

## **Measuring the Economic Impacts of Buy Local Campaigns in Iowa**

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*Abstract: In Iowa, both in urban areas and more rural territories, there is a general awareness of sales leakages. These leakages take the forms of out-of-region intermediate input purchases, overall household and institutional imports, and the normal regional competitive losses in small communities to neighboring trade centers. As an economic development service extension, we have developed a useful prototype for measuring regional import substitute opportunities and identifying the potential regional gains from such a campaign. This paper will describe the basics of the approach using IMPLAN along with an example of a recent buy local report.*

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### **Introduction**

1969 was the centennial year for Flandreau, S.D., the town where I attended high school. There were beard-growing contests, threshing bees, an all-schools reunion, and pioneer-life re-enactments. There was also a concerted effort for the entire year to “Shop here, it pays!” as small signs in local store windows proclaimed. Interstate 29 was just finishing up allowing easier access to the bigger cities of Brookings to the north and Sioux Falls to the south. Pipestone, a mere 15 miles away in Minnesota, had, unlike South Dakota, no sales tax on food and clothing. Local merchants knew that sales were leaking. And there would not be a better time to promote the city than during the centennial celebration.

In the mid-1980s there was a tremendous upheaval in rural merchandising in Iowa. Coinciding with the massive structural economic re-alignment associated with the farm-debt crisis, the state, like a lot of other agriculture states, suffered huge losses in the number and distribution of rural retail and service activity. Iowa lost a full third of its grocery stores during that tumultuous decade. Similar if not greater losses were realized in all manner of local retailers to include shoe and apparel sales, hardware and building material, auto dealers, and of course, farm related merchandisers. The combination of structural, demographic, and social re-adjustment in rural areas in this time was profound and absolutely beyond the remedy of a buy local campaign. Many traditional local businesses were hanging on for their lives. Most lost.

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Resurgence in buying-local in our area began in the early part of this decade not in our small struggling communities, but in Omaha, by far the largest of our nearby metropolitan competitors in Iowa. Never to be outdone, Des Moines followed suit. These big-city initiatives were followed in turn by several other Iowa cities that were smaller in size, but regional trade centers, nonetheless. These efforts represent a growing awareness of the degree and value of economic linkages that firms have with one-another. Most interestingly, both the Omaha and the Des Moines examples strongly urge local industry to purchase intermediate needs from area producers. They are not as interested in the household spending dimension perhaps because they already enjoy prodigious export retail and service sales to large trade territories. Instead, what these communities are both doing is trying to maximize regional inter-firm transactions with an eye towards bolstering local production through import substitution and capturing the multiplied-through effects of that shift.

In both examples, their larger-area chambers of commerce have taken the lead to produce the statistics to make their cases, to organize business leadership around the promotional effort, sign up participating industries, and then to engage in an actual multi-media and event campaign to maximize their efforts. Omaha has for years had a campaign called “Buy the Big O,” an annual, regional trade fair where local industries promote their goods and services to others.\* The Des Moines effort is called “Buy into the Circle,” where the circle is the ostensible ring of affiliated communities surrounding the city of Des Moines. In both examples, elements of regional industrial accounts were used to generate their target values. Both are trying to stimulate an increase in intra-regional purchases by 5 percent. Similar efforts have also been launched in Creston, Atlantic, and Marshalltown, Iowa, and we have been contacts for technical assistance by Rochester, MN, officials, rural business specialists at the University of Minnesota, as well as chamber and university representatives from Ohio.

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\* Persons versed in popular literature during the 1980s and 90s will know that the “Big O” refers to something else entirely. One wonders if the folks in Omaha knew that. Or, maybe they did!

## **The Process**

Our direct participation in this whole process began during the Des Moines campaign, which involved a review of the relevant activities of Omaha, as we knew them, and then developing an approach to the problem that seemed reasonable. We did not do the analysis for the Des Moines initiative; we only advised their chamber of commerce staff. That process, however, yielded some cautions that we felt needed to be articulated, and compelled us to develop protocols for conducting this kind of technical assistance in support of rural communities and in keeping with our mission to help promote regional economic gains. In particular it required us to pay attention to the capacities in our IMPLAN modeling systems and data sets, to align those data sets properly, to differentiate cleanly among the types of imports that were to be measured, and then using reasonable procedures determining the upper limit of an import-substitution economic impact initiative. The first part of that process involved evaluating what both Omaha had done and what Des Moines had done to arrive at their target numbers and to come up with their estimate of 5 percent import substitutes.

