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2012 Economic Impact of JumpStart Inc. Portfolio and Client Companies

Candice Clouse
Cleveland State University, c.clouse@csuohio.edu

Ziona Austrian
Cleveland State University, z.austrian@csuohio.edu

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Maxine Goodman Levin
College of Urban Affairs

Prepared for:
JumpStart Inc.

Prepared by:
Candice Clouse, M.S.
Ziona Austrian, Ph.D.

July 2013

**2012 ECONOMIC
IMPACT OF JUMPSTART
INC. PORTFOLIO AND
CLIENT COMPANIES**

**CENTER FOR
ECONOMIC
DEVELOPMENT**

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EXECUTIVE SUMMARY

This report measures the calendar year 2012 economic impact of companies that have been supported by JumpStart Inc. Companies included in this report have received either technical assistance only or both technical assistance and direct investment funding from the nonprofit venture development organization since its inception in 2004. The report also includes the calendar year 2012 economic impact of companies that received investment from North Coast Angel Fund since its inception in 2006 because North Coast Angel Fund (NCAF) operations are supported by JumpStart. It's important to note that the NCAF invests in companies throughout Ohio; while JumpStart's entrepreneurial acceleration activities are confined geographically to the 21 counties of Northeast Ohio.

The Center for Economic Development at Cleveland State University's Levin College of Urban Affairs prepared this economic impact study for JumpStart. In total, 171 JumpStart and/or NCAF companies were surveyed for this study and 155 responded. Of those 155, 28 were excluded from the impact analysis because they reported no employment, payroll, or expenditures, suggesting that they do not yet create an economic impact.

This study is based only on information collected from survey responses from 63 companies that have received both funding and technical assistance¹ ("portfolio companies") from JumpStart and/or North Coast Angel Fund, and 64 separate and different companies that received only technical assistance ("client companies") from JumpStart staff. Some of the companies that responded to this survey have also received funding and/or technical assistance from other entities in the JumpStart Entrepreneurial Network, and some received funding from sources outside this network.²

This report mirrors the methodology used in the *2011 Economic Impact of Jumpstart Inc. Portfolio and Client Companies*, a report completed by the Center for Economic Development in June 2012. The *Methodology* section of this report provides details on how data were collected and other methodological issues.

¹ Technical assistance includes the time spent by JumpStart both with and on behalf of portfolio and client companies. This assistance helps companies accelerate their strategic planning, operations, fundraising, talent acquisition, marketing, and/or public relations initiatives.

² The JumpStart Entrepreneurial Network is a connected group of Northeast Ohio entrepreneurial support entities managed by JumpStart Inc. For a list of these entities, visit www.jumpstartnetwork.org.

ECONOMIC IMPACT ON NORTHEAST OHIO (NEO)

The economic impact on Northeast Ohio by 127 JumpStart-supported companies includes the following impact measures:

- Employment Impact: 1,652 jobs
- Labor Income Impact: \$95.2 million
- Value Added Impact: \$139.5 million
- Output Impact: \$211.3 million
- Tax Impact: \$27.9 million
 - \$9.4 million to the state and local governments
 - \$18.4 million to the federal government

ECONOMIC IMPACT ON OHIO

The economic impact on Ohio by 127 JumpStart-supported companies includes the following impact measures:

- Employment Impact: 2,140 jobs
- Labor Income Impact: \$124.7 million
- Value Added Impact: \$180.6 million
- Output Impact: \$269.7 million
- Tax Impact: \$35.5 million
 - \$11.9 million to the state and local governments
 - \$23.6 million to the federal government

COMPARISON OF ECONOMIC IMPACT: 2010 - 2012

In some cases, the 2012 economic impact estimates are larger than in previous years. These increases are due both to the inclusion of additional companies as well as the growth of companies that answered the survey over multiple years. The companies that participated in the study in all three years increased their Northeast Ohio employment by 162, Northeast Ohio payroll by \$13.4 million and expenditures in Northeast Ohio by \$15.5 million.³ Companies that participated in the survey in all three years increased their Ohio employment by 224, Ohio payroll by \$17.6 million and Ohio expenditures by \$19.7 million.⁴

³ In Northeast Ohio, 90 companies with a total Northeast Ohio employment of 547 were included in the 2010 impact analysis. In 2011, 112 companies with a total Northeast Ohio employment of 775 were included. This compares to 2012 where 117 companies were included with a direct employment of 849 in Northeast Ohio. This is an increase of 55% in employment over the three years.

