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Baiting the Hook: Targeting Economic Development Monies More Effectively

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INTRODUCTION

The literature on economic development programs for state and local governments is increasingly recognizing the need to target monies on specific kinds of firms and industries and to establish narrowly focused development strategies both to take advantage of local assets and to address local economic, social, and political needs. The notion of "shotgun" approaches to corporate recruitment, offering cafeteria-style packages of relocation incentives, is giving way to the strategy of focusing recruitment efforts on specific kinds of firms and providing individualized incentives to choose particular sites or communities. The zeal for development at all costs and in all areas, in other words, is waning although the enthusiasm for some business sectors, such as "high-technology" firms, is still evident in many communities.

There are numerous reasons why that adjustment is being made in recruitment strategies. First, the leveling effects of federal and state tax structures reduce the burden of state and local taxes through tax credits, tax abatement programs, and other special financing programs. Therefore, many economic incentives to choose particular locations are of minimal effect in the decision-making process, although reductions in federal transfers to state and local governments may increase the importance of tax climates. (Shannon and McDowell, 1985:7) Second, the diffusion of economic development policies
encourages governments to study the programs of other jurisdictions and copy the more successful tactics. Therefore, effective recruitment strategies will only provide shortlived advantage and governments will have to concentrate on the incentives that can tip the balance in favor of their communities rather than attempting to gain long-term advantage through innovative, but untried, strategies.

Third, unfocused and broad approaches to recruitment are much more expensive to maintain and harder to defend when budgets are tight and concrete and immediate results are demanded. Development monies must be spent effectively and financial commitments and programmatic efforts must be considered long-term. Fourth, increasingly communities are becoming aware of the need to seek specific kinds of industries. They are seeking: (1) "clean" industries that will not threaten the quality of life and reduce the attractiveness of their localities for other firms and industries; (2) "proportionate" industries that will not overtax the infrastructure and other facilities in the community; (3) "healthy" industries that will be stable fixtures in the local economy; (4) "productive" industries that will provide the right kinds of employment opportunities and steady payrolls; (5) "familiar" industries that can employ laid-off workers and those with common skills; (6) "inobtrusive" industries that will not disrupt the economic and social patterns of the communities; and (7) aesthetically "attractive" industries that can fit the self-image of the residents and become imbedded in the community.

Fifth, there are strong indications that the major factors influencing many site selection decisions are beyond the reach of public policy-makers. The manipulation of the aesthetic qualities of a location, the proximity to everything from natural resources to customers to educational institutions, the availability of museums and art galleries, and so on, may be either beyond the capabilities of state and local governments (or any government, for that matter) to provide or too expensive to warrant serious consideration.

Sixth, the impetus beyond many major recruitment drives is often a set of very specific economic problems endemic to that community or state and very specific economic goals to resolve
those problems. Therefore, corporate recruitment increasingly is focusing on labor intensive industries when unemployment is high, diverse industries when there is too much dependence on a few or on declining industries in the community, manufacturing or service industries when they seem most appropriate for the available labor force, and so on. The effective corporate recruiters, in other words, are the state and communities that can provide just the right package of inducements to firms to tip the balance in favor of their sites, making best use of the unique factors in their communities and minimizing the expense of surplus incentives which have little or no impact on the decision to choose a particular site (Smith, 1986:212) while assuring that the industries thus selected are genuine assets to the communities in which they locate.

Meeting those selection criteria is no small task for states and communities, particularly when there is a confusing array of policy and program analyses suggesting the most appropriate recruitment strategies, strong political and economic pressures to be effective recruiters (often with very little consensus on what kinds of firms should be targeted), strong economic and political pressures to include certain development incentives that will also be advantageous to indigenous industries (Stone, 1984; Waugh and Waugh, 1984, 1986), and often few fiscal and administrative resources with which to address the issue of economic development (Daniels, Barbe, and Seigel, 1985:10-11).

