Economic Impact of JumpStart Inc. Portfolio and Client Companies, 2010

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EXECUTIVE SUMMARY

The Center for Economic Development at Cleveland State University's Levin College of Urban Affairs prepared this economic impact study for JumpStart Inc. The study measures the 2010 economic impact of companies supported by JumpStart Inc. since its inception in 2004. The impact of these companies on Northeast Ohio and Ohio is based on the size of their Northeast Ohio and Ohio operations in 2010. Companies supported by JumpStart Inc. have received either technical assistance only, or technical assistance and funding.

This report is based on information from 52 companies that received funding and technical assistance (“portfolio companies”) from JumpStart and 59 companies that received only technical assistance (“client companies”) from JumpStart. Some of the companies also received funding and technical assistance from other entities in the JumpStart Entrepreneurial Network and some received funding from sources outside this network. Of the 111 companies that fully completed the survey used for this study, 21 were excluded from the impact analysis because they had no payroll, expenditures, or revenues.

This report differs from past impact studies conducted by Cleveland State University for JumpStart. Previous reports measured the economic impact of JumpStart through its own activities and the activities of companies supported by the nonprofit venture development organization either through funding or assistance. This report measures the economic impact of JumpStart portfolio and client companies as a group as opposed to that that of JumpStart Inc., therefore, the results of this study are not comparable to previous reports. The Methodology section of this report provides details on how data were collected and other methodological issues.

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1 Technical assistance includes JumpStart time spent 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 that is managed by JumpStart Inc. For a list of the entities, visit www.jumpstartnetwork.org. Of the 52 companies that received funding from JumpStart, 20 attracted capital from other entities in the JumpStart Entrepreneurial Network and 47 attracted capital from investors other than JumpStart and JumpStart Entrepreneurial Network members.
ECONOMIC IMPACT ON NORTHEAST OHIO (NEO)

The economic impact of JumpStart’s portfolio and client companies in 2010 on Northeast Ohio includes the following impact measures:

- Output Impact: $154.4 million
- Value Added Impact: $89.7 million
- Labor Income Impact: $58.0 million
- Employment Impact: 1,115 jobs
- Tax Impact: $18.3 million
  - $7.5 million to the state and local governments
  - $10.8 million to the federal government

ECONOMIC IMPACT ON OHIO

The economic impact of JumpStart’s portfolio and client companies in 2010 on Ohio includes the following impact measures:

- Output Impact: $155.7 million
- Value Added Impact: $90.4 million
- Labor Income Impact: $58.5 million
- Employment Impact: 1,125 jobs
- Tax Impact: $18.4 million
  - $7.5 million to the state and local governments
  - $10.9 million to the federal government
INTRODUCTION

The Center for Economic Development at Cleveland State University’s Levin College of Urban Affairs prepared this economic impact study for JumpStart Inc. The study measures the 2010 economic impact of companies supported by JumpStart Inc. since its inception in 2004. The impact of these companies on Northeast Ohio and Ohio is based on the size of their Northeast Ohio and Ohio operations in 2010. Companies supported by JumpStart Inc. have received either technical assistance only, or technical assistance and funding.

This report is based on information from 52 companies that received funding and technical assistance (“portfolio companies”) from JumpStart and 59 companies that received only technical assistance (“client companies”) from JumpStart3. Some of the companies also received funding and technical assistance from other entities in the JumpStart Entrepreneurial Network and some received funding from sources outside this network.4 Of the 111 companies that fully completed the survey used for this study, 21 were excluded from the impact analysis because they had no payroll, expenditures, or revenues.

In this report, Northeast Ohio includes 21 counties. This region is comprised of six metropolitan statistical areas (Akron, Canton-Massillon, Cleveland-Elyria-Mentor, Mansfield, Sandusky, and Youngstown-Warren-Boardman) and eight non-metro counties.