⁴ In Ohio, 90 companies with a total Ohio employment of 552 were included in the 2010 impact analysis. In 2011, 121 companies with a total Ohio employment of 880 were included. This compares to 2012 where 127 companies were included with a direct employment of 1,100 in Ohio.

INTRODUCTION

This report measures the calendar year 2012 economic impact of companies that have been supported by JumpStart Inc. Companies included in this report have received either technical assistance only or both technical assistance and direct investment funding from the nonprofit venture development organization since its inception in 2004. The report also includes the calendar year 2012 economic impact of companies that received investment from North Coast Angel Fund since its inception in 2006 because North Coast Angel Fund (NCAF) operations are supported by JumpStart. It's important to note that the NCAF invests in companies throughout Ohio, while JumpStart's entrepreneurial acceleration activities are confined geographically to the 21 counties of Northeast Ohio.

In total, 171 JumpStart and/or NCAF companies were surveyed for this study and 155 responded. Of those 155, 28 were excluded from the impact analysis because they reported no employment, payroll or expenditures, suggesting that they do not yet create an economic impact. The results presented in this report express the calendar year 2012 impact of 127 companies: 63 companies that received both funding and technical assistance⁵ ("portfolio companies") from JumpStart and/or North Coast Angel Fund, and 64 separate and different companies that received only technical assistance ("client companies") from JumpStart staff. Some of the companies that responded to this survey have also received funding and/or technical assistance from other entities in the JumpStart Entrepreneurial Network, and some received funding from sources outside this network.⁶

In this report, Northeast Ohio is defined as a 21-county region. This region is comprised of six metropolitan statistical areas (MSAs)—Akron, Canton-Massillon, Cleveland-Elyria-Mentor, Mansfield, Sandusky, and Youngstown-Warren-Boardman—and eight non-metro counties. The MSAs are defined as follows:

- Akron MSA: Portage and Summit counties
- Canton-Massillon MSA: Carroll and Stark counties
- Cleveland-Elyria-Mentor MSA: Cuyahoga, Geauga, Lake, Lorain, and Medina counties
- Mansfield MSA: Richland County
- Sandusky MSA: Erie County
- Youngstown-Warren-Boardman MSA: Mahoning and Trumbull counties

The eight non-metro counties are Ashland, Ashtabula, Columbiana, Crawford, Holmes, Huron, Tuscarawas, and Wayne.

⁵ Technical assistance includes the time spent by JumpStart both with and on behalf of portfolio and client companies. This assistance helps companies accelerate their strategic planning, operations, fundraising, talent acquisition, marketing, and/or public relations initiatives.

⁶ The JumpStart Entrepreneurial Network is a connected group of Northeast Ohio entrepreneurial support entities managed by JumpStart Inc. For a list of these entities, visit www.jumpstartnetwork.org.

This report mirrors the methodology used in the *2011 Economic Impact of Jumpstart Inc. Portfolio and Client Companies*, a report completed by the Center for Economic Development in September 2011. The *Methodology* section of this report provides details on how data were collected and other operational issues.

