NEW OPPORTUNITIES FOR IOWA:

STRATEGIC PLANNING RECOMMENDATIONS

FOR ECONOMIC GROWTH

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EXECUTIVE SUMMARY AND RECOMMENDATIONS

The State Government Reorganization Bill (S.F. 2175, 71st General Assembly) enacted this year requires the new Department of Economic Development to prepare a strategic plan for Iowa's economic development. This report has been prepared in response to that mandate. It will be the basis for the first five-year development plan. Each year the five-year plan will be revised. Since it is to be a strategic plan, its most important purpose is to define the principles and criteria that should guide legislators, officials, and agency staff as they design and implement policies that impinge on economic development. As an initial step toward a long term strategic plan, this report is less a detailed prescription of what needs to be done to promote growth than a basis and stimulus for on-going discussion and analysis of how Iowa's economic prospects can be improved. Specific policy and operational recommendations are made, but time and resource constraints limit their extent. As the plan is revised each year, policies and operational guidelines can be spelled out in more detail.

State government can significantly influence the course of the Iowa economy over the coming decades. Iowans do have some control over their economic destinies. A development plan must recommend how that control can be exercised in a positive, growth promoting way. To this end, the report discusses issues involved in the definition and measurement of economic development, examines the role of state and local governments in the development process, and presents a framework for designing and evaluating economic development policies. It uses this framework to examine issues and policy options in several areas: financial assistance, information and marketing, technical assistance, education, research, infrastructure, and government efficiency and obstacles to private activity. Recommendations based on these analyses are presented; taken together these recommendations constitute a plan for furthering Iowa's economic development.

The state has been active on the economic development front. A number of programs are in place and working. Given that these programs will continue to absorb considerable resources, a central question is how the state can best use its economic development dollars. Thus, the plan is as much concerned with how existing programs can be made to work better as with the design of new programs.

A. The economic development process

Economic development occurs when there is an increase in the income and product generated within the state. It requires either that more resources (land, labor, materials, and capital) be employed within the state or that existing resources be employed more productively.

The decisions that determine the pace of economic development in a state are made primarily by resource owners (individuals and corporations). In making their decisions, owners of capital take account of the many factors that influence the returns to capital and locate where the expected (or perceived) returns are greatest. An Iowa location is chosen if the present value of the expected net returns to capital is greater for the Iowa location than for all other locations. Among the factors that affect this locational choice are wage rates, taxes, public services, and transportation costs. Quality of life considerations may also be important since plant location decisions are often made by managers who will be living and working at the location.

Similarly, workers locate where they perceive the returns from employment to be greatest. These returns are both monetary and non-monetary; they include after-tax wages, public services, and environmental amenities.

The wages that workers require to work in a particular state depend in part on the taxes that they pay and the public services that they receive. Therefore, governmental policies and environmental factors that affect Iowa's attractiveness as a place to live and work also affect its attractiveness to prospective businesses because they affect wages. Stated differently, we usually think of investment as being the means by which jobs are created. It would be more accurate to say that jobs are created in Iowa as owners of mobile capital and labor decide that it is advantageous to employ their resources in Iowa rather than elsewhere. Jobs are created through the joint decisions of workers and owners of capital. The attractiveness of Iowa as a place to invest depends on wages which depend in turn on the attractiveness of Iowa as a place to work. Making Iowa attractive to workers need not conflict with improving its "business climate."

B. The role of state government

State government influences development as it affects the attractiveness of Iowa as a place for the employment of mobile capital and labor resources and as it affects resource productivity. Resource owners base location decisions on their perceptions of the magnitude and certainty of the return that will be realized in each location. For a given degree of certainty, they will prefer the location that they expect will generate the highest return for their resources. Therefore, state government can promote development if it can either increase the perceived returns from employing mobile capital and labor resources in Iowa or increase the certainty of those returns. It may be able to do so by:

1. increasing public services including infrastructure services and/or decreasing taxes for mobile resources.
2. marketing and providing information that changes perceptions of the returns from locating in Iowa without changing actual returns.
3. changing actual returns with subsidies in the form of financial, technical, job training, and other assistance to both newly formed and existing businesses.
4. altering regulations that affect resource returns.
5. assuring that state policies are seen to be (and are) stable and predictable.

As government affects the magnitude and certainty (variability) of perceived returns from resource use in Iowa, it affects what is often termed the state's "business climate." Improving Iowa's business climate means increasing the perceived returns to mobile resource owners and reducing the uncertainty of those returns.

A location decision may be a decision to build a new plant, start a new business, or maintain or expand an existing business. Policies to influence location decisions may therefore aim at attracting new businesses to the state, encouraging new business start-ups, and retaining and encouraging the expansion of existing businesses.

1. Public services and taxes

The value of public services may be increased relative to taxes for mobile resources in three ways. First, government may become more efficient,

reducing the costs of providing a given package of services. An example would be the consolidation of county governments to reduce costs and taxes. Second, it may redistribute the costs of government, placing a lower burden on mobile resources and increasing the burden on immobile resources. An example would be increasing taxes on land in order to reduce personal and corporate income taxes. Third, government can eliminate activities that do not generate benefits commensurate with their costs. Such cutbacks will reduce public service levels, but the loss of services will be more than compensated by the reduction in taxes. Any of these three means of increasing services relative to taxes makes Iowa government a "better buy" and increases Iowa's attractiveness as a location for economic activity. However, they are all likely to be controversial, because they usually will involve fewer services or higher taxes for some segment of the population. The third measure is perhaps the most difficult to implement since it requires that dollar values be placed either explicitly or implicitly on government services.

2. Information

It is possible that businesses located in other states would earn a greater return if their activities were carried out in Iowa, but they locate elsewhere because they know little about Iowa or they have misperceptions of the costs and benefits of doing business in Iowa. In this case no reduction in the actual costs of doing business is necessary to induce location in Iowa. The only action needed is information that makes clear the advantages of Iowa relative to other states. Included in this category of actions would be information and advertising aimed at changing Iowa's "image" as a place to work and live.

Marketing and information programs can by themselves be effective in attracting business to Iowa only if owners of mobile resources presently have inaccurate knowledge and perceptions of Iowa. Also, it must be possible to clear up these misperceptions through marketing efforts and in doing so make resource owners see Iowa in more attractive terms. Before setting up marketing programs, it should be determined that these conditions for their success are met.

3. Subsidies

The third broad category of actions involves subsidies to business aimed at reducing costs enough to induce its location in Iowa. Such subsidies can take a number of forms: grants, low cost loans, wage subsidies, tax concessions, or public services. Subsidies can be financed by contributions from the private sector or taxes. The effects of financing on development must be considered. For example, if a subsidy is financed by taxes on mobile resources currently located in Iowa, the financing of the subsidy may drive out resources and offset in part or in full the favorable development effects of the subsidy. Note that a subsidy occurs when public services are made available to a business at a fee, charge, or tax that is less than the cost of providing the services.

4. Regulations

State government affects the costs of doing business through regulations and laws that govern private production, contracting, and exchange. Laws may obstruct as well as facilitate exchange, and when they do they inhibit growth and development. Likewise, regulations designed to represent the interests of consumers or the public at large may or may not generate benefits for those groups commensurate with the costs they impose on production activities; when they do not, development is inhibited. An economic development plan should include on-going assessment of the consequences of government regulations and laws for private sector costs.