- Akron metro area includes Portage and Summit Counties
- Canton metro area includes Carroll and Stark Counties
- Cleveland metro area includes Cuyahoga, Geauga, Lake, Lorain, and Medina Counties
- Mansfield metro area consists of Richland County
- Sandusky metro area consists of Erie County
- Youngstown metro area includes Mahoning and Trumbull Counties
- Eight non-metro counties include Ashland, Ashtabula, Columbiana, Crawford, Holmes, Huron, Tuscarawas, and Wayne

This report differs from past impact studies conducted by Cleveland State University for JumpStart. Previous reports measured the economic impact of JumpStart through its own activities and the activities of companies supported by the nonprofit venture development organization either through funding or assistance. This report measures the economic impact of JumpStart portfolio and client companies as a group as opposed to that of JumpStart Inc.,

3 Technical assistance includes JumpStart time spent 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.

4 The JumpStart Entrepreneurial Network is a connected group of Northeast Ohio entrepreneurial support entities that is managed by JumpStart Inc. For a list of the entities, visit www.jumpstartnetwork.org. Of the 52 companies that received funding from JumpStart, 20 attracted capital from other entities in the JumpStart Entrepreneurial Network and 47 attracted capital from investors other than JumpStart and JumpStart Entrepreneurial Network members.
therefore, the results of this study are not comparable to previous reports. The Methodology section of this report provides details on how data were collected and other methodological issues.

**REPORT STRUCTURE**

This report is composed of three sections. Following this Introduction, the Methodology section describes the concept of economic impact and explains the methodology used in this study. The third and final section presents estimates of the economic impacts on Northeast Ohio and Ohio.
METHODOLOGY

WHAT IS ECONOMIC IMPACT?

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

- **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 (output, value-added, labor income, and employment) is a summation of three types of impacts: **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.

STUDY METHODOLOGY

Economic impact analysis is based on inter-industry relationships within an economy—that is, the buy-sell relationships 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 economic multiplier measures the ripple effect that an initial expenditure has on the local economy.

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.5 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 including the U.S. Bureau of Economic Analysis, the U.S. Department of Defense, the Federal Reserve Bank, the Ohio Department of Development, Columbia University, Yale University, and others. The number of users, as well as their reputations, points to the high regard for the IMPLAN® model among researchers and consultants. Economic impact is estimated for Northeast Ohio by building an IMPLAN model for the 21-county area. To estimate an economic impact for Ohio a separate IMPLAN model is built for the remainder of Ohio (a 67-county region) and the impact estimates of the two regions are aggregated to estimate the impact on Ohio.6

Impact Study Data

Cleveland State University designed an online and telephone survey questionnaire in partnership with JumpStart introducing specific questions to distinguish among a responding company’s activities in Northeast Ohio, the remainder of Ohio, and outside Ohio for calendar year 2010. The economic impact study presented in this report uses company data for Northeast Ohio and Ohio. In January of 2011, JumpStart sent the online survey to its client and portfolio companies. Following the collection of data via the online survey, JumpStart collected additional data pertaining to Cleveland State University’s follow-up questions on employment, revenue, and expenses, through telephone interviews conducted between May and July 2011. 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. Cleveland State University also verified company level data by ensuring consistency between the different variables and geographies.

In total, JumpStart collected complete survey data from 111 companies. Of these, 52 portfolio companies received funding and an average of eight hours of technical assistance a week for 18 months from JumpStart, and 59 client companies received an average of two hours of technical assistance a month for 36 months from JumpStart.7 Of the 52 portfolio companies that received funding and technical assistance, 5 companies each employed between 20 and 55 employees in Northeast Ohio; 10 companies each employed between 10 and 19 employees; and 37 companies each employed fewer than 10 employees in 2010. Of the 59 client companies that received only technical assistance, one company employed between 20 and 50 employees

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5 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.

6 Impact in the remainder of Ohio is a result of one company located in Lucas County and other companies that have employees located in Ohio, outside of Northeast Ohio.