Nonetheless, communities and states proceed with the implementation of development programs concentrating alternatively on such things as enterprise zones, free trade zones, industrial park development, job training programs, industrial revenue bonds, tax increment financing and other tax abatement schemes, quality education programs, and other presumed incentives for business relocation. The strength of the commitment to economic development is evident in the financial and administrative resources being devoted to the programs and the discussions of committing even more, such as permitting the investment of pension and other trust funds to economic development. The resources committed, however, are often dissipated in ineffective recruitment efforts, especially inappropriate incentive packages. The major questions in
economic development are how effective can states and communities be in recruiting new businesses and how much scarce resources should be committed to that task. How can state and communities best address the issue of economic development, in other words? The literature is just beginning to catch up with these questions.

**FOCUSED ECONOMIC DEVELOPMENT PROGRAMS**

With as many as 7500 economic development agencies pursuing the same industries (Ellenis, 1983:116) and offering similar incentive packages to lure them to particular localities, the possibility of consistently outbidding other agencies for new firms is rather remote. Indeed, there is growing concern that some localities may be granting such liberal tax abatement incentives that local tax rolls will never realize the anticipated benefits of increased industrial development. The firms may, in fact, relocate before they become property and income tax payers in the community. (Smith, 1985; Waugh and Waugh, 1986) The industries, also, may pose considerable cost to the communities in terms of maintenance of infrastructure, provision of services such as water treatment and police and fire protection, and damage to the environment. Some communities, in short, are simply bidding for industries without considering the long-term impact of a "win."

The literature of economic development offers conflicting advice to state and local communities on where development dollars should be best spent. Good transportation networks, proximity to raw materials and customers, adequate and trained labor resources, venture capital, an "hospitable" regulatory and tax environment, adequate and affordable energy resources, and potential for further expansion are all considered crucial factors in site selection decisions. Nonetheless, there are indications that many of these factors are of only marginal importance to many firms and, particularly, to so-called "high technology" firms.

Based on studies of business relocations in the Chicago area, Smith (1985, 1986) suggests that many firms, especially multi-establishment corporations, use site selection criteria that are
not sensitive to government incentive packages. He concludes that large firms will place their top-level management offices in central cities with easy access to communication and financial networks, second-level administrative offices in suburban locations that are convenient to access and less expensive to maintain, and production units in areas nearer to markets, labor supplies, and transportation. (Smith, 1986:208) The latter, in particular, may be much more vulnerable to corporate "divestment," i.e., shutdown, employment contraction or diversion of capital (Smith, 1985:5) due to factors over which local governments may have no control (Ibid., 18), such as changes in the firm's market or internal financial factors.

Smith (Ibid., 22) suggests that local governments not subsidize business relocations but that they streamline red tape, provide adequate and quality infrastructure and public services, facilitate the acquisition of facilities and land, target specific firms and/or industries, and manage their dependency on the new firms to lessen the ill-effects of outmigration by firms. Professor Smith's recommendations are broader than most.

The rest of the literature on how to influence site selection decisions is quite mixed. Surveys conducted in 1967 and 1972 of utility executives responsible for recruiting industries indicated that tax considerations were becoming less important to most firms, that unionization was less important than the quantity and quality of the available labor force, and that access to raw materials was less important than the availability of financing and educational facilities. (Lynch, 1973) Many of those conclusions have been substantiated by experts more recently. There is good evidence, for example, that tax incentives are of very limited value in influencing site selection decisions. Representatives of the National Association of Manufacturers have testified that taxes are not determining factors in the decisions made by manufacturing firms and similar conclusions have been reached for other industrial sectors by the U.S. Department of Housing and Urban Development and the Joint Center for Urban Studies. (GAO, 1982:10) Experience with "free enterprise zones" has also borne out that conclusion (GAO, 1982; Welles, 1981; Schmenner, 1979), although not all agree
that taxes are of so little importance (see, e.g., Rasmussen, Bendick, and Ledebur, 1982).