5. Uncertainty

In addition to increasing the perceived returns from resource use in Iowa, state government can promote development if it can reduce the uncertainty of those returns, at least insofar as that uncertainty is due to instability and unpredictability of government policy, which appears to be increasingly the case. Since job-creating investment is long-lived, businesses considering an Iowa location are concerned about future as well as current regulations, taxes, and public service availability. Tax system stability and predictability is especially important because uncertainty about future tax laws generates uncertainty about future net returns from an investment and therefore diminishes its attractiveness.

6. Limited ability to influence growth

Merely delineating possibilities, as we have done to this point, does not imply that government can have a major effect on development. Indeed, state government's ability to increase employment and incomes by any of the means discussed is limited for several reasons. First, national and international market forces and public policies are the main determinants of the economic environment within which Iowa governments and businesses operate. State government has only a limited ability to affect that environment. Second, inefficiencies in the delivery of public services undoubtedly exist, but they too may be difficult to identify. There are no glaring inefficiencies in Iowa government that could be the source of significant decreases in government costs and in the tax burdens on mobile resources. Third, redistribution of the costs of government away from mobile and toward immobile resources will be limited by considerations of fairness.

State government cannot direct the course of the Iowa economy over the coming decades. It cannot define and expect to succeed in a strategy that is contrary to the pressures of the market place. It can, however, try to identify those pressures and take actions that are consistent with them. Its strategy must consist of taking many actions, each of which promises a slight but favorable effect on economic development. An important, if not the most important, element of that strategy must be the efficient execution of its task of providing public services.

7. Desirability of influencing growth

An individual state will see its economic development policies as desirable if they are effective in increasing economic activity within the state. From a national perspective, however, it is unlikely that greater efficiency (lower costs) in producing the nation's goods and services will follow from location changes brought about by the development policies of individual states. The decisions that determine the economic base of Iowa or any other state are made predominately by individuals and businesses. They have strong incentives to make the best possible use of the resources under their control, and they tend to do so. It is therefore difficult for government to improve upon the outcomes of private decisions. Moreover, even if private decisions are less than optimal, it is difficult for government to

identify the instances in which they fail and take action that remedies the failure.

Many of the economic development efforts of states are necessarily competitive; their purpose is to induce businesses to locate in one state rather than another. The competitive advantage that economic development programs are intended to give a state are often offset by similar programs in neighboring states. Development programs may have no effect on location, and the resources they use may be wasted. This is not a happy outcome, but it may be even worse if efforts to influence location are effective. When businesses locate differently in response to development policies, the result is likely to be higher costs. Businesses are induced to choose higher cost locations because government is covering part of their costs through a direct or indirect subsidy.

Unless state development efforts have the effect of correcting inefficient business locations, the gains of any one state will be mirrored by losses in other states. Nevertheless, states may persist in competitive economic development activities because individual states can gain even if the nation as a whole does not. Also, states may feel that if they do not "meet the competition" they will lose economic base. Thus, Iowa may have to play the economic development game to limit its losses, but as it does, it should pursue national legislation and compacts with other states that would limit the competition.

C. Strategic planning recommendations

The Iowa economy is following the national economy in its recovery from the 1981-83 recession. If the national economy continues its growth, Iowa's economy will do likewise, regardless of whether the state takes actions explicitly aimed at promoting growth.

However, state government can take a number of actions that would likely improve Iowa's growth prospects. This section recommends a set of such actions, which taken together constitute an economic development plan. As a strategic plan, its main objective is to provide direction and orientation for the state's economic development efforts. But operating and administrative recommendations are also made when possible. Each recommended action promises to make Iowa more attractive as a place for employing mobile capital and labor

resources by either increasing the perceived returns from such employment or increasing the certainty of those returns. Because the state has been active in promoting growth, some recommendations are simply that existing programs be continued and improved.

1. General recommendations

This section summarizes recommendations that are intended to orient and guide the economic development policies of the Department as a whole. Subsequent sections review recommendations for specific program areas (information and marketing, research, and technical and financial assistance) and for making state and national policies in several key areas more supportive of Iowa's economic growth.

Development objectives.

The broad goal of the Department's development efforts should be to increase the incomes of Iowans by increasing production and employment in the state. This general goal can be translated into two more specific goals: 1) retain the businesses that presently make up Iowa's economic base and 2) expand and diversify the economic base by industrial recruitment, encouraging the expansion of existing businesses and new business start-ups, and aiding the development and commercialization of new products and technologies.

Diversification. While agriculture and agriculture-related manufacturing are and will remain important parts of Iowa's economy, significant growth of income and employment cannot be expected from their expansion. Growth will require adding new industries and expanding existing industries that are still a relatively small part of the economy. Accordingly, diversification should be a primary and immediate goal of the Department's marketing, technical and financial assistance, and research support programs. Diversification can be promoted by encouraging existing businesses to diversify as well as by attracting and encouraging the start-up of businesses from under-represented industries.

Diversification should be sought as a means to growth and not as an end in itself. Also, diversification should not be underwritten by subsidies. When new industries are added to Iowa's economic base, it should be because Iowa is a profitable and otherwise attractive location for them. Assistance

should not be given to a business under the expectation that continuing assistance will be necessary for its long-term survival.

Retention. Emphasis on diversification does not rule out efforts to retain and expand employment in sectors that are currently a significant part of Iowa's economic base. Those efforts, however, should have a lower priority than actions aimed at expanding industries that are either new to the state or still a small part of its economy. Retaining industry should be secondary to diversification not because jobs in established industries are less valuable than those in new industries. Instead, the reason is that for established industries, there is little need for Department actions to demonstrate the suitability of an Iowa location because the economics of operating in Iowa are presumably well understood. If the basic economics of these industries favor Iowa locations, Department efforts to encourage expansion will not be needed. If Iowa locations are not competitive, then it is questionable whether the Department should provide financial or other assistance to retain or expand the industries. Regardless of its desire to retain jobs, Iowa certainly cannot subsidize on any significant scale a major sector for which Iowa has become a relatively unprofitable location.

Iowa government can perhaps best help in retaining business by operating and carrying out its traditional functions so that government is a good buy--so that there is a favorable balance between the public service benefits enjoyed by potentially mobile businesses and the taxes, fees, and charges they pay to support government. In particular, government should not impose taxes and costs on existing, potentially mobile businesses and their employees in an effort to attract new businesses through direct and indirect subsidies.

Demonstration

Attracting a business representing a new industry to the state or encouraging the start-up of such a business are means of demonstrating Iowa's desirability as a location for that industry. The payoff to policies having such a demonstration effect is potentially greater than just the additional employment and income generated by the assisted business. Therefore, the Department should to the extent possible use financial and other assistance as demonstration grants, their purpose being to demonstrate that Iowa is a profitable and otherwise attractive location for new industries. Once established, that fact should be used in marketing efforts to attract

businesses in the same, or related, or complementary (input-supplying) industries.

Guidelines for development policies

The goals defined above should not be pursued without regard for their cost, which is measured by the value of the resources used in development efforts. Instead, each effort, whether marketing, technical or financial assistance, research or other, should produce current and future gains for Iowans that are at least as great as its costs. These gains may be in the form of higher incomes for owners of labor and capital resources. In addition, there may be a public sector gain if the businesses that locate, retain, or expand their operations in Iowa because of the policy pay taxes, fees, and user charges that more than compensate for any public expenditures necessitated by their operations. Environmental and amenity gains and losses from locating economic activity in the state also should be considered. A policy that increases economic activity in the state may nevertheless make Iowans worse off if it causes sufficient environmental damage. Stated differently, development policies should increase living standards for Iowans.