METHODOLOGY

INPUT-OUTPUT METHOD

Economic impact analysis is based on inter-industry relationships within an economy—that is, the buy-sell relationships that exist among industries. These relationships largely determine how an economy responds to changes in economic activity. Input-output (I-O) models estimate inter-industry relationships in a region by measuring the industrial distribution of inputs purchased and outputs sold by each industry. Thus, by using I-O models, it is possible to estimate how the impact of one dollar or one job ripples through the local economy, creating additional expenditures and jobs. This is the concept of an economic multiplier, which measures the ripple effect that an initial expenditure has on the local economy.⁷

The economic impact estimates presented in this report use the IMPLAN® Version 3.0 model, which is the most recent economic impact assessment software system released by Minnesota IMPLAN Group, Inc.⁸ The user can develop sophisticated models of local economies in order to estimate a wide range of economic impacts. The IMPLAN® impact model is used by more than 1,000 public and private institutions and the number of users, as well as their reputations, points to the high regard for the IMPLAN® model among researchers and consultants. The economic impact for Northeast Ohio was estimated through an IMPLAN model built for the 21-county area. To estimate an economic impact for Ohio, a separate IMPLAN model was built for the remainder of Ohio (a 67-county region) and the impact estimates of the two regions were summed to estimate the impact on Ohio. The data provided by JumpStart’s client and portfolio companies informed whether their employees and expenditures were located in NEO; outside of NEO, but within the state of Ohio; or outside Ohio. Companies located outside Ohio are excluded from these impact estimates.

ECONOMIC IMPACT DEFINED

Economic impact is an analytical approach used to estimate economic benefits produced in affected regions by projects, programs, or companies. Economic impact estimates the benefits for a specific region and time period. These economic benefits are estimated in terms of five different measures:

⁷ For example, suppose that Company A reports sales of \$10 million. From the revenues of the company, they pay suppliers and workers, cover production costs, and take a profit. Once the suppliers and employees receive their payments, they will spend a portion of their money in the local economy purchasing goods and services, while another portion of the money will be spent outside the local economy (leakage). By evaluating the chain of local purchases that result from the initial infusion of \$10 million, it is possible to estimate a regional economic multiplier.

⁸ IMPLAN was originally developed by two federal agencies, the Department of Agriculture and the Department of the Interior, to assist in land and resource management planning. The model was later commercialized by the Minnesota IMPLAN Group, Inc.

- *Output impact* measures the value of goods and services produced in the economy.
- *Value-added impact* estimates the value of goods and services produced in the economy less intermediary goods and services, such as materials, utilities, and other goods used in the production process. Value-added impact is comparable to gross regional product.
- *Labor income* estimates the household earnings that are generated in the economy.
- *Employment impact* measures the number of jobs created in the economy.
- *Taxes* include federal taxes as well as state and local taxes.

Each economic impact is a summation of three components: *direct impact*, *indirect impact*, and *induced impact*. *Direct impact* refers to the initial value of goods and services, including labor, purchased by the companies affected by JumpStart. These purchases are sometimes referred to as the first-round effect. *Indirect impact* measures the value of labor, capital, and other inputs of production needed to produce the goods and services required by the companies (second-round and additional-round effects). *Induced impact* measures the change in spending by local households as a result of increased earnings of employees working in the local companies that produce goods and services for the companies.

Impact Study Data

JumpStart and the Center designed an online survey questionnaire with specific questions to distinguish a responding company's activities in Northeast Ohio, the remainder of Ohio, and outside Ohio for calendar year 2012. The economic impact study presented in this report uses company data for Northeast Ohio and Ohio. All spending outside of Ohio is excluded from the study.

JumpStart sent the online survey to 102 client companies and 69 portfolio companies of JumpStart and/or NCAF. These companies received 14,303 hours of pro-bono technical assistance from JumpStart and the JumpStart Entrepreneurial Network in 2012 and at least 41,590 hours of pro-bono technical assistance in total.

Following the collection of data from the survey, JumpStart collected additional data via telephone interviews pertaining to Cleveland State University's follow-up questions on some companies' employment, payroll, and expenditures. An official member of each client or portfolio company's management team, legally allowed to verify the accuracy of company data, provided and confirmed the information.⁹ Cleveland State University also verified company-level data by ensuring consistency between the different variables and geographies.

⁹ The exact language as noted on the survey was "I hereby certify that I am authorized to provide the patent, employment, and financial information for my company and that the survey information reported herein is correct for the period stated and is consistent with any information reported to government entities for payroll, tax, unemployment insurance, and workers compensation purposes."

