<u>Manufacturing</u>	26	151	177
Printing & publishing	0	44	44
Transportation equipment	17	12	29
<u>Wholesale</u>	7	76	83
Wholesale: durable goods	0	25	25
Wholesale: nondurable goods	7	50	58
<u>Retail Trade</u>	28	535	563
General merchandise stores	2	66	67
Food stores	7	58	65
Auto dealers & service stations	1	42	43
Eating & drinking places	15	252	266
Miscellaneous retail	3	84	88
<u>Finance, Insurance & Real Estate</u>	12	353	365
Banking	6	70	76
Insurance carriers	5	30	34
Insurance agents & carriers	1	87	88
Real estate	0	137	137
<u>Services</u>	483	717	1,199
Hotels & other lodging	7	42	49
Personal services	16	49	65
Business services	396	213	609
Auto repair, services, & parking	45	58	103
Amusement & recreation	0	50	50
Health services	4	42	46
Legal services	5	38	43
Social services	0	41	41
Membership organizations	0	61	62
Engineering	0	58	58
<u>Government</u>	65	46	111
TOTAL*	2,615	2,198	4,813

SPENDING IMPACT

The Cleveland port industry generated \$440.9 million of spending in Northeast Ohio in 1998. Of that amount, direct impact contributed \$272.9 million while indirect and induced impacts contributed \$168.0 million. Thus, in Northeast Ohio, about \$440 million of goods and services were produced as a result of the maritime operations of the Port of Cleveland.

Table 3 shows the total, direct, and indirect and induced impacts on spending for all major industries and selected detailed industries. As with employment impacts, the direct spending impacts are heavily concentrated in the transportation and public utilities sector (85 percent), including \$81 million by shipping company headquarters. Within the transportation sector, direct spending impact was also strong in trucking and warehousing, railroad transportation, and water transportation, reflecting the complementary relationship among all modes of transportation.

Analyzing total spending impacts reveals that the transportation and public utilities sector was still the largest sector affected, but it accounted for only 59 percent of total spending impact. The other sectors that showed significant spending impacts are services (accounting for 13 percent of total) and finance, insurance, and real estate (9 percent). These two sectors mainly benefited through indirect and induced effects.

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Table 3: Spending Impact of the Port of Cleveland on Northeast Ohio, 1998 (\$000)

	Direct	Indirect & Induced	Impact
<u>Transportation & Public Utilities</u>	233,180	24,801	257,981
Railroad transportation	48,799	942	49,741
Trucking & warehousing	55,849	3,681	59,529
Water transportation	42,645	5,350	47,995
Shipping company headquarters	80,586	0	80,586
Transportation services	5,121	2,252	7,373
Communication	45	6,184	6,229
Electric, gas & sanitary services	0	4,980	4,980
<u>Agriculture & Mining</u>	0	785	785
<u>Construction</u>	0	6,419	6,419
Special trade contractors	0	4,287	4,287
<u>Manufacturing</u>	4,041	28,047	32,087
Food & kindred products	375	3,147	3,522
Printing & publishing	20	5,176	5,196
Transportation equipment	2,842	3,883	6,725
<u>Wholesale</u>	703	9,036	9,738
Wholesale: durable goods	4	4,219	4,223
Wholesale: nondurable goods	699	4,817	5,516
<u>Retail Trade</u>	1,085	22,130	23,215
General merchandise stores	95	3,707	3,802
Food stores	325	2,744	3,069
Auto dealers & service stations	76	3,078	3,155
Eating & drinking places	443	7,425	7,868
Miscellaneous retail	121	2,969	3,090
<u>Finance, Insurance & Real Estate</u>	1,451	37,657	39,109
Banking	720	8,299	9,020
Insurance carriers	647	4,002	4,649
Insurance agents & carriers	72	5,564	5,636
Real estate	12	15,740	15,752
<u>Services</u>	19,942	35,547	55,489
Business services	14,890	7,041	21,931
Auto repair, services, & parking	2,965	4,980	7,945
Health services	367	2,853	3,220
Legal services	419	3,224	3,643
Engineering	1	5,408	5,408
<u>Government</u>	12,520	3,561	16,081
TOTAL*	272,922	167,982	440,904

*Total is equal to the summation of major (underlined) industries

PERSONAL INCOME IMPACT

The Cleveland port industry generated \$156 million of personal income in Northeast Ohio in 1998, with \$98 million of direct impact and \$58 of indirect and induced impact. Thus, Northeast Ohio's workers earned \$156 million in 1998 as a result of the Port of Cleveland's maritime operations.

Table 4 describes the direct, indirect and induced, and total income impacts for major industries and selected detailed industries. Again, as expected, the direct impacts are concentrated in the transportation and public utilities industries (82 percent). Analyzing the indirect and induced income impacts reveals that impacts are more evenly distributed among the major sectors, with services accounting for \$16 million of the total \$58 million (27 percent).

Because of the strong influence of direct effects, analyzing total income impacts shows that transportation and public utilities industries accounted for 56 percent, while services accounted 18 percent of total income impact. Within services, business service was the largest detailed industry impacted by port activities. Other major industries that benefited most from the port's activities were finance, insurance, and real estate; manufacturing; and retail trade.