Targeting

The Department should strive to produce the greatest possible public and private sector income gains for Iowans within the limits imposed by the resources available to the Department. Thus, development efforts should target particular industries, types or size of firms, or regions only if there is reason to believe that such targeting will increase the income gains generated with available resources. Applying this general principle points to the following recommendations.

1. For reasons detailed above, businesses that add diversity to the Iowa economy should be favored over those that do not.
2. Insofar as possible, development policies should be neutral regarding the location of businesses within the state. In particular, availability of the various types of assistance should not depend on where within the state the business locates.
3. There is no basis for favoring one size of business over another independent of other factors.
4. Development policies should aim at attracting, retaining, and

expanding businesses that produce exports or import substitutes. Among such businesses, those that purchase a larger share of their inputs from Iowa producers should be given priority if they can be identified.

5. Businesses that produce products or services that by their very nature must be produced in Iowa should not be the focus of any economic development efforts. Most retail and restaurant services fall into this category.
6. Higher wage businesses should usually be given priority over lower wage businesses. An exception might be a low-wage business that would employ relatively immobile secondary workers, such as secondary workers in a farm household.
7. The objective of making Iowa's economic base larger than it would otherwise be can be served by retaining economic activity in the state as well as by fostering new enterprises and attracting businesses to the state. Therefore, in its assistance programs (financial or otherwise), the Department should not favor out-of-state businesses over Iowa enterprises that may be considering an out-of-state move or expansion.

Building on education

Iowa's education system is nationally known for its quality. The state is at or near the top in key measures of educational excellence. Largely because of the state's slow economic growth, however, many of Iowa's college graduates take employment elsewhere. Compared with states having lower quality education systems, Iowa has a higher outmigration and lower unemployment rates. A national demand appears to exist for Iowa workers.

Iowa's economic development strategies should include efforts to retain productive, well educated persons. Several industries that employ relatively large percentages of professional workers have been experiencing above average growth rates ini Iowa. The state should support the continued growth of these and related industries through its financial assistance and marketing efforts. Similarly, higher technology manufacturing, which also could draw on Iowa's considerable human resources, may offer possibilities for employment growth in the state.

Implementation and evaluation of existing programs

Iowa now has a comprehensive set of programs for promoting economic development; the new Department of Economic Development will not lack tools in its efforts to attract, retain, and encourage the creation and expansion of businesses. Coordinating and improving the administration of these programs should be a high priority objective for 1987. A plan for evaluating each program should be developed, preferably within the next year. Each plan should include a system of monitoring and record keeping that will generate the data needed for evaluation, and it should state the criteria that will be applied. Key to the evaluation of each program are data on its costs and the gains in income and employment that it generates. These annual evaluations will be important inputs to the annual revisions of the Department's strategic plan. A number of more specific administrative recommendations are made in the sections of the report that discuss individual programs.

2. **Recommendations for financial assistance programs**

To assure that financial assistance programs actually promote development, program administrators must determine whether assistance is required for the applicant business to operate in Iowa. If it is, they must then determine whether having the business in Iowa generates gains that warrant the cost of assistance. The report presents a number of recommendations regarding administrative procedures and award guidelines that should be helpful in making these determinations, the more important of which are summarized in this section.

Uniform procedures and guidelines

The fact that all assistance programs have their main effect on the "bottom line" or profitability of a business points to the need for uniform application procedures and award criteria for all state administered assistance programs. Ideally, all applicants for assistance would be required to submit the same information in support of their application, and all applications would be processed in the same manner. Centralized administration of all or most financial assistance programs so that businesses can go to a one-stop service center, recommended by Garfield Schwartz ("Cost and Quality of Production Factors," p. 20), should also be considered. It is recognized that legal restrictions may prevent complete uniformity,

particularly in the case of federally funded programs that have objectives other than state economic growth.

Private and local government matching

The local government (municipality and/or county) and private sector of the community in which the business would locate should be required to share the cost of providing financial assistance as a condition for state assistance. If cost sharing is not required in some or all cases, the guidelines and procedures for requesting assistance should make clear that voluntary cost sharing will strengthen any request for assistance because it can be taken as an indicator of the magnitude of benefits. When calculating the amount of private sector contributions, the investment of the assisted business should not be included. Calculations of the local government contribution should not include outlays that it would make even if the assisted business does not locate in the locality.

Private lender participation

A business seeking state assistance should ordinarily be required to obtain the majority of its funding from private lenders. The willingness of banks and other commercial lenders to supply funds to a business is an important indicator of its economic viability, which is relevant because expected benefits, no matter how large, will not be realized if the business fails. Requiring some funding from commercial lenders will bring the investment banking skills of those lenders to bear on the problem of assessing the prospects of the applicant and provide information that would be costly for administrators to obtain otherwise.

Aggregation of assistance costs

When weighing the benefits against the costs of assisting a business, costs should be calculated as the total assistance being provided under <u>all</u> state administered programs. Also, published indices of the effectiveness of assistance programs, such as "cost per job," should be based on all assistance costs and not on the assistance provided under a single program. In addition to aggregating state government assistance costs, the DED should collect information about the amount of financial and other assistance provided by local governments. Comparisons will be facilitated by stating costs in present value terms. The purpose is to determine the total government subsidy

provided to each business. This information will be needed by legislators as they make decisions about the continuation of various programs and by the Department as it gauges the effects of its policies.

Research

Financial assistance programs have been implemented to deal with two perceived problems: capital gaps and competing financial assistance programs of other states. This has been done, however, without solid evidence that the problems are serious. Are capital shortages for particular borrowers significantly inhibiting growth? Are the financial assistance programs of other states attracting businesses that would otherwise locate in Iowa? To date, research on these questions suggests that financial assistance and other forms of subsidy, such as tax concessions, have relatively little effect on location decisions. A key research goal of the Department should be to gather additional and more conclusive evidence on these questions. In particular, it should obtain information about how economic activities vary in their profitability between Iowa and other states. As the Department administers and evaluates its own programs, it will generate evidence on these basic questions. Garfield Schwartz (Rebuilding ..., p. 27) also calls for research on capital gaps, and a related recommendation (p. 18) calls for a study of bank lending practices.

Additional funding

The Department should not seek additional funding for financial assistance; rather its central concern should be to improve administrative procedures and award guidelines. The main reason for not increasing funding is the previously noted difficulty of determining whether assistance is needed to assure that a particular business locates in Iowa and whether the benefits of doing so exceed the costs. Consequently, there is and will likely continue to be considerable uncertainty about whether assistance programs are in fact promoting development. This uncertainty has led other economic development plans, those of Michigan and Minnesota in particular, to recommend a limited role for financial assistance, tax concessions, and other subsidy programs.

As a practical matter, the scope of assistance programs cannot be expanded to meet the "demand" for assistance. Most of the businesses that constitute Iowa's (or any other state's) economic base can in the long run

operate in other states. (The exceptions are those that are exploiting land and other natural resources that are geographically fixed.) Therefore, most can apply for assistance in either maintaining or expanding their present operations, and they have an incentive to do so even if assistance is not needed to assure their continued presence in the state. The Department cannot put itself in the position of having to consider and possibly negotiate an assistance package for each of the geographically mobile enterprises that presently make up Iowa's economic base. The only practical way of limiting the demands for assistance is to place firm limits on the available funds.