In total, JumpStart collected complete survey data from 155 companies. Of the surveyed companies, 41% of the companies received funding from JumpStart or North Coast Angel Fund and 59% percent received services from JumpStart.

Of the JumpStart- or NCAF-supported companies that responded, 28 (1 JumpStart portfolio company and 27 JumpStart client companies) were excluded because of lack of economic activity in Ohio. Of the remaining 127 companies, 63 were portfolio companies of JumpStart and/or North Coast Angel Fund and 64 were client companies. The economic impact analysis is based the Ohio spending of these 127 companies.

The 63 JumpStart portfolio companies included in the analysis each received an average of 121 hours of technical assistance from JumpStart (in addition to the capital). Each of the 64 client companies included in the analysis received an average of 86 hours of technical assistance from JumpStart.

Of the 127 companies, 69% have 10 employees or fewer. However, several of the companies are becoming larger employers. There are 18 companies that employ between 11 and 25 employees each and 13 companies employ more than 26 employees in Ohio.

Each of these 127 portfolio and client companies was assigned to one of the 440 sectors included in the IMPLAN® model. The IMPLAN® regional model and its data were edited to reflect each company's information. These changes to the model result in better impact estimates because they are based on actual estimates of the specific startup companies, rather than on the average industry data provided by IMPLAN®.

ECONOMIC IMPACT ESTIMATES

ECONOMIC IMPACT ESTIMATES FOR NORTHEAST OHIO (NEO)

This study reports the economic impact of JumpStart-supported companies in terms of five measures: employment, labor income, value added, output, and taxes. Hereafter, the supported portfolio and client companies will be referred to collectively as “the companies.”

The direct economic impact of the companies on Northeast Ohio in 2012 included a total of 849 employees, a payroll of \$60.4 million, and expenditures of \$108.7 million. Table 1 summarizes the impact results of the five measures for 2012 by direct, indirect, induced, and total effects.

Table 1: Economic Impact in Northeast Ohio, 2012

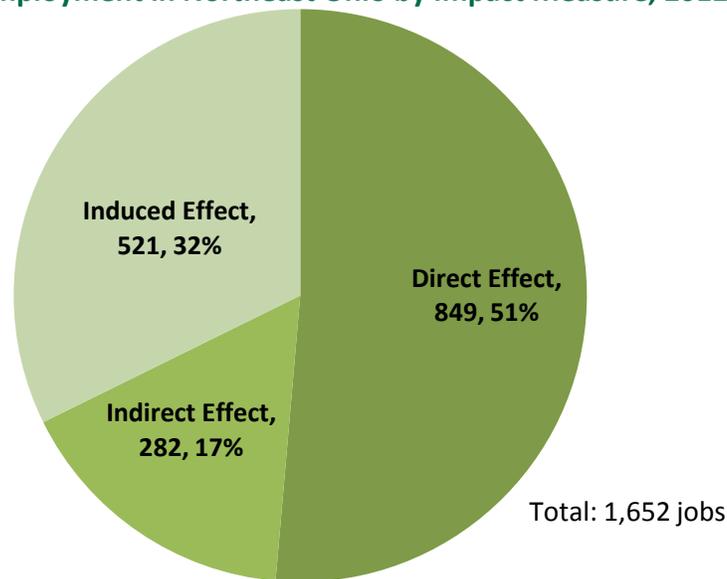
Impact Type	Employment	Labor Income	Value Added	Output	Tax
Direct Effect	849	\$60,403,647	\$79,656,178	\$108,705,939	\$14,898,336
Indirect Effect	282	\$14,120,210	\$22,212,883	\$39,739,943	\$4,485,801
Induced Effect	521	\$20,710,326	\$37,652,678	\$62,859,050	\$8,495,596
Total Effect	1,652	\$95,234,183	\$139,521,739	\$211,304,932	\$27,879,733

Notes: The economic impact is presented in 2013 dollars.

All numbers have been rounded to the nearest whole number.