Table 4: Income Impact of the Port of Cleveland on Northeast Ohio, 1998 (\$000)

	Direct	Indirect & Induced	Impact
<u>Transportation & Public Utilities</u>	80,356	6,740	87,095
Railroad transportation	10,543	204	10,747
Trucking & warehousing	23,345	1,539	24,884
Water transportation	9,731	1,221	10,952
Shipping company headquarters	34,192	0	34,192
Transportation services	2,476	1,117	3,593
Communication	10	1,447	1,457
<u>Agriculture & Mining</u>	0	150	150
<u>Construction</u>	0	4,410	4,410
Special trade contractors	0	3,159	3,159
<u>Manufacturing</u>	1,525	7,638	9,163
Food & kindred products	61	535	597
Printing & publishing	6	1,972	1,978
Transportation equipment	1,145	887	2,032
<u>Wholesale</u>	236	2,594	2,830
Wholesale: durable goods	1	978	979
Wholesale: nondurable goods	235	1,616	1,851
<u>Retail Trade</u>	417	8,213	8,630
General merchandise stores	35	1,217	1,252
Food stores	118	962	1,079
Auto dealers & service stations	31	1,244	1,275
Eating & drinking places	177	2,938	3,114
Miscellaneous retail	51	1,228	1,279
<u>Finance, Insurance & Real Estate</u>	587	10,686	11,273
Banking	344	3,815	4,159
Security & commodity brokers	0	1,584	1,584
Insurance carriers	211	1,313	1,524
Insurance agents & carriers	32	2,475	2,507
Real estate	1	1,107	1,108
<u>Services</u>	12,843	15,719	28,562
Business services	10,814	3,876	14,690
Auto repair, services, & parking	990	1,233	2,224
Health services	209	1,592	1,801
Legal services	259	1,993	2,253
Engineering	0	1,931	1,931
<u>Government</u>	2,205	1,720	3,925
TOTAL*	98,169	57,869	156,038

*Total is equal to the summation of major (underlined) industries

TAX IMPACT

Maritime operations at the Port of Cleveland also resulted in additional revenues to local, state, and federal governments. As a whole, the Port of Cleveland's maritime operations resulted in total taxes of \$66.7 million. Table 5 displays the local, state, and federal tax impacts resulting from Port of Cleveland shipments in 1998.

Table 5: Tax Impact of the Port of Cleveland in 1998 (\$000)

Type of Tax	Impact
Local	\$9,738.0
State	\$11,271.3
Federal	\$44,875.4
Total	\$65,844.7

SUMMARY OF IMPACTS

This section summarizes the economic impact of the Port of Cleveland's maritime operations in 1998. Table 6 reports on total employment, spending, and income impacts for the selected detailed and major industries that were displayed in Tables 3, 4 and 5.

The total impact in 1998 was:

- 4,813 jobs
- \$440.9 million in spending
- \$156.0 million in personal income
- \$65.9 million in tax revenues, including \$9.7 million to local governments, \$11.3 million to the State of Ohio, and \$44.9 million to the federal government.

Table 6: Summary Table of Impacts of the Port of Cleveland on Northeast Ohio, 1998

	Employment (Jobs)	Spending (\$000)	Income (\$000)
<u>Transportation & Public Utilities</u>	2,150	257,981	87,095
Railroad transportation	261	49,741	10,747
Trucking & warehousing	760	59,529	24,884
Water transportation	187	47,995	10,952
Shipping company headquarters	799	80,586	34,192
Transportation services	86	7,373	3,593
Communication	23	6,229	1,457
Electric, gas & sanitary services	13	4,980	713
<u>Agriculture & Mining</u>	10	785	150
<u>Construction</u>	155	6,419	4,410
Special trade contractors	109	4,287	3,159
<u>Manufacturing</u>	177	32,087	9,163
Food & kindred products	13	3,522	597
Printing & publishing	44	5,196	1,978
Transportation equipment	29	6,725	2,032
<u>Wholesale</u>	83	9,738	2,830
Wholesale: durable goods	25	4,223	979
Wholesale: nondurable goods	58	5,516	1,851
<u>Retail Trade</u>	563	23,215	8,630
General merchandise stores	67	3,802	1,252
Food stores	65	3,069	1,079
Auto dealers & service stations	43	3,155	1,275
Eating & drinking places	266	7,868	3,114
Miscellaneous retail	88	3,090	1,279
<u>Finance, Insurance & Real Estate</u>	365	39,109	11,273
Banking	76	9,020	4,159
Security & commodity brokers	18	2,636	1,584
Insurance carriers	34	4,649	1,524
Insurance agents & carriers	88	5,636	2,507
Real estate	137	15,752	1,108
<u>Services</u>	1,199	55,489	28,562
Hotels & other lodging	49	1,827	688
Personal services	65	1,826	814
Business services	609	21,931	14,690
Auto repair, services, & parking	103	7,945	2,224
Amusement & recreation	50	1,556	800
Health services	46	3,220	1,801
Legal services	43	3,643	2,253
Social services	41	2,047	758
Membership organizations	62	2,329	897
Engineering	58	5,408	1,931
<u>Government</u>	111	16,081	3,925
TOTAL*	4,813	440,852	156,038

*Total is equal to the summation of major (underlined) industries

CONCLUSIONS

Benefits from local port activities can be understood to accrue to their regions in three phases. In the first phase, benefits are enjoyed by businesses that are using water transportation services, who additionally gain a competitive advantage by having the port facilities in the region. The second phase refers to benefits gained by industries that purchase from or sell to businesses that are linked directly to the port. Finally, in the third phase, the general community, including local households, benefit from the jobs, income, and taxes generated by the port industry activities.

The estimates of economic impact indicate that the maritime operations of the Cleveland-Cuyahoga Port Authority and the various private-shipping docs located nearby make a significant ongoing contribution to the regional economy. Local port facilities have historically played a strategic role in fostering the growth of local manufacturing industries. As the importance of global markets increases, the port facilities will become even more critical to the growth of local manufacturers.