Industrial New Jobs Training Program (INJPT)

This program, authorized by H.F. 623, is not administered by the Department, although it has oversight responsibilities. Department approval of the training agreements that are the vehicles for assistance under this program is not required at present, but it should be. Also, a significant share (25 percent or more) of the training costs should be borne by the business; at present cost sharing is not required. The amount of assistance provided to a business under this program should be a consideration in determining the amounts provided under other programs and vice versa. Awards under INJTP should be determined by the same guidelines as awards under other programs. In particular, local government and local private sector contributions (from others than the assisted business) should be part of any assistance package. House File 766 established a similar program for small businesses. The same recommendations apply.

Iowa Housing Finance Authority (IHFA) Programs

The IHFA programs relevant for economic development are its Small Business Loan program and the Economic Development Bond Bank, the latter being a new program. The Bond Bank should be implemented as soon as possible and operated <u>without subsidy</u> from state government. It should aid in the marketing of private purpose and local government bonds only when there is the expectation that the loans will be fully repaid. Some state funds will be needed to provide the initial capitalization of the bank. These funds should essentially serve as a reserve; appropriations on a continuing basis should not be needed.

Tax concessions

Tax credits and exemptions are widely used to promote economic development. Iowa has several such concessions, and more were recommended by Garfield Schwartz. However, direct and flexible methods of assistance, such as loans, grants, and principal and interest buydowns, are strongly preferable to tax concessions.

Lender commitment program

The Department should establish a lender commitment program following the example of Illinois. Under the program, Iowa lending institutions would be asked to set aside a fraction of their loan portfolio for designated categories of borrowers. Assisted borrowers would be those facing a presumed shortage of capital such as small and new businesses. The existence of the commitments would then be publicized to eligible businesses as part of the Department's information and marketing programs.

The program should be administered with other assistance programs and be subject to the same application procedures and award guidelines. That is, the program should be regarded as another source of funds to be allocated by the Department upon application by a business and sponsoring local government.

Interstate banking

It is doubtful that Iowa's restrictions on interstate banking are significantly inhibiting economic development. Nevertheless, relaxing those restrictions would likely prove beneficial from a development perspective. Banking competition in medium and large cities would increase, and the range of banking services would likely improve. Having offices of the large national and international banks in Iowa would improve its image and be helpful in attracting out-of-state businesses. Therefore the Department should survey what other states have done and then propose legislation for changing Iowa's banking regulations. The research and debate generated by the proposed legislation should further clarify the issue.

3. Recommendations for marketing policy

Business survey. A program should be established for interviewing executives from businesses that recently have come to Iowa, expanded their operations in the state, or decided to leave Iowa to determine the key factors

in their decisions. This survey would generate information useful in tailoring future marketing efforts.

Demonstration assistance. The Department should consider developing a program aimed at demonstrating Iowa's potential as a location for selected new industries. Under the program financial and technical assistance would be provided to a business in a new (to Iowa) industry with the expectation that the business' success would aid in attracting other businesses in the same and related industries to the state. Successful locations resulting from this program could be the basis for future marketing efforts.

Executive participation. The participation of executives from Iowa businesses in actual marketing efforts, such as video presentations and blitz trips, should be continued and reinforced. Straight-talking discussions by these executives would have as much credibility with other business leaders as anything the state could do. Also, the Department should establish a network of influential persons with Iowa connections who would promote the state's interests in economic development. Members could be recruited from prominent former Iowans who are graduates of Iowa universities, CEO's of major firms, or have retired outside the state.

Product catalog. The product-services catalog now being developed by the Department will provide information that could encourage businesses within the state to substitute Iowa-made inputs; it also would inform businesses considering location in the state about the availability of suppliers.

Buy Iowa. A "Buy Iowa" marketing campaign should be established to urge businesses within the state to seek out Iowa suppliers.

Policy analysis and public information. The Department should keep the public informed about its own activities and the performance of the Iowa economy. It should also assume responsibility for providing the Governor, legislators, and public officials with analytically sound and non-partisan analyses of the development effects of existing and proposed public policies.

4. Recommendations for technical assistance and research

Management assistance. The Department should determine whether the SBDC, CIRAS, and other programs are delivering adequate management assistance to businesses involved in the production of exports and import substitutes. Depending on the outcome of this evaluation, the Department may need to work

for coordination and reorientation of those programs or establish a management assistance system to supplement them. A decision to develop a system should be based on firm evidence that it would produce sufficient development benefits to warrant its costs.

Incubators. The progress of the three existing incubators should be monitored and evaluated during the next year to determine whether they are cost effective means of promoting development. Additional incubators should not be implemented until more experience with existing ones is gained. This recommendation is consistent with the Garfield Schwartz report, Cost and Quality of Production factors: Infrastructure, which recommends only the evaluation of the need for incubators and not an increase in their numbers.

Research funding. Lottery funds for research aimed at developing new products and technologies should be available to both private firms and universities. Private sector-university collaborations should be encouraged. Application procedures and award criteria should be developed and publicized widely; awards should be competitive.

New business opportunity program. As a supplement to the incubator approach for fostering new busnesses, the Department should investigate the potential of a "New Business Opportunity Program" to which Iowa persons and businesses could apply for financial, technical, and other assistance needed to launch a business in a new (to Iowa) industry. Awards would be competitive.

Information flows. Efforts to promote development by increasing research and speeding technology transfer and the commercialization of research findings will require increased flows of information and ideas between universities and businesses. Some linkages are in place, but the Department should develop a more extensive system. The Bureau of Technology and Innovation within the Department could be the hub of such a system.

Local government assistance. While most technical assistance programs are oriented toward private businesses, there is a role for technical assistance to local governments. This assistance would enable communities to pursue innovative arrangements with businesses and to adapt to economic change. One possibility is to develop a program involving circuit-riding advisors. A Department telephone advisory service is another possible

mechanism for rendering assistance to local governments. The Department should examine the potential for education and training programs for economic development professionals and other state and local government employees and officials. The programs would provide information about the nature of the development process and government's role in it, as well as the state's development programs and activities.

5. Recommendations for infrastructure policy

Infrastructure policies can be important elements in a state's development strategy. Both underbuilt and overbuilt infrastructure can reduce Iowa's ability to serve businesses' needs at a cost that helps them be competitive.

Investment and cost allocation criteria

Decisions to build a new infrastructure facility or to replace or not replace an existing one are investment decisions. To serve the objective of economic growth, an infrastructure investment should be made only when those who will use the services provided by the facility, both directly and indirectly, are willing to pay the full cost of its construction, operations, and maintenance. If users are not willing to pay these costs, they are effectively saying that the value of the services provided by the facility are less than its costs; resources used to provide the facility would generate more value in other uses.

Infrastructure costs should be borne by those individuals and businesses whose economic activities, production and consumption, use the services of the facility. It is these activities that generate the demand for the facility. Individuals and businesses may use a facility either directly or indirectly. Indirect use occurs when they buy products the production and distribution of which make use of the facility. Furthermore, the users of the services provided by the facility should pay in accordance with the costs occasioned (caused) by their use. The surest way to ensure adequate but not excess infrastructure over the long run is to follow a policy whereby users are asked to pay for infrastructure according to the costs they generate. Excess infrastructure is most likely to develop when those whose activities generate the need for the infrastructure are not called upon to pay the full costs of building, operating, and maintaining it.