## **Baseline Values**

The Omaha and Des Moines approaches were different and initially involved identifying vastly different amounts of imports relative to their respective economies. We can identify several opportunities for gathering I-O data for either import substitution or other local economic activity promotion.

1. Gross industrial intermediate import values from IMPLAN can be estimated by
  - Multiplying each industry's output times its Type I multiplier to arrive at total locally supplied input purchases, and
  - Subtracting that amount and value added to arrive at the gross value of payments to governments, institutions, and imports.
  - Last, ratios of imports to locally supplied goods can be calculated to determine specific industrial commodity and service import dependence.

This approach over-states imports because institutional payments and payments to capital and depreciation are also contained in that remainder. Still, it is useful to a point because it helps to quickly identify which industries are potentially the largest importers and the magnitude of payments made external to the regional economy. It then follows that those would be industries that could rank very high on a local

import substitution list were one to target specific firms. A cleaner estimate of total commodity imports from the model can be obtained by cross-tabulating the massive detailed industry by industry social accounts matrix in IMPLAN.

2. In the case of Des Moines, city officials used IMPLAN to identify the total intermediate purchases.
  - Specifically, they downloaded the “commodity trade” report in the model for their study area to determine the intermediate imports. Those estimates from IMPLAN were then summed to arrive at their 5 percent import substitution amount.
  - Next, the analysts sorted the data from highest to lowest to compile a list of total major commodity imports to develop a scenario.
  - Then they allocated the entire 5 percent import substitute amount over the 30 commodity producing industries using weights *in proportion to each commodity's share of the total of the sample of 30*. This represented nearly 88 percent of all import amounts and was used as the commodity “sample” for the subsequent analysis.
3. Our contribution to standardizing this process entailed adding institutional (primarily) imports and lowering the targeted value to include only reasonably achievable import substitutes.
  - The commodity trade summary identifies the amount of commodities by type that are estimated to be imported into the region by both industries as intermediate goods and by institutions (hereafter households).
  - We next, for both lists of commodity imports, align import types with commodity producing industries in the region of analysis. This is done with a table of the region’s social accounts where there is a value greater than zero in industrial output. We delimit our import substitution assessment to only commodities for which there is a producer in the region. Our regions cannot import substitute automobile production, medicine manufacturing, oil refining, mined goods, or many other specialized commodities -- those values should be excluded.\*

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\* In the regional targeted industry analysis that we do for multi-county regions in the state, which also has an import substitute component, we do not *a priori* exclude commodities for which there are no local producers. In that analysis we do additional analysis to determine if regional demand is sufficient to entice new firms into the region to meet that demand.

- That reduces our potential import total, and we take 5 percent of that amount, respectively, for both intermediate and household imports.
- Last we sort the data, again respectively, and identify the top 20 commodities for each dimension of the analysis – in our cases usually over 80 percent of the total potential imports. The aforementioned 5 percent value is then applied *in proportion to each commodity's share of the total of the sample of 20* to give us our weighted input values into the model.\*

### **Modeled Amounts**

Our sifting and decision making process gives us a ranked amount of imported commodities that match with existing suppliers. This group of 20 commodities is intended to be representative of the import substitute potential for the entire schedule of commodities from which the original 5 percent value was determined. Those amounts are entered sequentially into separate runs that shock the I-O system, first for the intermediate values and next for the household values. Separate output statistics are compiled for each run and profiled in the report to the community.