A large and growing segment of the literature indicates that quality of life factors, also, exert considerable influence on location decisions. Everything from climate to cultural activities may influence the decisions of businesses. (Student, 1976; London, Crandall, and Seals, 1977; Burstiner, 1979; Rudd, Vigen, and Davis, 1983) Indeed, a survey by Lynch (1973:13-15) concluded that quality of life factors were the most important in site selection decisions with labor quality and cost being a close second. One analysis has suggested that quality of life or amenity factors may be most important in the site selection decisions of "high tech" firms when high-level administrative and technical personnel, who will be moving to the new location, participate in the decision-making. (Waugh and Waugh, 1984) A subsequent study focused on whether quality of life considerations influenced the decisions of smaller firms when the personal preferences of owners and managers might carry greater weight, but the data did not substantiate that proposition. (Waugh and Waugh, 1986)

Other studies have indicated that the criteria used in making site selection decisions may be quite complex, ranging from the "business climate" to the level of unionization to the aesthetic qualities of the location. (Welles, 1981) The expectation is that the configuration of factors may differ from firm to firm and from industry to industry. In a recent study, considerable variation was found among the principal selection criteria used by small, medium, and large "high tech" firms. Medium-sized firms (i.e., gross sales between $140 million and $800 million) indicated the greatest concern for the "intrinsic" factors or those having the most direct relationship to production, such as labor, taxes, raw materials, and transportation. All three categories of firms indicated that amenity factors were of low priority relative to other business concerns. Labor quality and availability were high on all three lists. (Waugh and Waugh, 1986) Those findings were consistent with the findings of a congressional study (Joint Economic Committee, 1982) but considerably different from the criteria suggested by a Conway Data study in 1983. The Conway Data study suggests that "high
tech'' firms seek sites offering (1) an intellectual base, including educational programs; (2) a nucleus of scientific activity; (3) good transportation, particularly airlines, connections; (4) aesthetic appeal; (5) support for research laboratories; and (5) campus-like industrial sites.

The criteria suggested by Conway Data, in fact, are those that have guided a number of state economic development programs such as those being implemented by the state of Kansas (DDED, 1982) and others following the Research Triangle and Silicon Valley development models. Well over half the states are investing in computers for public schools, special science and mathematics programs, research and development programs involving private industries and public universities, vocational education, and special funds to assure venture capital. (Conway, 1983:535) These expenditures offer ample evidence of the lure of "high technology" development. High percentages of states are also investing in training programs, tax abatement strategies, and low interest loans (Ellenis, 1983:121-123), as well as other incentives.

In general, the types of incentives being offered by state and local governments, especially in their packages for "high tech" firms, include programs to:

1. encourage research, development, and technology transfer;
2. develop human resources through customized training and educational programs;
3. increase management training and assistance;
4. generate venture capital and provide specialized financing packages for new businesses;
5. expand and maintain infrastructure and facilities, including industrial parks; and
6. develop active recruitment and information gathering capacities. (OTA, 1984)

In designing their own incentive packages, state and local governments should be considering the kinds of industries and firms that would be best in the long-term for their communities. The major economic development policy question, then, is what kinds of incentives appeal to particular industries or firms? That is the question to be addressed in this article.
METHOD

The Survey

A mail survey was conducted during the fall of 1984 and winter of 1985. Questionnaires were sent to a sample of two hundred of the approximately eight hundred firms listed in the July 1984 issue of Business Week as having high research and development expenditures relative to gross sales. The listing, "R&D Scoreboard," is published annually and uses Standard and Poor's categorizations of firm-types. Firms were chosen from this listing because, while new firms are added each year, the list is reasonably stable. Moreover, because R&D expenditures are usually good indicators of the financial health of a firm, the listing was expected to have a high percentage of firms in "expansion modes," meaning firms likely to consider expansions and relocations. In a sense, the listing may also be taken to be oriented toward "high technology" firms, although not all the firms fit into that category. Firms classified as conglomerates and food industries and firms producing products very closely tied to particular locations were eliminated from the pool. A random sample was taken of the remaining firms.