Employment Impact

The total employment impact in Northeast Ohio attributed to the companies amounted to 1,652 jobs (Figure 1). Of these, 849 (51%) were the result of direct impact – the employees of the companies. An additional 282 jobs (17%) were created in industries supporting the companies, and 521 (32%) more jobs were created throughout the economy because of employees’ spending due to their increased earnings.

Figure 1: Employment in Northeast Ohio by Impact Measure, 2012

Labor Income (Earnings) Impact

Every job created by the companies and their suppliers generates earnings for local households. In 2012, total household earnings in Northeast Ohio increased by \$95.2 million. Of this impact, \$60.4 million (63%) resulted from the direct effects of the companies' payroll, and \$14.1 million (15%) resulted from increased earnings in other industries in the region that supply the companies. The induced income impact of \$20.7 million (22%) was due to increased household spending throughout the economy because of their additional earnings. Figure 2 shows the breakdown of the output, value added, and labor income impacts by type of effect.

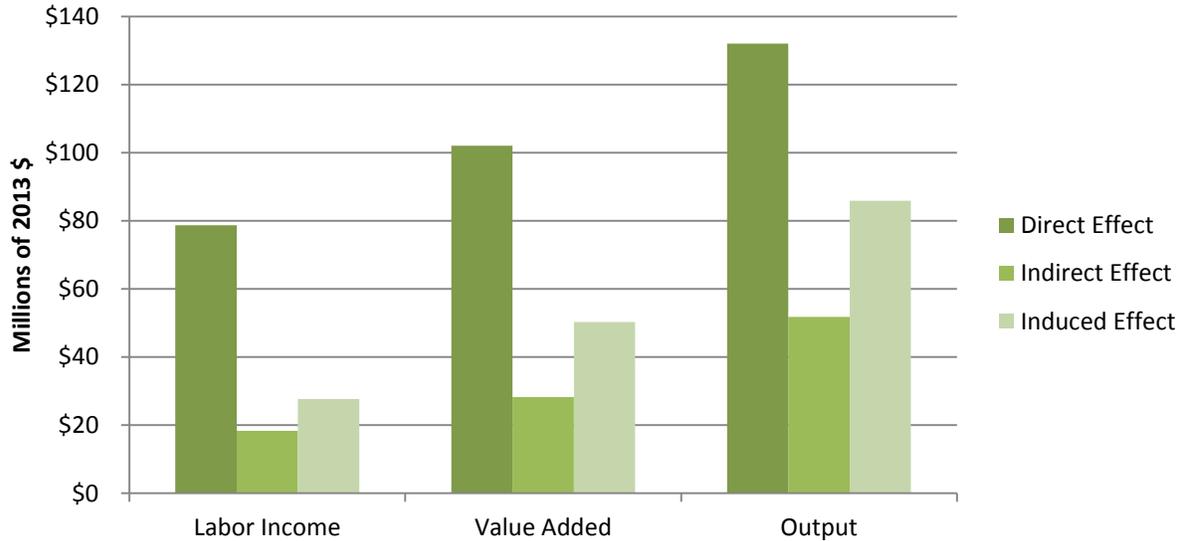
Value-Added Impact

Value-added impact measures the value of goods and services produced in the economy less intermediate goods and services; it is equivalent to the definition of gross regional product. In 2012, the value-added impact from the companies was \$139.5 million. Of that, \$79.7 million (57%) was attributed to direct impact, \$22.2 million (16%) to indirect impact, and \$37.7 million (27%) to induced impact.

Output Impact

Output measures the total value of goods and services produced in the region as a result of the spending of the companies. Output impact provides an estimate of the total change in output produced in Northeast Ohio because of the companies' activities in 2012. Output impact amounted to \$211.3 million. Of that, the direct production of goods and services by the companies accounted for \$108.7 million (51%). An additional \$39.7 million (19%) was indirect impact—goods and services produced regionally to support the activities of the companies. The induced impact of \$62.9 million (30%) measures the value of goods and services produced in the region to satisfy the increased demand by households working for the companies and their suppliers.