7 The 52 companies that received funding from JumpStart Inc. include 4 companies that received funding only from North Coast Angel Fund (NCAF). Companies funded by NCAF are included with those funded by JumpStart Inc. because JumpStart Inc. pays the expenses of NCAF.
and one employed between 10 and 19 employees in 2010. The remaining 57 companies employed fewer than 10 employees each in 2010.

Of the 111 companies that fully completed the survey, 21 were excluded from the impact analysis (2 companies that received funding and technical assistance and 19 companies that received technical assistance only) because, they had no payroll, expenditures, or revenue. These companies were not included in the study because no company dollars were spent in the studied economies.

Thus, the economic impact study is comprised of data from a total of 90 companies. Each of these 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 the specific startup companies instead of using the average industry data provided by IMPLAN®.
ECONOMIC IMPACT ESTIMATES

ECONOMIC IMPACT ESTIMATES FOR NORTHEAST OHIO (NEO)

The study reports on five measures of impact for the group of companies supported by JumpStart Inc. and potentially other entities: output, value-added, labor income, employment, and tax; as mentioned earlier, these will be referred to as “the companies”. Table 1 summarizes the impact results of the first four measures for 2010 by the direct, indirect, induced, and total effects. Tax impact is discussed on Page 8.

Table 1. Economic Impact in Northeast Ohio, 2010

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Output ($)</th>
<th>Value Added ($)</th>
<th>Labor Income ($)</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Effect</td>
<td>84,400,539</td>
<td>48,858,143</td>
<td>34,319,914</td>
<td>546</td>
</tr>
<tr>
<td>Indirect Effect</td>
<td>31,024,383</td>
<td>17,304,800</td>
<td>10,607,336</td>
<td>216</td>
</tr>
<tr>
<td>Induced Effect</td>
<td>38,956,073</td>
<td>23,528,750</td>
<td>13,101,699</td>
<td>353</td>
</tr>
<tr>
<td>Total Effect</td>
<td>154,380,995</td>
<td>89,691,693</td>
<td>58,028,949</td>
<td>1,115</td>
</tr>
</tbody>
</table>

The economic impact is presented in $2010. All numbers have been rounded to the nearest whole number.

Output Impact

Output impact provides an estimate of the total change in output produced in Northeast Ohio because of the companies’ activities in 2010. Output impact in 2010 amounted to $154.4 million (in $2010, Table 1). Of that, direct production of goods and services by the companies accounts for $84.4 million (55%). An additional $31 million (20%) is indirect impact—goods and services produced regionally to support the activities of the companies. The induced impact of $39 million (25%) measures the value of goods and services produced in the region to satisfy the increased demand by households throughout the economy.

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 2010, the value-added impact from the companies was $89.7 million (Table 1). Of that, $48.9 million (54.5%) is attributed to direct impact, $17.3 million (19.3%) to indirect impact, and $23.5 (26.2%) to induced impact.

Labor Income (Earnings) Impact

Every new job created by the companies and their suppliers generates new earnings for local households. In 2010, total household earnings in Northeast Ohio increased by $58 million (Table 1). Of this impact, $34.3 million (59%) resulted from the direct effects of payroll of the companies; $10.6 million dollars (18%) of the total income impact resulted from increased earnings in other industries in the region that supply the companies. The induced income
impact of $13.1 million (23%) is due to increased household earnings throughout the economy. Figure 1 shows the breakdown of the three dollar-value measures (output, value-added, and labor income) by impact measure.

**Figure 1. Output, Value-Added & Labor Income Impact Measures for NEO, 2010**

![Bar chart showing the breakdown of impact measures by effect]

**Employment Impact**

The total employment impact attributed to the companies in 2010 in Northeast Ohio amounted to 1,115 jobs (Table 1). Of these, 546 (49%) are the result of direct impact – the employees of the companies. An additional 216 jobs (19%) were created in industries supporting the companies, and 353 (32%) more jobs were created throughout the economy because of increased employee earnings (Figure 2).
Economic Impact of JumpStart Portfolio and Client Companies, 2010

Figure 2. Employment in NEO by Impact Measure, 2010

Tax Impact
In 2010, the state and local tax revenues increased by $7.5 million in Northeast Ohio due to the activity of the companies. Tax revenues at the federal level increased by $10.8 million. This yielded an overall tax impact of $18.3 million in 2010.