Mailings were conducted in October and November of 1984 and February of 1985. The sample size was reduced after the elimination of duplication when holding companies and subsidiaries were both sent questionnaires and with the elimination of firms that could not be contacted by mail. Ninety-three firms responded to the questionnaire. Twenty-eight indicated that company policy and/or concerns about the sensitivity of information precluded participation and sixty-five answered some or all of the questions asked. With the aforementioned adjustments, the response rate was approximately fifty percent.

The Standard and Poor's categorizations of firm-types were used to differentiate among the firms in the survey. Because of the large number of categories (32), the firms were divided into four groups: information processing and telecommunications; heavy manufacturing; higher technology, light manufacturing; and "primary industry." The information processing group
included firms producing computers, peripherals, software, and information services, instruments (measuring devices, controls, etc.), semiconductors, and telecommunication services. The heavy manufacturing group included those firms classified as aerospace, appliance, automotive, electrical, leisure time industries, farm and construction machinery, machine tools and industrial and mining machinery, and miscellaneous manufacturing. The high technology and light industry group included firms producing drugs, electronics, and office equipment. Finally, the group of "primary industry" firms included a variety of firm-types that did not fit into the first three categories, such as building materials, chemicals, fuel, metals and mining, paper, and textiles. The last category included most of the firms in the survey that were judged to be restricted to certain kinds of locales and basic industries more closely tied to their sources of raw materials.

The Propositions

While the literature on economic development strongly suggests that there are site selection criteria that are firm- or industry-specific, there are few prescriptions for developing recruitment strategies for particular firms. The exception to that generalization is the list of criteria that "high technology" firms use in selecting sites. There is, nevertheless, considerable conflict in that listing.

The expectation in this survey was that the more "high technology" firms would conform to the patterns suggested in the literature. That is, the authors expected that the information processing and telecommunications firms would be more responsive to incentive programs featuring quality of life factors and university-industry information transfers and cross-fertilization, as well as to some of the more traditional factors such as the availability and skill levels of the workforce. The information processing and telecommunications group was expected to be largely unconcerned about raw materials, proximity to markets, and other "production-oriented" variables.

The heavy manufacturing group was expected to be much
more oriented toward the traditional concerns of labor, state and local regulations, taxes, raw materials, energy costs, transportation, markets and customers than the first group. Given the relatively high levels of unionization in heavy industry and the relatively lower skill levels required, the expectation was that labor costs would be more important to those firms than labor availability and skills. Heavy industries were expected to be much less interested in the amenity factors as well.

By contrast, the expectation was that higher technology, light manufacturing firms would be more interested in the amenity factors than the heavy industries, although perhaps less so than the information processing group. They were also expected to be a little less oriented toward the traditional production concerns than the heavy manufacturing group, more interested in the availability of skilled labor (and less in the cost), and more oriented toward industry-university cooperation and information transfers.

The expectations concerning the last category of firms, "primary industries," were mixed. By and large, the expectations were that these firms would be less technologically oriented, less interested in transfers of information and amenity factors, and more interested in state and local regulations and the traditional production variables.

Data Analysis

In terms of the general responses to questions concerning relocation experience and interests, most of the firms were large and had from several to several hundred plants and offices. Seventy-eight percent indicated that their markets had expanded during the previous five years. Eighty-nine percent indicated that they had relocated some or all of their facilities in the previous two years. Sixty-one percent indicated that they planned to relocate some of their facilities in the following two years. The expectation that the firms would likely be in "expansion modes" was borne out.