### **Case Study: Marshalltown, Iowa, Our Current Technical Service Approach The Region**

Marshalltown and Marshall County Iowa are roughly 60 miles from the Des Moines metropolitan area. The city has a long manufacturing heritage with both food processing and high value electronic products contributing to their economic base. Like most medium size communities, especially in the Midwest, growth prospects are dim and the community is losing retail, service, and population shares. To underscore their vulnerability, the city of Newton, just 30 miles to the south and home to the headquarters and the flagship plant of the former Maytag Corporation, is coping with the impending shut down of all operations by the end of 2007. The continued presence of Lennox Industries, a major employer and a leading manufacturer of heating and cooling equipment, is considered iffy at best by many. It is a regional trade and service center, but it suffers significant trade leakage of all sorts to four different metropolitan

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\* More aggressive analysts can target both the importing industries and the major commodities targeted for substitution by processing the industry and institution import matrices from IMPLAN. A cross-tabulation of those data would allow the analyst to not only identify import commodity type, but, proportionately, which industry imported those commodities. That intelligence could be used to assist in the identification of industries that would be more likely to contribute to the import substitution goal than others.

economies within 60 miles of the community. The local chamber of commerce asked for and received a buy local analysis.

### The Analysis

The analysis relied upon the default values for the 2003 economy that were part of the IMPLAN data set. From the commodity imports report we discovered that industry is estimated to need nearly 1.2 billion in imports, and households and institutions another \$616 million. Total estimated commodity imports were \$1.8 billion. In perusing the data, we discovered that, due to the presence of a large meat packing operation, the region was importing a very large amount of swine. We assumed that the regional agriculture economy was producing to capacity and that no increment in sales was possible and we excluded all agricultural imports from the basic table.

Next we filtered for non-ag commodities for which there were identified local producers and not. This reduced the value of commodities for which a substitute sales was possible down to \$603 million, just a third of the original value. Taking 5 percent of that amount gave us an import substitute target value of \$30.16 million. Table 1 demonstrates the filtering and decision making results. For example, out of \$1.2 billion in intermediate import demand, \$370 million were agricultural commodity related, and \$454.2 million were commodities for which there was no local producer. This reduced our feasible import substitution amount to \$375 million, just under a third of the original commodity import amount.

**Table 1. Commodity Import Data for Marshall County, Iowa.**

Imports	Intermediate	Household and Institutional	Total
Nonagricultural Commodities Produced in the Region	374.99	228.15	603.14
Nonagricultural Commodities Not Produced in the Region	454.21	379.28	833.49
All Agricultural Commodity Imports	369.47	8.47	377.94
Total Commodity Imports	1,198.67	615.90	1,814.58

Import substitute amounts were allocated to the top 20 commodity producing industries regardless of the feasibility of that industry having an increase in sales regionally in

order to come up with estimates of the potential region-wide economic impacts.\* The data can be organized, of course, to separate out the direct and indirect consequences distinct from the anticipated induced or household effects.

Table 2 summarizes the two sets of findings for Marshall County, Iowa. The 5 percent goal in intermediate sales would yield the equivalent, at current staffing, of 148 jobs paying \$5.56 million in area labor incomes. The 5 percent goal on the household side would directly support 114 jobs making \$3.3 million in labor income. Working through the entire scenario through indirect and induced activities yielded a total of 385 jobs paying \$12.23 million in labor incomes based on nearly \$40 million in total industrial output in the county.

**Table 2. Summary of Marshall County, Iowa, Import Substitution Economic Impacts**

Intermediate	Direct	Indirect	Induced	Total	Composite Multiplier
Output*	18,749,503	3,171,415	3,031,060	24,951,977	1.33
Labor Income	5,555,880	1,146,891	985,410	7,688,181	1.38
Jobs	148	37	41	226	1.53
Household					
Output*	11,407,350	1,826,154	1,789,627	15,023,131	1.32
Labor Income	3,284,956	672,619	581,800	4,539,374	1.38
Jobs	114	21	23	159	1.39
Total					
Output*	30,156,853	4,997,569	4,820,687	39,975,109	1.33
Labor Income	8,840,836	1,819,510	1,567,210	12,227,555	1.38
Jobs	262	59	64	385	1.47

\* Retail and wholesale output represent margin values

### Local Implementation

The local chamber in this case has come up with a marketing plan called “Target 5” replete with a logo of an archer and a target. There are three important dimensions to their efforts: first they need to both promote and gain acceptance of the economics of the concept. This involves perhaps less selling of the potential economic impact values

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\* There are categories like real estate where payments are made to external property owners, the management of companies, telecommunications, securities, telecommunications, or insurance carriers where the probability of expanding local output sales are unlikely. Still, these firms are used to estimate the potential for growth as surrogate indicators of the import substitution potential regardless of the feasibility of the prospect.

and more of gaining broad community awareness about the regional economic outcomes of buying local.

