

THE UNIVERSITY OF KANSAS
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Lawrence Chamber of Commerce
Economic Development Marketing Program
Impact Survey Report

Prepared for
The Lawrence Chamber of Commerce

by:

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PURPOSE

This survey was conducted for the Lawrence Chamber of Commerce with the intent of determining the impact on the Lawrence/Douglas County economy of firms doing business within this area that have been assisted in some way by the Chamber's Economic Development Marketing Program.

DESCRIPTION OF THE SURVEY

A one-page survey was used to gather data to be used in an Input/Output model. Brevity and simplicity were the goals in designing the survey form in an effort to gain a high response rate. A copy of the form is provided on the next page.

Of the 38 firms identified by the Chamber, 37 were still in business in this geographic area. Of that number, 32 (87%) returned survey forms. A few firms returned survey forms with some data omissions due to privacy concerns. These missing figures have been conservatively imputed based on national averages within industry classifications. All specific figures are being held in confidence by this Institute. Only the combined, categorized and analyzed data will be presented here.

RESULTS

Two measures have been identified within this analysis as being most representative of the collective economic and financial success of the firms included in this analysis and, therefore, the local economy: Income and Jobs. By simple addition, the following income (payroll and benefits) and jobs figures were available directly from the survey forms:

	<u>Income</u>	<u>Employment</u>
Direct effects from firms	\$199,415,325	6,135

Secondary (multiplier) effects account for the addition of more income and jobs as money earned is spent within the community. Details of how this was computed are contained in later sections of this report.

Secondary effects	<u>\$115,838,103</u>	<u>6,405</u>
Total impact from surveyed firms	<u>\$315,253,427</u>	<u>12,540</u>

In order to provide a context in which to consider these results, we have used county data from the U.S. Bureau of Economic Analysis for 1993. The measure closest to "income" in these tables is "Earnings by Place of Work." The measure of employment is the same.

BEA Douglas County Figures	\$941,242,000	49,018
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The 32 reporting firms assisted by the Chamber of Commerce in some form account for the following percentages of income and employment within the Lawrence/Douglas County economic area:

Impact of reporting firms	<u>34%</u>	<u>26%</u>
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ECONOMIC IMPACT ANALYSIS

What is an economic impact analysis?

In order to gauge the economic impact of an event, it is necessary to compare two alternative scenarios. In the context of this study, we compare the actual scenario in which firms assisted by the Chamber locate or expand in Lawrence/Douglas County with a fictitious scenario in which the firms do not operate in Lawrence/Douglas County and no other firms take their places. The economic impact of the firms is measured as the difference between the two scenarios for income and employment.

Economic impact studies also distinguish two broadly defined types of impacts: direct and indirect. In the context of our proposal, direct effects are the income and jobs that result from the operations of the firms assisted by the Chamber. Indirect effects are the jobs and income that result when funds spent within the community create additional jobs, income and tax revenues, in turn creating additional spending. The total effect is the sum of direct and indirect effects.

It should be kept in mind that economic impact studies involve the calculation of direct and indirect effects for two alternative scenarios. This is mathematically equivalent to calculating net direct effects (the difference of direct effects between the two scenarios) and then using net direct effects to calculate net indirect effects.

Measuring Net Direct Effects

Our measurement of net direct effects compared two scenarios. We first needed to measure the effects given that the Chamber-assisted firms operated and continued to operate in Lawrence. For the most part, the information about direct effects came directly from the survey forms. But in a few cases, the firms reported employment but refused to disclose wages or benefits. In these cases, we made use of published data on average compensation by industry to infer the income that the firms generated.

We also needed to consider the alternative scenario in which the assisted firms did not operate in Lawrence. Conceptually, we asked what would happen if all these firms shut their doors. We considered the types of products and/or services that the firms were producing, and concluded that the firms served regional or national markets rather than a purely local market. Therefore, it was reasonable to assume that employment and income would disappear from Lawrence/Douglas County if the assisted firms closed down. This contrasts with the case of firms that serve local markets. For example, if a grocery store goes out of business and local demand for groceries remains unchanged, other stores will add business and employees or a new store will open up.

We also made an inference that two part-time employees were the equivalent of one full-time employee, so that the 377 part-time employees reported yielded 189 full-time equivalent (FTE) positions.