How important the firms viewed specific site selection criteria is indicated in Table 1. The firms were asked to assign to each criterion a value ranging from 1, meaning very important, to 10,
### TABLE 1

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Light Manufacturing Firms (Rank)</th>
<th>Primary Industry Manufacturing Firms (Rank)</th>
<th>Heavy Manufacturing Firms (Rank)</th>
<th>Information Processing Firms (Rank)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor, Skills and Availability</td>
<td>2.50 (5)</td>
<td>1.77 (1)</td>
<td>0.00 (9)</td>
<td>3.00 (1)</td>
</tr>
<tr>
<td>Potential for Expansion</td>
<td>3.00 (3)</td>
<td>2.62 (7)</td>
<td>3.00 (1)</td>
<td>3.00 (1)</td>
</tr>
<tr>
<td>Business/Local Regulatory Practices</td>
<td>2.60 (7)</td>
<td>2.69 (6)</td>
<td>2.62 (7)</td>
<td>2.62 (7)</td>
</tr>
<tr>
<td>Cost of Land and Construction</td>
<td>1.90 (2)</td>
<td>2.15 (3)</td>
<td>2.75 (4)</td>
<td>2.75 (4)</td>
</tr>
<tr>
<td>Labor Costs</td>
<td>2.85 (8)</td>
<td>3.17 (10)</td>
<td>3.75 (11)</td>
<td>3.75 (11)</td>
</tr>
<tr>
<td>Tar Climate</td>
<td>1.65 (1)</td>
<td>2.38 (4)</td>
<td>2.67 (7)</td>
<td>2.67 (7)</td>
</tr>
<tr>
<td>Community Social Climate-Pleasantries</td>
<td>3.75 (1)</td>
<td>4.08 (12)</td>
<td>5.42 (13)</td>
<td>5.42 (13)</td>
</tr>
<tr>
<td>Proximity to Academic Institutions</td>
<td>3.30 (10)</td>
<td>4.85 (15)</td>
<td>7.67 (18)</td>
<td>7.67 (18)</td>
</tr>
<tr>
<td>Transportation Facilities</td>
<td>3.99 (9)</td>
<td>4.45 (14)</td>
<td>6.97 (16)</td>
<td>6.97 (16)</td>
</tr>
<tr>
<td>Cost of Living</td>
<td>3.55 (6)</td>
<td>4.20 (14)</td>
<td>5.67 (16)</td>
<td>5.67 (16)</td>
</tr>
<tr>
<td>Access to Markets</td>
<td>2.69 (6)</td>
<td>4.08 (12)</td>
<td>6.97 (16)</td>
<td>6.97 (16)</td>
</tr>
<tr>
<td>Proximity to Customers</td>
<td>3.36 (11)</td>
<td>4.60 (14)</td>
<td>7.67 (18)</td>
<td>7.67 (18)</td>
</tr>
<tr>
<td>Access to Raw Materials/Components</td>
<td>4.06 (11)</td>
<td>4.60 (14)</td>
<td>6.97 (16)</td>
<td>6.97 (16)</td>
</tr>
<tr>
<td>Recreation Facilities</td>
<td>4.50 (14)</td>
<td>4.74 (16)</td>
<td>5.67 (16)</td>
<td>5.67 (16)</td>
</tr>
<tr>
<td>Climate of Region</td>
<td>5.18 (16)</td>
<td>5.50 (17)</td>
<td>6.63 (19)</td>
<td>6.63 (19)</td>
</tr>
<tr>
<td>Energy Costs and Availability</td>
<td>5.50 (17)</td>
<td>5.70 (18)</td>
<td>7.67 (18)</td>
<td>7.67 (18)</td>
</tr>
<tr>
<td>Cultural Amenities</td>
<td>5.70 (18)</td>
<td>6.10 (19)</td>
<td>8.10 (20)</td>
<td>8.10 (20)</td>
</tr>
<tr>
<td>Rank order by means on 1-10 scale</td>
<td></td>
<td></td>
<td></td>
<td>7.00 (18)</td>
</tr>
</tbody>
</table>