Redistribution of Road Use Tax Fund

The Iowa highway system is large relative to systems found in other Midwestern states. An extensive county road system, portions of which support very little travel, is being maintained to a significant extent through cross subsidization from other components of the state's road system. Specifically, the many miles of county roads account for 18 percent of the total vehicle miles, yet the current formula allocates 37 percent of available RUTF revenues to them. The formula should be restructured to decrease the allocation to counties. The Iowa DOT should study the feasibility of shrinking the county road system, with actual choices left to the counties. Alternative financing mechanisms, including "access" fees or taxes, should also be explored.

Maintaining and improving Iowa's primary roads

For development of the state as a whole, additional road capacity is needed only if the present road system does not serve enough developable sites to support continuing economic growth. If, however, a sufficient number of suitable sites already exist, additional investment in roads is unlikely to result in aggregate economic growth within the state. Indications are that Iowa now has an abundance of developable sites at locations with excellent highway transportation to major out-of-state markets except, perhaps, the St. Louis area. Thus, while an argument for selectively upgrading roads of Iowa's smaller communities that are not near to metropolitan areas might be made on the basis of equity, doing so probably would not significantly bolster the Iowa economy. In fact, the costs of upgrading would add to the overall cost of government in Iowa and, on that score, decrease the attractiveness of the state.

Instead of upgrading on a large scale, the DOT can best serve the goal of economic development by using resources obtained from redistribution of the RUTF and higher motor fuel taxes and registration fees to maintain and improve the roads that link existing metropolitan areas to out-of-state markets. The Department should work with the DOT to identify highway and rail linkages that are key to the state's economic growth. Traffic and cost data should be the basis for investments to upgrade primary road segments, rather than the desire to bring of economic growth to particular areas of the stte. If the road user taxes generated by trips along a road segment are sufficient not only to properly maintain the existing road but also to finance improvements,

upgrading is warranted, since the willingness of these users to pay is evident. Otherwise, it is not.

6. Recommendations for other government policies

To this point, recommendations have been made regarding government activities that have economic growth as a major and explicit objective. However, government has the potential for either inhibiting or promoting growth as it carries out its traditional duties. This section summarizes the report's recommendations for making government policies in several areas more supportive of growth.

County reorganization

The Legislature should act as soon as possible to reduce the number of county governments. Doing so would increase the cost-effectiveness of Iowa government in sparsely settled counties, allowing either tax reductions or public service increases that would make those counties more attractive as a location for economic activity. Regardless of whether consolidation is legislated, any legal obstacles to sharing of costs, services, facilities, and personnel among counties should be eliminated. Furthermore, such sharing should be encouraged by the Department as it provides technical and managerial assistance to local government.

School district consolidation

From a development perspective, school district consolidation should not be a high priority concern. Relatively high school taxes in sparsely populated rural areas are not a deterrent to the location of business in the state as a whole because they do not increase the cost of doing business in more densely settled parts of the state. Alternative locations that do not have the cost disadvantages resulting from sparse population are available. But high taxes in the less populous areas of the state do work against their development. Therefore, the distribution if not the level of economic activity in the state may be affected by the efforts that school districts make to reduce their costs through consolidation or other means.

The role of universities

Although their primary missions are research and education, Iowa's institutions of higher education are significant factors in the state's

economy. Directly, they produce exports (research and the education of out-of-state students) and import substitutes (education of young Iowans). They may also contribute to economic development in other ways. In particular, through incubation centers and product development corporations, university research findings can be transferred to Iowa businesses. These businesses, in turn, may increase employment opportunities for well educated, productive Iowans within the state. Iowa's universities should be encouraged to enter into arrangements with private investors to develop, produce, and market products based on university research. They should also explore ways of facilitating interaction between those outside the university and those within. Possible mechanisms include a central referral system, a directory of faculty interests and expertise, and specialized conferences and seminars. Through these mechanisms businesses could gain information about potentially useful research results. Conferences also would be a vehicle for establishing contacts with university researchers.

Retaining college graduates

A large fraction of graduates from Iowa universities take employment outside the state. This exodus has led Garfield Schwartz (Rebuilding..., p. 38) and others to propose that tax credits, tuition reimbursement, and forgiven loans be used as incentives to retain college graduates in Iowa. However, such incentives are likely to prove ineffective in increasing total employment of college graduates in Iowa. They may result in the substitution over time of Iowa graduates for graduates from schools in other states. If so, the latter would then leave the state. The brain drain would not be stopped because total demand for college graduates would not be increased.

Improving government finance

When compared to other states, Iowa's tax system is not an "outlier." On some dimensions, such as the top rate on the personal income tax, Iowa compares unfavorably with many other states. But on other features, such as the single factor formula for allocating corporate income, it compares very favorably. On balance, there is little reason to believe that Iowa's tax system puts it at a competitive disadvantage with other states; Iowa's economic growth is not being significantly inhibited by its tax system. Therefore, it would be a mistake to think that the state's growth prospects can be greatly enhanced by changing taxes or, more generally, the means by

which government is financed. Reinforcing this view are the results of numerous studies showing that taxes have relatively minor effects on business location decisions. Nevertheless, several actions could be taken in the area of government finance to enhance the state's attractiveness as a location for business.

Tax system stability. Each session of the legislature sees a number of proposals for significant changes in Iowa's system of taxation and state aid for local governments. Most of these proposals are not enacted, but a few are. In combination, the proposals for change and the changes actually made add substantially to the uncertainty that businesses must cope with in their investment and operating decisions. This uncertainty is reinforced by the on-going debate about reform of the federal tax system.

Reducing the uncertainty that derives from the prospect of action by the General Assembly would enhance Iowa's business climate. Therefore, the General Assembly should commit itself to making changes in the state's system of government finance only infrequently and only after careful analysis of the effects of proposed changes. Regardless of whether the legislature makes a formal and explicit commitment to tax system stability, the Governor and the Department should communicate the need for stability on a continuing basis to the changing set of legislators.

Charges and fees. The trend to financing a larger share of expenditures with charges and fees is a desirable one and should be continued to the extent possible. Linking the receipt of a service or the use of a facility to the payment that finances it aids in making a judgment about its value. It guards against the overexpansion of the public sector that may arise when people do not see a clear link between their demands for public services and the taxes they pay, as is the case when government is financed by broad based taxes.

Property tax relief. Revenue system changes that would further reduce reliance on property taxes and increase reliance on state sales and income taxes would not be desirable from an economic development perspective. Such "property tax relief" has been an important if not the major thrust of tax policy in Iowa over the past two decades. The result is that a much larger share of total state and local taxes is now collected from owners of labor and capital, many of whom are free to relocate their resources to other states in response to higher taxes, and a smaller share is collected from owners of

land, which is fixed in location. This shift in tax shares cannot have been helpful from an economic development perspective. Continuing the shift would likewise be unhelpful, it not damaging.

State aid. State aid to county and municipal governments should not be increased unless it is to fund a project or activity that is clearly of primary benefit and interest to the state as a whole. In that case, the alternative of state take-over of the activity should be given serious consideration. For example, rather than providing state funds for maintaining a system of county jails, it might be more cost-effective to have a statewide system of prisons and detention centers.

Road taxes. Motor fuel and vehicle license taxes decreased in real (inflation-adjusted) terms by 31 percent from 1970 to 1984. This erosion should be offset by increases in these taxes, with the additional revenue being used to maintain the existing primary road system and to improve key road linkages to out-of-state markets.

Regulations affecting business

The Department should review on a continuing basis Iowa's laws and regulations to determine whether they impose unwarranted costs on business. When such is determined to be the case, recommendations for appropriate changes should be made to the General Assembly.