The net direct effects are summarized in Table 1. Note that the effects for payroll and benefits differ slightly from the raw survey results, because of the inferences that were made.

Table 1
Net Direct Effects of Chamber-Assisted Firms

	\$ Payroll	\$ Compensation including benefits	FTE Employment
Raw Survey Results	147,414,436	197,273,428	6,135
Inferences	<u>1,599,997</u>	<u>2,141,897</u>	<u>0</u>
Net Direct Effects	149,014,433	199,415,325	6,135

Methodology for Measuring Indirect Effects

Indirect effects occur when money is recycled within a community. For example, employees of the Chamber-assisted firms will spend some portion of their income at local businesses, providing a second round of jobs and income within the local community. At the same time, the Chamber-assisted firms will purchase some portion of their supplies and other inputs at local businesses, also generating jobs and income in the community. By their very nature, indirect impacts cannot be measured precisely; they can only be estimated based on the net direct impact.

The standard method for estimating indirect impacts is by use of *multipliers*. Technically speaking, a multiplier is the ratio: (net indirect plus net direct effects) / (net direct effects). Multipliers differ by industry and by size of the community.

The validity of an estimate of indirect effects depends on the methodology employed to derive the multipliers. The best method for estimating multipliers is to use an input-output model developed specifically for the region studies. IPPBR has developed computer programs to estimate multipliers at the regional and county levels. These programs depend on county-level employment and income data. We used these computer programs to estimate multipliers for Douglas County broken out by industry. Data limitations prohibit the construction of reliable multipliers for any region smaller than a county.

Measurement of Indirect Effects for Douglas County

There are three sources of indirect effects of the Chamber-assisted firms:

- 1) consumer spending due to wages paid by firms,
- 2) expenditures on supplies and other inputs by firms, and
- 3) expenditures on capital goods by firms.

Each of these types of indirect effects needs further elaboration.

Consumer spending. We started with the payroll and benefits reported by the firms. Together, payroll and benefits form employee compensation. We then looked at national ratios of compensation to consumption of various types of goods and services. (Local data on consumption patterns is not available.) Once we broke down consumption into its various components, we needed to consider the degree to which consumer purchases were local. The determination of whether a purchase is local

depends not only on where the consumer buys the good or service, but also on where the good or service is produced. For example, if a person buys a new automobile in Lawrence, only a small portion of the expenditure is local - the retailing service. The bulk of the purchase supports wages and expenditures in Detroit or some other auto production center. In contrast, if a person gets a dental check-up in Lawrence, a very high percentage of the purchase is local. The dentist's services constitute the bulk of the expenditure. One part of the IPPBR's set of computer programs to calculate multipliers addresses the issue of local purchases. We calculated local purchase coefficients and applied them to the estimates of consumer expenditures.

Supplies and other inputs. Firms provided estimates of total expenditures for supplies and other inputs. We used national averages to break the total down into estimates of expenditures of type of good. We then applied local purchase coefficients to estimate local spending by firms.

Capital expenditures. Firms also provided estimates of their total capital expenditures in 1995. We used national averages to break capital expenditures into type of good, and then applied local purchase coefficients to estimate local spending. To summarize, construction expenditures are largely local, while purchases of machinery are largely from outside Douglas County.

After estimating spending from the three sources above, we applied our industry-specific Douglas County multiplier to find indirect expenditures, income and employment.

Results of the Impact Analysis

Overall, the firms that have been assisted by the Chamber of Commerce are responsible for over \$300 million in income and over 12,000 jobs in Douglas County. The average multiplier for income for this set of firms was 1.58, indicating that for each \$100 of direct compensation by the firms, another \$58 was generated in Douglas County as income was spent and re-spent. The average multiplier for jobs was 2.04, indicating that each direct job created approximately one additional job in industries that supply the original firms or in industries that provide consumer goods and services.

Table 2
Direct, Indirect and Total Impacts

	\$ Compensation including benefits	FTE Employment
Net Direct Effects	199,415,325	6,135
Net Indirect Effects	<u>115,838,103</u>	<u>6,405</u>
Total	315,253,427	12,540
Multiplier	1.58	2.04