Valuation of Site Selection Criteria by Firm-Type
<table>
<thead>
<tr>
<th></th>
<th>Firms Manufacturing</th>
<th>Firms Light Industry</th>
<th>Firms Heavy Industry</th>
<th>Firms Processing Industry</th>
<th>Firms Information Processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preference for Proximity by Firm Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>54</td>
<td>23</td>
<td>30</td>
<td>11</td>
<td>11</td>
<td>33</td>
</tr>
<tr>
<td>46</td>
<td>46</td>
<td>45</td>
<td>33</td>
<td>33</td>
<td>56</td>
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<tr>
<td>0</td>
<td>15</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>56</td>
</tr>
</tbody>
</table>

Note: Columns may not add up to 100% due to rounding.

(In Percentages)
meaning unimportant. While there is a great deal of similarity in how the four types of firms ranked the criteria, there are also important differences. Relative to the expectations noted earlier, the data substantiate some and certainly fail to do so for others. In terms of the quality of life or amenity factors, none of the groups expressed a strong interest, although the information processing group response was slightly more positive and the community social climate and cost of living were in the middle range in most of the rankings. Recreation facilities, climate of the region, and cultural activities were very low on all the lists.

As expected, the availability of skilled labor was high and ranked #1 on the lists of the information processing and light manufacturing firms. Labor costs were very high on the lists of the heavy and light manufacturing groups, #1 and #2 respectively. Those expectations were substantiated, as were the expectations that the information processing and light manufacturing firms would be comparatively less interested in the production variables than the heavy manufacturing and "primary industry" groups. The latter, in fact, indicated the greatest interest in their access to customers and markets, transportation facilities, low cost energy, raw materials, and in the regulatory atmosphere in the community. The relative high ratings given to tax climate by all four groups are somewhat contrary to expectations, given the GAO and other analyses of tax abatement programs and the warnings concerning their overutilization in economic development programs.

In terms of the potential for industry-university information transfers and cross-fertilization, as expected the information processing group indicated the strongest interest. That interest, however, was not strong in comparison to other concerns.

The final item to note from Table 1 is the strength of the rankings. The mean responses were generally lower with greater distance between the means for the heavy manufacturing, light manufacturing, and "primary industry" firms than they were for the information processing firms, particularly for the highest rated criteria. That may indicate greater sensitivity to those criteria in making site selection decisions and clearer preferences among the criteria. The responses of the
<table>
<thead>
<tr>
<th>Rank</th>
<th>Importance of Proximity</th>
<th>Firm Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Primary Manufacturing</td>
<td>Light</td>
</tr>
<tr>
<td>2</td>
<td>Primary Manufacturing</td>
<td>Heavy</td>
</tr>
<tr>
<td>3</td>
<td>Information Processing</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Consulting and Information Systems</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Faculty Research</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Access to University Libraries</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Faculty Consulting and Information Systems</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Access to University Libraries</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Degree Programs for Employees</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Employment of University Graduates</td>
<td></td>
</tr>
</tbody>
</table>

**Table 3**

(continued on next page)
### TABLE 4
IMPORTANCE OF TRANSFER OF SCIENTIFIC KNOWLEDGE BY FIRM-TYPE
(in percentages)

<table>
<thead>
<tr>
<th>Importance</th>
<th>Information Processing Firms</th>
<th>Heavy Manufacturing Firms</th>
<th>Light Manufacturing Firms</th>
<th>Primary Industry Firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Important</td>
<td>24</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Important</td>
<td>24</td>
<td>35</td>
<td>17</td>
<td>25</td>
</tr>
<tr>
<td>Somewhat Important</td>
<td>29</td>
<td>40</td>
<td>33</td>
<td>0</td>
</tr>
<tr>
<td>Not Important</td>
<td>18</td>
<td>20</td>
<td>42</td>
<td>33</td>
</tr>
<tr>
<td>Don't Know</td>
<td>6</td>
<td>0</td>
<td>8</td>
<td>42</td>
</tr>
</tbody>
</table>

N = 17 19 12 12

Note: Columns may not add up to 100% due to rounding.
information processing firms, on the other hand, are more closely grouped which may indicate greater interest in packages of site characteristics.