Figure 2: Output, Value-Added & Labor Income Impact Measures for Northeast Ohio, 2012



Tax Impact

Based on the IMPLAN model, there was \$27.9 million in tax revenue associated with the activity of the companies in 2012. Of the tax impact, \$14.9 million (53%) was attributed to direct impact, \$4.4 million (16%) to indirect impact, and \$8.5 (30%) to induced impact. Thirty-four percent (34%) of the tax impact was in state and local taxes. Sixty-six percent (66%) of the tax impact was in federal taxes.

ECONOMIC IMPACT ESTIMATES FOR OHIO

The economic impact for Ohio is based on the summation of the impact in Northeast Ohio discussed earlier and an impact conducted for the remaining 67 counties in Ohio. This economic impact of companies in the remaining 67 counties comes largely from companies that received investment from North Coast Angel Fund, a fund whose operations are paid for by JumpStart. The Fund invests in companies in Northeast Ohio and across the state.

The same five measures of impact used to look at Northeast Ohio are summarized for the entire state of Ohio during 2012: employment, labor income, value added, output, and taxes. The impact results are summarized in Table 2 by direct, indirect, induced, and total effects.

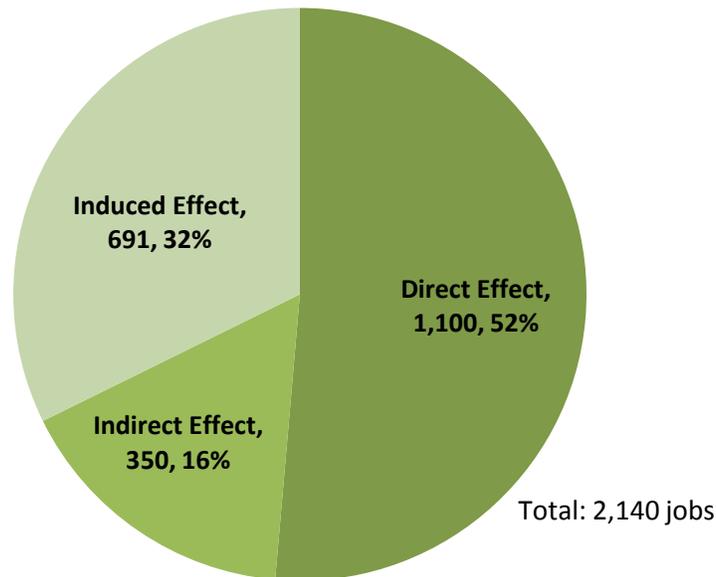
Table 2: Economic Impact in Ohio, 2012

Impact Type	Employment	Labor Income	Value Added	Output	Tax
Direct Effect	1,100	\$78,696,562	\$102,053,121	\$131,980,213	\$18,586,628
Indirect Effect	350	\$18,305,842	\$28,261,141	\$51,809,263	\$5,688,588
Induced Effect	691	\$27,689,158	\$50,316,393	\$85,870,800	\$11,257,143
Total Effect	2,140	\$124,691,562	\$180,630,655	\$269,660,276	\$35,532,359

Notes: The economic impact is presented in 2013 dollars.
All numbers have been rounded to the nearest whole number.

Employment Impact

The total employment impact in 2012 in Ohio attributed to the companies amounted to 2,140 jobs. Of these, 1,100 (52%) were the result of direct impact. An additional 350 jobs (16%) were created in industries supporting the companies, and 691 (32%) more jobs were created throughout the economy due to increased employee earnings (Figure 3).

Figure 3: Employment in Ohio by Impact Measure, 2012

Labor Income (Earnings) Impact

The increase in household earnings created by the companies and their suppliers represents the labor income impact. In 2012, total household earnings in Ohio increased by almost \$124.7 million. Of this impact, \$78.7 million (63%) resulted from the direct effects of the companies' payroll, and \$18.3 million (15%) resulted from increased earnings in other industries in the state that supply the companies. The induced income impact of \$27.7 million (22%) was due to increased household earnings throughout the economy. Figure 4 shows the breakdown of the labor income, value added, and output and impacts by type of effect.

