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Draft Final Report

Total Economic Impact of The Upjohn Company
on Kalamazoo County, 1987

by
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For many years Upjohn has determined the direct economic impact of the company on the local area. For the first time last year I calculated the indirect impact of Upjohn on Kalamazoo County using a regional economic model maintained by The W. E. Upjohn Institute for Employment Research. The indirect impacts capture the total effects of Upjohn on local jobs, income, or goods and services purchases outside the company. The estimates for 1987 of the indirect effects are:

- Jobs..... 6,934
- Income..... \$179.1 million
- Goods and Services Purchases..... \$438.1 million

The total economic impact of Upjohn on Kalamazoo County with respect to jobs is the sum of the direct effects (Upjohn employees of 7,907) and the indirect effects (6,934 jobs created outside Upjohn), for a total of 14,841 jobs. Similarly, the total economic impact of Upjohn on Kalamazoo County with respect to income is \$482.9 million, the sum of the \$303.8 million of direct income to Upjohn employees plus the \$179.1 million of income created outside the company.

Sometimes these total impacts are stated as a ratio with respect to the direct jobs or income, generally known as employment or income multipliers. Thus, Upjohn's employment multiplier is 1.88 (14,841/7,907), meaning that each Upjohn job creates 0.88 jobs somewhere else locally, while the income multiplier is 1.59, meaning that every dollar of income at Upjohn adds another 59 cents of income somewhere else locally. The multiplier estimates are slightly lower this year relative to last year because of the decrease in local capital investment and the correction of a minor double counting error in the Upjohn data for goods and services purchases.¹

The indirect economic impacts of Upjohn are combined with the direct spending which has always been a part of the Upjohn report on its impact on

¹Goods and services purchases last year were treated separately from auto rentals, hotels, air travel, and the airport fuel flowage fees, whereas it turns out that the Upjohn data for goods and services purchases actually include these four items.

the local community. For convenience a summary of Upjohn's 1987 facts and figures follows using last year's format:

Wages, Salaries, estimated fringe benefits, ² and development program.....est.	\$434.8
Taxes (local).....	14.4
Dividends.....	5.6
Capital Expenditures.....	112.9
Goods and Services ³	110.8
Contributions.....	2.8

While Upjohn has called the sum of this direct spending, total local direct spending (\$681.3 million), it should be understood that there is some overlap between the indirect effects that I have calculated and the direct effects reported above.

Specifically, my estimates of the indirect effects, as stated earlier, summarize the effects of Upjohn on the local economy outside the company with respect to jobs, income, or goods and services purchases. Thus, the \$110.8 million of Upjohn spending on goods and services are part of the total indirect goods and services purchases of \$438.1 million that I calculated. Moreover, it should be recognized that the \$179.1 million of income created outside Upjohn is also a part of the 438.1 million of purchases of goods and services, since firms outside Upjohn pay wages and salaries out of their total sales, not in addition to those sales.

Thus, Upjohn's total economic impact is the combination of Upjohn's calculation of the direct effects plus my calculations of the indirect effects, without any double counting. This total impact amounts to Upjohn's \$681.3 million of direct spending plus my estimate of the indirect purchases of goods and services of 438.1 million less the \$110.8 of goods and services purchases counted by Upjohn as a direct impact. Thus, Upjohn's total economic impact in 1987 is \$1,008.6 million.

²Fringe benefits were estimated assuming the ratio of fringe benefits to wages and salaries from 1986 remains the same in 1987. Specifically, estimated fringe benefits for 1988 are \$127.5 million, the ratio of \$112.9 million paid in fringes in 1986 to income of \$269.1 million in that same year times 1987 wages and salaries of \$303.8. The actual data for 1987 fringe benefits can be substituted for the estimated data when that data becomes available.

³Includes auto rentals, hotels, air travel, and airport fuel flowage fees within total goods and services.

I recommend that Upjohn maintain their current method of reporting direct spending because these expenditures are generally based on verifiable data, whereas my estimates are approximations. It should also be reiterated that Upjohn's total economic impact can be summarized as the company's impact on jobs or income in the county separately from the itemization discussed above.