The second dimension is organizational. This local chamber as the primary business group in the community must organize and develop leadership and buy-in on this issue. It is one thing to say it, another to support it, and another to actually do it. Developing strategies for actually effecting increases in inter-industrial purchases, enhancing regional linkages, as it were, are yet to be developed and implemented. The local chamber on this issue in the area has been looking to the Des Moines experience for guidance and for ideas.

### **Case Study: Omaha and Des Moines, Contrasts and Similarities**

Regional leadership on enhancing local industrial linkages clearly resides in the City of Omaha. Their Buy the Big O campaign has been going on for years, and its entire focus has been to enhance business to business interactions through an annual trade fare. In 2003 the city quantified their potential. They hired a private firm to estimate import amounts, arriving at that time at a total of \$6.2 million.\* From that estimate they derived a 5% campaign that they claimed would ultimately create 15,000 jobs. A broad-based promotional, data base, industrial and business buy-in campaign followed.

The campaign was extended to simply the “O!” campaign in 2004. That effort was a multi-dimensioned exercise intended to develop area promotional merchandize (with an O! on it), to further the potential for inter-industry product awareness, to broadly market the city and its industrial potential to itself, and generally, to carry on from their annual trade convention. Their effort is geared towards marketing and communications within the region.

The Des Moines implementation example aligns better with what is going on among the smaller communities in the state. Still, if imitation is the sincerest form of flattery, Des Moines indeed flattered Omaha. First, like Omaha, their emphasis maximized inter-industrial transactions in the name of import substitution. When they were informed that, as a practical matter, their regional institutions (home of city, county, and state government, federal facilities, and other significant institutions) and households were

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\* The consultant Ross Boyle, Growth Strategies Organization, Inc., was hired for this project. We are unsure how that amount was arrived at. Our own analysis of just Douglas County, Nebraska, found, for 2003, intermediate imports in excess of \$11 billion.

also likely responsible for very large sales leakages, the persons organizing the effort showed little interest in pursuing that angle. Instead, the effort was intended from the beginning to promote more business to business interaction. In short, the Greater Des Moines Partnership of area chambers focused their efforts on developing member leadership and activity on the topic, getting broad buy-in from area businesses, and developing their technical assistance capacity.

Their analytic foundations were also transparent. Their arrival at target numbers and commodity values depended on a set of existing estimated regional social accounts from Implan and an analysis of those data. Once compiled, their compilation of potential import-substitution economic impact values followed in straightforward fashion. Once the analytics and economics were satisfactory to the group, they proceeded to the internal and external promotional phases of the projects.

The implementation of the proposal was spearheaded, with staff assistance, by a committee of chamber members – actual business leaders. They first sold the initiative to the membership at large, and then designed and implemented the early promotional efforts. After the initial research was conducted by staff, they first engaged in a media campaign complete with television and radio ads. To this was added a “Buy into the Circle” web site and the development of a member data base. Next, they sought and received pledges by businesses in the community to try to buy local from commodity inputs, to services, to basic office materials, and even banking and other financial activities. The popularity of the program was impressive. The organizers originally planned to sign up 100 participating firms in the inaugural year – instead they tripled that amount.

### **Evaluation**

Are these efforts effective? It would take extremely careful measurements to document, in the case of the Des Moines Metro or Omaha, two rapidly growing economies, substantive shifts in regional product attributable to this effort. After all, one of the I-O hallmarks of regional growth is enhanced linkage opportunities and, all things equal, higher incremental Type I multipliers. Growth by its nature proportionately reduces external demand.