The importance of locating close to universities is indicated in Table 2. Three of the four categories of firms expressed strong interests in locating close to universities. Although light manufacturing firms would appear to be slightly less interested than the information processing and heavy manufacturing types of firms, the levels were largely consistent with expectations. The low level of interest among the "primary industry" firms would also seem consistent with the rest of the data and with expectations.

The reasons for the expressed interest are indicated in Table 3. Asked to value the particular advantages to be gained by industry-university cooperation and information transfers, the firms generally assigned low values. The greatest interest, by far, was in the employment of university graduates and degree programs for employees, although the "primary industry" firms did not value these advantages very highly. The comparatively highest interest in industry-university interaction among the information processing and telecommunications firms was as expected but the generally low valuations were not consistent with that expectation. Indeed, in some cases the heavy manufacturing firms appeared more interested in the usefulness of university facilities than did the presumed "high tech" oriented firms.

How the firms viewed the importance of transfers of scientific knowledge from universities is indicated in Table 4. As expected the information processing firms ranked the transfers the highest with 47% stating that the transfers were important or very important, but the overall responses were less strong than those for information processing firms. A surprisingly high percentage, 42%, of the light manufacturing firms indicated that the transfers were not important to their operations. The "primary industry," again as expected, did not value scientific transfers very highly.

CONCLUSIONS
How can state and local governments target their economic development monies more effectively? The answer to that question is contingent upon the type of industry or firm a locality wishes to attract. In terms of the kinds of firms included in this study and the current literature on economic development, some recommendations can be made.

For information processing, telecommunications, and semiconductor firms, the most important considerations are the skills and availability of labor. Other factors may enter into the site selection equation and may tip the balance in favor of a particular location, but labor is the primary concern. That includes concerns about training and education programs and, to a lesser extent, transfers of scientific knowledge. In large measure, these factors are consistent with the incentive packages promoted in the literature, although the industry-university relationships do not seem to be important to these firms as the literature would suggest.

For many manufacturing firms, the crucial variables are labor costs, tax climate, regulatory practices, and energy costs and availability. These factors are consistent with the movement of firms to the Sunbelt where there is less unionization of the workforce, generally lower tax rates and business regulation, and lower energy costs. These factors, on the whole, would not appear to be as malleable by state and local governments except to the extent that tax and regulatory incentives may be designed for particular firms or industries.

Light manufacturing firms appear to put greatest emphasis on the skills, availability, and cost of labor, regulatory practices, and tax climate. Training and education programs, as well as tax incentives and regulatory reforms, are the best "bait" to recruit such firms.

The last category, the "primary industries," would appear to be much less influenced by factors amenable to government manipulation. With the exceptions of the strong interests in transportation facilities and regulatory practices, very little could be done by governments. Affecting access to customers and markets and energy costs are beyond the means of most communities.

Given how the firms ranked and valued the site selection
criteria and the relatively low rankings given to many factors such as the quality of life variables, the most effective strategies for targeting monies would seem to be to focus in on programs to develop human resources. Educational and training programs, as suggested by Susan MacManus (1985), should be part of the economic development program. Tax and regulatory incentives may also be offered but with care to avoid excessive and unnecessary, i.e., "surplus," benefits. Investments in transportation facilities and infrastructure in general are consistent with the indicated preferences.

Beyond these generic incentives, a community should focus on the specific needs and interests of the industries targeted for recruitment and develop packages of incentives that may appeal to a number of such firms.

REFERENCES


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