Unemployment and workers' compensation. Currently there is a perception in the Iowa business community that Iowa's unemployment and workers' compensation costs are excessive and hamper economic development. Recent sharp increases in tax rates and premiums for unemployment and workers' compensation have certainly occurred, but there appears to be little reason to fear that these increases put Iowa at a competitive disadvantage. Other states have also suffered such increases and Iowa's costs remain average or below average when compared to costs in other states.

Tort liability limits. The cost of liability insurance has increased sharply since 1981 for many Iowa businesses and governments. In some cases, insurance is unavailable. Increases in liability insurance premiums and the costs of defending lawsuits have undoubtedly increased the cost of doing business in Iowa. However, these increases have not necessarily made Iowa less attractive relative to other states as a location for business because

other states have experienced similar increases. Therefore, it is unclear that limits on liability are needed for economic development purposes.

A recommendation regarding liability limits should wait the findings of the Citizen's Committee on Tort Liability Reform, appointed and funded by the Legislature and chaired by Representative Jay and Senator Doyle.

Restrictions on farmland ownership. These restrictions are sufficiently broad that they pose no barrier to the flow of capital into agricultrure. The fact that the law limits number of stockholders but not the amount of funds or acres is the key to its ineffectiveness. There may be good reasons for relaxing ownership restrictions, but promoting growth is not one of them.

Improving regional and national economic policies

A key element of Iowa's long-run economic development strategy should be a push for national policies that are favorable to development of Iowa. The state should also work for interstate coordination of tax, expenditure, and economic development policies so that self-defeating competition for industry is minimized. National monetary and fiscal policies, especially as they affect interest rates and the foreign exchange value of the dollar, should be a key concern in these efforts. A replay of the early 1980s with high real interest rates and a high value of the dollar should be prevented.

Forums for pursuing this broad objective should include national and regional conferences and organizations for governors, legislators, and Congressional delegations. The Department should maintain close contact with Iowa's Congressional delegation, keeping it informed of the likely development consequences of national policies and legislation.

NEW OPPORTUNITIES FOR IOWA:

STRATEGIC PLANNING RECOMMENDATIONS

FOR ECONOMIC GROWTH

October 1, 1986

Submitted to Iowa Department of Economic Development by:

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I. INTRODUCTION

The State Government Reorganization Bill (S.F. 2175, 71st General Assembly) enacted this year requires the new Department of Economic Development to prepare a strategic plan for Iowa's economic development. This report has been prepared in response to that mandate. It will be the basis for the first five-year development plan. Each year the five-year plan will be revised. Since it is to be a strategic plan, its most important purpose is to define the principles and criteria that should guide legislators, officials, and agency staff as they design and implement policies that impinge on economic development. As an initial step toward a long-term strategic plan, this report is less a detailed prescription of what needs to be done to promote growth than a basis and stimulus for on-going discussion and analysis of how Iowa's economic prospects can be improved. Specific policy and operational recommendations are made, but time and resource constraints limit their extent in this first plan. As the plan is revised each year, policies and operational guidelines can be spelled out in more detail.

State government can significantly influence the course of the Iowa economy over the coming decades. Iowans do have some control over their economic destinies. A development plan must recommend how that control can be exercised in a positive, growth promoting way. To this end, the report discusses issues involved in the definition and measurement of economic development, examines the role of state and local governments in the development process, and presents a framework for designing and evaluating economic development policies. It uses this framework to examine issues and policy options in several areas: financial assistance; information, marketing and image; technical assistance and research support; infrastructure; and government efficiency and obstacles to private activity. Recommendations

based on these analyses are presented; taken together these recommendations constitute a plan for furthering Iowa's economic development.

The state has been active on the economic development front. A number of programs are in place and working. Given that these programs will continue to absorb considerable resources, a central question is how the state can best use its economic development dollars. Thus, the plan is as much concerned with how existing programs can be made to work better as with the design of new programs.

Iowa's economic growth has been and will continue to be significantly affected by state and national policies in a number of areas, and not just by policies that aim explicitly at promoting growth. It is therefore important for the Department of Economic Development to take the lead in explaining how state and national policies, both existing and proposed, affect the state's growth. It should identify and promote actions that will improve growth prospects. To aid in this task, the report includes recommendations for making state and national policies in several key areas more supportive of Iowa's economic growth. At the state level, areas considered are education, infrastructure investment, taxation, and regulation. At the national level, monetary and fiscal policies are the key concern.

The report builds on previous studies and therefore does not duplicate in detail their examination of the performance, prospects, and structure of the Iowa economy. But two points made in those studies deserve emphasis. First, the weakness of Iowa's economy over the past few years is due to conditions and events over which Iowans and their government have little control. Iowa's hard times have not been due in any significant sense to the policies of its state government.[1] Second, a plan must be based on a clear understanding of the limits and constraints on what government can do. It should not set

targets and generate expectations that cannot be realized. Therefore, this report identifies those factors--national and international trends and Iowa's current economic structure--that set the broad limits on Iowa's future economic growth.

II. THE ECONOMIC DEVELOPMENT PROCESS

Economic development occurs when there is an increase in the income and product generated within the state. Development requires either that more resources (land, labor, materials, and capital) be employed within the state or that existing resources be employed more productively. Since development ordinarily involves increased employment of both capital and labor, it usually means an increase in the number of jobs available within the state. However, development can occur without job expansion, as would be the case when output per worker increases because of technological progress or increased capital per worker. Development defined this way will usually mean an increase in per capita income for the state's residents. But per capita income need not increase with development: total output can be increased by increasing the number of workers employed without increasing the output per worker.

The decisions that determine the pace of economic development in a state are made primarily by resource owners (individuals and corporations). In making their decisions, owners of capital take account of the many factors that influence the returns to capital and locate where the expected (or perceived) returns are greatest. An Iowa location is chosen if the present value of the expected net returns to capital is greater for the Iowa location than for all other locations. Among the factors that affect this locational choice are wage rates, taxes, public services, and transportation costs. Quality of life considerations may also be important since plant location decisions are often made by managers who will be living and working at the location.

Similarly, workers locate where they perceive the returns from employment to be greatest. These returns are both monetary and non-monetary; they include after-tax wages, public services, and environmental amenities.

The wages that workers require to work in a particular state depend in part on the taxes that they pay and the public services that they receive. Therefore, governmental policies and environmental factors that affect Iowa's attractiveness as a place to live and work also affect its attractiveness to prospective businesses because they affect wages. Stated differently, we usually think of investment as being the means by which jobs are created. It would be more accurate to say that jobs are created in Iowa as owners of mobile capital and labor decide that it is advantageous to employ their resources in Iowa rather than elsewhere. Jobs are created through the joint decisions of workers and owners of capital. The attractiveness of Iowa as a place to invest depends on wages which depend in turn on the attractiveness of Iowa as a place to work. Making Iowa attractive to workers need not conflict with improving its "business climate."

Does development necessarily make Iowans better off? As noted above, an increase in economic activity within the borders of the state, which is the usual definition of economic development, need not be associated with an increase in the average or per capita income of Iowa's population. Therefore, there is need for concern with how development occurs as well as with whether it occurs. The state might not, for example, wish to follow policies that attract low-wage industry and the labor force needed by that industry even though doing so would increase total economic activity in the state. The reason is that average or per capita incomes would fall.

Development occurs when increased amounts of goods and services are produced for export. It can also result from an increase in production of goods that are bought locally if the goods would otherwise be bought out of state. For example, if Iowa's public universities and colleges were closed, then the educational services that they provide would be bought from out of

state suppliers. However, if a new business opens up and supplies goods to Iowans that were already being supplied by other Iowa businesses, then development has not occurred. Business and economic activity and jobs have just been shifted from one Iowa location to another. An example of this latter case would be the opening of a new shopping center in a city that already has an adequate number of retail outlets.