ECONOMIC IMPACT ESTIMATES FOR OHIO

The economic impact for Ohio is based on the impact in Northeast Ohio discussed above and the impact in the remainder of Ohio. The economic impact in the remainder of Ohio results from one company located in Northwest Ohio planning to move to Northeast Ohio and Northeast Ohio companies with employees who reside in the remainder of Ohio. In the 67 counties included in the remainder of Ohio, there were a total of 6 employees with a payroll of $269,539 and an estimated output of $727,914.

The same five measures of impact are summarized for the state of Ohio during 2010: output, value added, labor income, employment, and tax. The impact results of the first four measures are summarized in Table 2 by the direct, indirect, induced, and total effects. Again, the tax impact will be discussed at the end of the section.
Table 2. Economic Impact in Ohio, 2010

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Output ($)</th>
<th>Value Added ($)</th>
<th>Labor Income ($)</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Effect</td>
<td>85,128,453</td>
<td>49,266,582</td>
<td>34,589,453</td>
<td>552</td>
</tr>
<tr>
<td>Indirect Effect</td>
<td>31,290,924</td>
<td>17,461,941</td>
<td>10,707,774</td>
<td>218</td>
</tr>
<tr>
<td>Induced Effect</td>
<td>39,260,023</td>
<td>23,711,168</td>
<td>13,202,872</td>
<td>355</td>
</tr>
<tr>
<td>Total Effect</td>
<td>155,679,400</td>
<td>90,439,691</td>
<td>58,500,099</td>
<td>1,125</td>
</tr>
</tbody>
</table>

The economic impact is presented in $2010. All numbers have been rounded to the nearest whole number.

**Output Impact**
Output is an estimate of the total change in output produced in Ohio due to the activities of the companies. Output impact in 2010 amounted to $155.7 million (in $2010, Table 2). Of that, $85.1 million (55%) is accounted for by direct production of goods and services by the companies. An additional $31.3 million (20%) is indirect impact—goods and services produced in the state to support the activities of the companies. The induced impact of $39.3 million (25%) measures the value of goods and services produced in the state to satisfy the increased demand by households throughout the economy.

**Value-Added Impact**
Value-added impact corresponds to gross regional product. In 2010, the value-added impact in the state from the companies was $90.4 million (Table 2). Of that, $49.3 million (54.5%) is attributed to direct impact, $17.5 million (19.3%) to indirect impact, and $23.7 (26.2%) to induced impact.

**Labor Income (Earnings) Impact**
The increase in household earnings created by the companies and all their suppliers represents the labor income impact. In 2010, total household earnings in Ohio increased by $58.5 million (Table 2). Of this impact, $34.6 million (59%) resulted from the direct effects of payroll of the companies; $10.7 million dollars (18%) of the total income impact resulted from increased earnings in other industries in the state that supply the companies. The induced income impact of $13.2 million (23%) is due to increased household earnings throughout the economy.

**Employment Impact**
The total statewide employment impact in 2010 attributed to the companies amounted to 1,125 jobs in Ohio (Table 2). Of these, 552 (49%) are the result of direct impact. An additional 218 jobs (19%) were created in industries supporting the companies, and 355 (32%) more jobs were created throughout the economy due to increased employee earnings (Figure 3).
Figure 3. Employment in Ohio by Impact Measure, 2010

![Pie chart showing employment impact measures: Direct Effect (552, 49%), Indirect Effect (218, 19%), Induced Effect (355, 32%), Total Effect 1,125 jobs.]

**Tax Impact**

In 2010 there was an increase of $7.5 million in state and local tax revenues. There was an increase in the federal tax revenues of $10.9 million. The total tax impact for the state was $18.4 million.