For our struggling, smaller regional trade centers the issue is different. These places exist within substantially reduced broad regional economic capacity. They are places

that consolidated trade and services from surrounding smaller cities, but are not able to compete with larger metropolitan trade areas. They are also economies that are less diverse and exhibit over time fewer and fewer opportunities for inter-industrial transactions. Can a buy local campaign assist in local stability? Also, again, can we partition-out the re-captured increment to local product that is the result of the effort?

A community economics specialist would likely inform both cases, the growing metropolises and the struggling regional trade centers, that maximizing the incidence of transactions among area businesses is an important part of either enhancing or retaining local economic energy. There are, of course, regional specializations and advantages, unique commodity demands, or other industrial factors that simply preclude feasible import substitution. Still, from the research conducted and the mathematics employed, you can say that if you achieve a negative shift in the amount or proportion of regional imports, you can at least infer positive economic outcomes.

There are, however, very limited data from which to even attempt to measure efficacy. County level data from the BEA or County Business Patterns give us a good idea of long term trends and patterns of change, but teasing out the discrete effects of a regional “intervention” strategy is certainly beyond the analysis of highly aggregated job or earnings statistics. Some states, like Iowa, do compile relatively detailed and complete statistics on retail and service sales, as they are subject to sales tax accounting, many entities are not measured. A dimension of buying local could be assessed using those statistics, especially if a local data base identified the kinds or names of firms that were participants in the process, although with one or just a few observations one would be extremely careful about inferring too much.

Our advice to the regional chambers is that they are in the best position to tap into information that both describes the behavioral changes among industry participants and measures the amounts of change. A simple periodic survey instrument for firms that had pledged to buy local could gain at least three broad areas of information: the amount of local buying shifting that the firm claims, the kind of purchases that are being made, and the amount of new or increased sales that they believe are resulting from their firm as a consequence of the program.

Beyond straightforward direct data analysis, however, the general advantages of a buy local effort are

- Demonstrable enhancements of area economic activity under an import-substitution rubric.
- Increased economic activity and trade-related communication among local businesses.
- Opportunities to develop inter-industry data bases for networking and cross-promotion.
- When households are added to the measures, there is the chance to emphasize the importance of household economic decision making on the regional economy. There is the opportunity to identify and itemize for households their broad purchasing power – that old-fashioned “shop local” campaigns only target a very small part of what consumers purchase.
- For the local chamber of commerce or economic development entity it creates a local service example distinct from chasing firms – it fits nicely into the category of membership services and promotion.
- Great opportunity for community economics educational programming from extension and other community service specialists.

There are drawbacks. Concerted efforts by booming metropolitan areas to keep more of what they already enjoy an advantage in appear hugely selfish to fringe communities. That was an acknowledged gripe in the Omaha example, and chamber leaders responded by softening the rhetoric of their campaigns, broadening their recruitment in the buy local initiative to include regional businesses, and working to directly involve bordering communities in the initiative. That was less of an issue in Des Moines as their approach was organized region-wide and did not have the highly localized message (Buy the Big O!) that Omaha deployed.

An interesting drawback involves presenting to local merchants and leaders the relatively low multipliers that are in effect for most industries. Whether by accident or by design, local merchants and economic development folks latch onto two phenomenon that they think is important. The first is something called money turnover. A person will say something like, “a dollar spent locally will turn over 5 to 8 times.” Related to this comment is the popular idea that there is a local money multiplier of, according to one small area chamber executive, “from 4 to 5.” In their minds, a dollar spent locally leads to \$4 or \$5 of multiplied through sales. Many really believe that money spent locally multiplies like rabbits. And countering those assumptions with

charts, math, and schematics often actually undermines our intellectual authority on the matter. This is especially irksome to local merchants, an issue made worse when we introduce them to the idea of margined sales. When push comes to shove, local folks will believe the person with the biggest numbers. Otherwise, we leave them with a sense of economic development cognitive dissonance. The service experts tell us one thing, our leaders tell us another, and our eyes tell us something else. Whom to believe?

In the end, regionally or statewide, buy-local efforts have the potential for energizing and helping to focus local development efforts, work to help industry understand their mutual interdependencies, and create tangible growth benchmarks for communities.

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