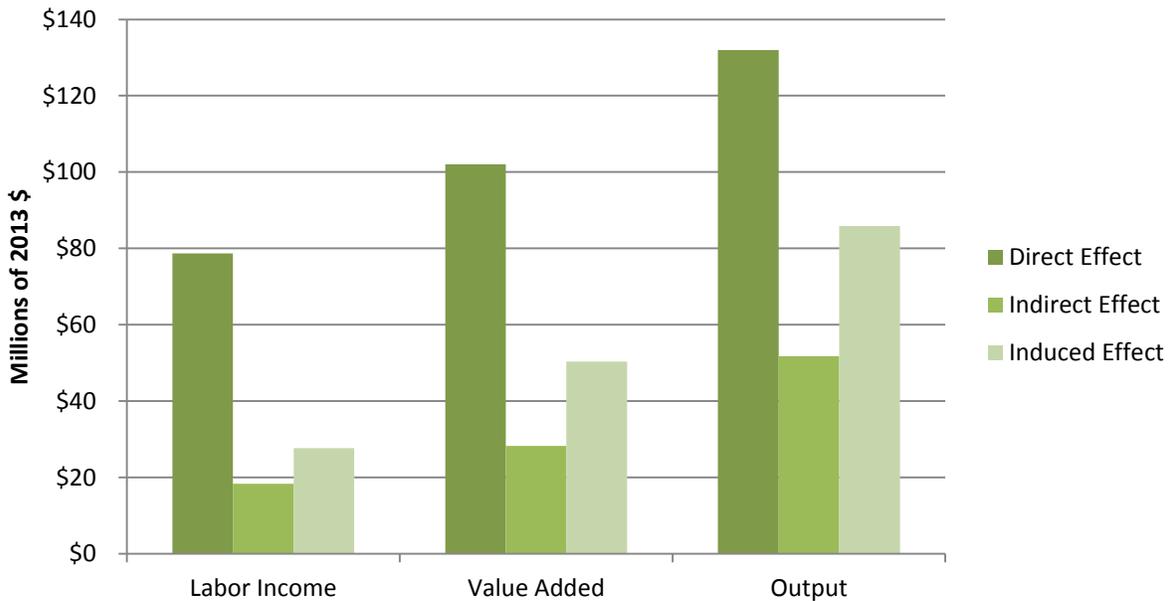
Value-Added Impact

Value-added impact corresponds to gross regional product. In 2012, the value-added impact in the state from the companies was \$180.6 million. Of that, \$102.1 million (56%) was attributed to direct impact, \$28.3 million (16%) to indirect impact, and \$50.3 million (28%) to induced impact.

Output Impact

Output impact is an estimate of the total change in the value of goods and services produced in Ohio due to the activities of the companies. Output impact in 2012 amounted to \$269.7 million. Of that, \$132.0 million (49%) was accounted for by the direct production of goods and services by the companies. An additional \$51.8 million (19%) was indirect impact—goods and services produced in the state to support the activities of the companies. The induced impact of \$85.9 million (32%) measures the value of goods and services produced in the state to satisfy the increased demand by households.

Figure 4: Output, Value-Added & Labor Income Impact Measures for Ohio, 2012



Tax Impact

Based on the IMPLAN model, there was \$35.5 million in tax revenue associated with the activity of the companies in 2012. Of the tax impact, \$18.6 million (52%) was attributed to direct impact, \$5.7 million (16%) to indirect impact, and \$11.3 (32%) to induced impact. As with the impact in Northeast Ohio, 34% of the tax impact was in state and local taxes. Sixty six percent (66%) of the tax impact was in federal taxes.

2010 – 2012 COMPARISON

NORTHEAST OHIO COMPARISON

In Northeast Ohio, 90 companies with a total direct Northeast Ohio employment of 547 were included in the 2010 impact analysis (Table 3). In 2011, 112 companies with a total direct Northeast Ohio employment of 775 were included. In 2012, 117 companies with a total direct employment of 849 were included. This is an increase of 55% in employment over the three years. Between 2010 and 2012, the total amount of payroll included in the analysis increased 72% (\$24.7 million) and the expenditures increased 27% (\$22.6 million).