III. THE ROLE OF STATE GOVERNMENT IN THE DEVELOPMENT PROCESS

State government influences development as it affects the attractiveness of Iowa as a place for the employment of mobile capital and labor resources and as it affects resource productivity. Resource owners base location decisions on their perceptions of the magnitude and certainty of the return that will be realized in each location. For a given degree of certainty, they will prefer the location that they expect will generate the highest return for their resources. Therefore, state government can promote development if it can either increase the perceived returns from employing mobile capital and labor resources in Iowa or increase the certainty of those returns.

A. Possible state actions

The state's development policy options fall into five categories:

1. increasing public services including infrastructure services and/or decreasing taxes for mobile resources.

2. marketing and providing information that changes perceptions of the returns from locating in Iowa without changing actual returns.

3. changing actual returns with subsidies in the form of financial, technical, job training, and other assistance to both newly formed and existing businesses.

4. altering regulations that affect resource returns.

5. assuring that state policies are seen to be (and are) stable and predictable.

As government affects the magnitude and certainty (variability) of perceived returns from resource use in Iowa, it affects what is often termed the state's "business climate." Improving Iowa's business climate means increasing the perceived returns to mobile resource owners and/or reducing the uncertainty of those returns. The remainder of this section briefly discusses

the state's potential for influencing location decisions and the desirability of doing so. It is to be emphasized that a location decision may be a decision either to build a new plant or to start a new business or to maintain or expand an existing business. Policies to influence location decisions may therefore aim at attracting new businesses to the state, encouraging new business start-ups, and retaining and encouraging the expansion of existing businesses.

1. **Public services and taxes**

The value of public services may be increased relative to taxes for mobile resources in three ways. First, government may become more efficient, reducing the costs of providing a given package of services. An example would be the consolidation of county governments to reduce costs and taxes. Second, it may redistribute the costs of government, placing a lower burden on mobile resources and increasing the burden on immobile resources. An example would be increasing taxes on land in order to reduce personal and corporate income taxes. Third, government can eliminate activities that do not generate benefits commensurate with their costs. Such cutbacks will reduce public service levels, but the loss of services will be more than compensated by the reduction in taxes. Any of these three means of increasing services relative to taxes makes Iowa government a "better buy" and increases Iowa's attractiveness as a location for economic activity. However, they are all likely to be controversial, since they will usually involve fewer services or higher taxes for some segment of the population. The third measure is perhaps the most difficult to implement because it requires that dollar values be placed either explicitly or implicitly on government services.

2. Information

It is possible that businesses located in other states would earn a greater return if their activities were carried out in Iowa, but they locate elsewhere because they know little about Iowa or they have misperceptions of the costs and benefits of doing business in Iowa. In this case no reduction in the actual costs of doing business is necessary to induce location in Iowa. The only action needed is information that makes clear the advantages of Iowa relative to other states. Included in this category of actions would be information and marketing aimed at changing Iowa's "image" as a place to work and live.

Marketing and information programs can by themselves be effective in attracting business to Iowa only if owners of mobile resources presently have inaccurate knowledge and perceptions of Iowa. Also, it must be possible to clear up these misperceptions through marketing efforts and in doing so make resource owners see Iowa in more attractive terms. Before setting up marketing programs, it should be determined that these conditions for their success are met.

3. Subsidies

The third broad category of actions involves subsidies to business aimed at reducing costs enough to induce its location in Iowa. Such subsidies can take a number of forms: grants, low cost loans, wage subsidies, tax concessions, or public services. Subsidies can be financed by contributions from the private sector or taxes. The effects of this financing on development must be considered. For example, if a subsidy is financed by taxes on mobile resources currently located in Iowa, the financing of the subsidy may drive out resources and offset in part or in full the favorable development effects of the subsidy. Note that a subsidy occurs when public

services are made available to a business at a fee, charge, or tax that is less than the cost of providing the services.

4. Regulations

State government affects the costs of doing business through regulations and laws that govern private production, contracting, and exchange. Laws may obstruct as well as facilitate exchange, and when they do they inhibit growth and development. Likewise, regulations designed to represent the interests of consumers or the public at large may or may not generate benefits for those groups commensurate with the costs they impose on production activities; when they do not, development is inhibited. An economic development plan should include on-going assessment of the consequences of government regulations and laws for private-sector costs.

5. Uncertainty

In addition to increasing the perceived returns from resource use in Iowa, state government can promote development if it can reduce the uncertainty of those returns, at least insofar as that uncertainty is due to instability and unpredictability of government policy, which appears to be increasingly the case. Since job-creating investment is long-lived, businesses considering an Iowa location are concerned about future as well as current regulations, taxes, and public service availability. Tax system stability and predictability are especially important, since uncertainty about future tax laws generates uncertainty about future net returns from an investment and therefore diminishes its attractiveness.

B. Limited ability to influence growth

Merely delineating the possibilities, as we have done to this point, does not imply that government can have a major effect on development. Indeed, state government's ability to increase employment and incomes by any of the

means discussed is limited for several reasons.[2] First, national and international market forces and public policies are the main determinants of the economic environment within which Iowa governments and businesses operate. State government has only a limited ability to affect that environment. Second, inefficiencies in the delivery of public services undoubtedly exist, but they too may be difficult to identify. There are no glaring inefficiencies in Iowa government that could be the source of significant decreases in government costs and in the tax burdens on mobile resources. Third, redistribution of the costs of government away from mobile and toward immobile resources will be limited by considerations of fairness.

It is not uncommon for studies of economic development policy to recommend that the state follow a strategy of promoting particular industries. The recommendation is often based on a forecast of how the state's economy will develop given its comparative advantages. For example, the Michigan economic development plan recommends that the state foster manufacturing that requires sophisticated machinery and highly skilled labor. This may or may not be the direction that the Michigan economy takes in the coming years, but it is clear that its government is not free to choose that direction in opposition to basic economic forces.

Likewise, Iowa's state government cannot choose or direct the course of the Iowa economy over the coming decades. It cannot define and expect to succeed in a strategy that is contrary to the pressures of the market place. It can, however, try to identify those pressures and take actions that are consistent with them. Its strategy must consist of taking many actions, each of which promises a slight but favorable effect on economic development. An important, if not the most important, element of that strategy must be the efficient execution of its task of providing public services.

Government can choose to encourage particular industries, but in doing so it will not assure their dominance or success. The pattern of industrial development will be dominated by private investment decisions. Private investment in Iowa amounts to hundreds of millions of dollars per year; state government cannot control or greatly influence the pattern of this development by the expenditure of a few million dollars on financial and technical assistance, information and marketing, and the like.

C. Desirability of influencing growth

An individual state will see its economic development policies as desirable if they are effective in increasing economic activity within the state. From a national perspective, however, it is unlikely that greater efficiency (lower costs) in producing the nation's goods and services will follow from location changes brought about by the development policies of individual states. The decisions that determine the economic base of Iowa or any other state are made predominately by individuals and businesses. They have strong incentives to make the best possible use of the resources under their control, and they tend to do so. It is therefore difficult for government to improve upon the outcomes of private decisions. Moreover, even if private decisions are less than optimal, it is difficult for government to identify the instances in which they fail and take action that remedies the failure.