Table 3: Comparison of 2010 - 2012 Direct Effects for Northeast Ohio¹⁰

	2010	2011	2012
Total Companies	90	112	117
Direct Employment	547	775	849
Direct Labor Income	\$34,319,914	\$53,780,427	\$59,064,566
Direct Value Added	\$48,858,143	\$83,068,865	\$79,656,178
Direct Output	\$84,400,538	\$119,892,669	\$107,044,358

The 2012 economic impact estimates are significantly larger than the 2010 and, in some cases, the 2011 results. The increase in economic impact between 2010 and 2012 is due to both the growth of companies that existed in both years and the participation of additional (new client or portfolio) companies. In Northeast Ohio, the total impact results grew between 2010 and 2012 (Table 4). The number of Northeast Ohio companies included in the analysis increased by 30%. Total employment impact increased by 48%. Calculated in nominal terms, without adjusting for inflation, total labor income impact increased by 64%, value added increased by 56%, output increased by 37%, and taxes increased by 53% between 2010 and 2012.

Table 4: Comparison of 2010 - 2012 Total Impact Results for Northeast Ohio¹⁰

	2010	2011	2012
Total Companies	90	112	117
Employment	1,115	1,640	1,652
Labor Income	\$58,028,949	\$89,358,710	\$95,234,183
Value Added	\$89,691,693	\$143,605,936	\$139,521,739
Output	\$154,380,995	\$220,451,534	\$211,304,932
Tax	\$18,281,682	\$29,840,714	\$27,879,733

Forty-two (42) companies responded in all three years. This group of companies increased their aggregated Northeast Ohio employment by 162, payroll by \$13.4 million and expenditures by

¹⁰ All dollars are reported in nominal terms.

\$15.5 million. Thirty-six (36) other companies responded with Northeast Ohio activity for the first time in 2012. These companies had a total employment of 158, payroll of \$8.3 million, and expenditures of \$10.8 million.

OHIO COMPARISON

In Ohio, 90 companies with a total direct Ohio employment of 552 were included in the 2010 impact analysis (Table 5). In 2011, 121 companies with a total direct Ohio employment of 880 were included. In 2012, 127 companies were included with a total direct Ohio employment of 1,100. This is an increase of 99% in employment over the three years. Between 2010 and 2012, the total amount of payroll included in the analysis increased 128% (\$44.1 million) and the expenditures increased 53% (\$44.7 million).

Table 5: Comparison of 2010 - 2012 Direct Effects for Ohio

	2010	2011	2012
Total Companies	90	121	127
Direct Employment	552	880	1,100
Direct Labor Income	\$34,589,453	\$62,959,237	\$78,696,562
Direct Value Added	\$49,266,582	\$96,111,194	\$102,053,121
Direct Output	\$85,128,453	\$140,959,354	\$131,980,213

In the entire state, the total impact results grew in each measure between 2010 and 2012 (Table 6). The number of Ohio companies included in the analysis increased by 41% between 2010 and 2012. Total employment impact increased by 90%. Calculated in nominal terms, without adjusting for inflation, the total labor income impact increased by 113%, value added increased by 100%, output increased by 73%, and taxes increased by 93% between 2010 and 2012.

Table 6: Comparison of 2010 - 2012 Total Impact Results for Ohio¹⁰

	2010	2011	2012
Total Companies	90	121	127
Employment	1,125	1,891	2,140
Labor Income	\$58,500,099	\$105,175,743	\$124,691,562
Value Added	\$90,439,691	\$167,569,237	\$180,630,655
Output	\$155,679,400	\$259,510,849	\$269,660,276
Tax	\$18,427,520	\$34,799,184	\$35,532,359

Forty-four (44) companies responded in all three years with Ohio activity. This group of companies increased their aggregated employment by 224, payroll by \$17.6 million and expenditures by 19.7 million. Forty other companies responded for the first time in 2012 with

Ohio activity. These companies had a total employment of 187, payroll of \$9.3 million, and expenditures of \$12.1 million.