Many of the economic development efforts of states are necessarily competitive; their purpose is to induce businesses to locate in one state rather than another. However, the competitive advantage that economic development programs are intended to give a state are often offset by similar programs in neighboring states. Development programs may then have no effect on location, and the resources they use may be wasted. This is not a happy

outcome, but it may be even worse if efforts to influence location are effective. When businesses locate differently in response to development policies, the result is likely to be higher costs. Businesses are induced to choose higher cost locations because government is covering part of their costs through a direct or indirect subsidy.

Unless state development efforts have the effect of correcting inefficient business locations, the gains of any one state will be mirrored by losses in other states. Nevertheless, states may persist in competitive economic development activities because individual states can gain even if the nation as a whole does not. Also, states may feel that if they do not "meet the competition" they will lose economic base. Thus, Iowa may have to play the economic development game to limit its losses, but as it does, it should pursue national legislation and compacts with other states that would limit the competition.

D. Criteria for evaluating development policies

State economic development activities take a variety of forms: financial assistance, technical assistance, and information and marketing. All activities are similar, however, in that they entail costs, which are usually borne by federal or state taxpayers.[3] Two criteria should govern the use of these funds: efficiency and equity.

1. Efficiency

A development policy should produce current and future gains for Iowans that have a present value at least as great as the present value of its costs.[4] These gains may be in the form of higher incomes for owners of labor and capital resources. In addition, there may be a public sector gain if the businesses that locate, retain, or expand their operations in Iowa because of the policy pay taxes, fees, and user charges that more than compensate for any

public expenditures necessitated by their presence. Environmental and amenity gains and losses from the business' operations should also be considered. A policy that increases economic activity and incomes may nevertheless make Iowans worse off if it causes sufficient environmental damage.

If this efficiency criterion is not met, the policy makes Iowans as a group worse off since they are being called upon to pay more to support the policy than they gain from it.[5] The maximum they would be willing to pay is measured by the fiscal surplus and the gains in private sector income that result from the location of the businesses in Iowa.[6]

To be efficient, a policy must in fact attract economic activity to the state. It must cause businesses to locate in Iowa when they would not otherwise do so. Also, the development consequences of financing a policy must be taken into account. For example, if a policy is financed by taxes levied on existing Iowa businesses, they may over time cut back their operations in Iowa. The net result of the policy and its financing need not be favorable for development. This possibility points to the need to finance development policies with voluntary contributions and taxes from those who benefit from the business attracted to the state. Such financing does not reduce the attractiveness of Iowa to business presently located in the state.

A policy may increase production and employment and yet not be efficient. For example, a tax on the value of Iowa land would not repel economic activity since the land is not mobile; the land would continue to be used in its most profitable employment in Iowa as long as the tax is less than the rent accruing to the land. Revenues from this land tax could be used to subsidize steel production in the state. With enough subsidy, it would be profitable to ship in the ore, coal, and other materials and ship out the finished steel. Total employment and production in the state would

increase. But this policy would not be efficient unless the additional income generated by the presence of the steel mill exceeds the income loss suffered by the owners of the land because of the additional taxes they pay to subsidize the mill.

The meaning of the efficiency criterion can be stated less technically. It means that development policies should increase living standards for Iowans. The availability of market-traded goods should on the average be increased, which means in operational terms that real per capita incomes should be increased. It also means that population and industry should not be pursued at the expense of environmental quality and diminished quality of public services. The residents of the state to whom the government is responsible are not served by policies that reduce their living standards on the average even if the result is a larger population and economic base for the state.

In opposition to this view, it is often argued that industrial and population growth are necessary to provide jobs for those Iowans who would otherwise leave. Therefore, it is said, if we consider the interests and well being of all Iowans including those who would have to leave the state because of a lack of jobs, we would pursue industry and population even if it lowers average living standards.

The argument against this approach to providing employment for all Iowans is that there is a better option. Namely, follow the policy that we have been following. Give all Iowans the education and training needed to earn an average or better living. Then if there is not a job demanding their skills in Iowa, they will be able to go elsewhere and earn a better living than if they stayed in Iowa at a low wage job. Of course, the ideal would be to have high wage employment in Iowa for all of the young people educated in Iowa.

In short, if a government follows economic development policies that reduce living standards, it has violated the efficiency criterion; but worse, it has failed in its primary duty.

Information about the gains from a policy will in general be difficult to obtain, so there will typically be uncertainty about whether the efficiency criterion is in fact met. Furthermore, before the criterion can be applied by administrators of development programs, it must be translated into operational guidelines and procedures. Recommendations presented in the next section are a step toward making it operational.

2. Equity

Equity, or a concern with the distribution of the gains and costs associated with a policy, also may be important. Policies that satisfy the efficiency criterion may be foregone because they generate an unfair distribution of gains and costs. Alternatively, policies may fail on efficiency grounds, but nevertheless be undertaken because they benefit a segment of the population that is regarded as deserving; they bring about a desirable transfer of income. For example, financial assistance for a new factory may be efficient in that it is judged to generate income gains to workers and businesses that exceed its costs. Yet it may not be offered if the distribution of the gains is regarded as unfair. Or financial assistance for a factory in a small town may not be warranted on efficiency grounds, but it may be provided because it is thought desirable to support the incomes of persons living in small towns. It should be recognized that such support does involve a transfer of income and wealth from taxpayers at large to the residents of the town.

E. Development goals

The broad goal of the Department's development efforts should be to increase the incomes of Iowans by increasing production and employment in the state. This general goal can be translated into two more specific goals: 1) retain the businesses that presently make up Iowa's economic base and 2) expand and diversify the economic base by industrial recruitment, encouraging the expansion of existing businesses and new business start-ups, and aiding the development and commercialization of new products and technologies.

1. Diversification

While agriculture and agriculture-related manufacturing are and will remain important parts of Iowa's economy, significant growth of income and employment cannot be expected from their expansion Growth will require adding new industries and expanding existing industries that are still a relatively small part of the economy. Accordingly, diversification should be a primary and immediate goal of the Department's marketing, technical and financial assistance, and research support programs. If successful, these efforts will increase the share of employment and production in industries that are not dependent on agriculture.

Diversification should be sought as a means to growth and not as an end in itself. Also, diversification should not be pursued at any price; it should not be underwritten by subsidies. When new industries are added to Iowa's economic base, it should be because Iowa is a profitable and otherwise attractive location for them. Assistance should not be given to a business under the expectation that continuing assistance will be necessary for its long-term survival.

Diversification can be promoted by encouraging existing businesses to diversify as well as by attracting and encouraging the start-up of businesses from under-represented industries. Iowa is home for a number of well managed companies. A key part of a diversification strategy should be research and product development assistance that would allow these companies to move into new lines of business and in doing so diversify the economy.

There are two reasons for expecting success in diversification efforts. First, Iowa already has a presence in several industries that are relatively fast growing and not dependent on agriculture: printing and publishing, finance, real estate, insurance, and professional services. Second, these and many of the other industries that will experience relatively rapid growth over the next decade or so require a well-educated labor force. Iowa's quality labor force and its output of college trained professionals will give it some advantage as a location for these industries.

Attracting a business representing a new industry to the state or encouraging the start-up of such a business is a means of demonstrating Iowa's desirability as a location for that industry. The payoff to policies having such a demonstration effect is potentially greater than just the additional employment and income generated by the assisted business. This suggests a high priority for using financial and other assistance as a demonstration grant, the purpose of which is to demonstrate the economic feasibility and desirability of locating in Iowa. More generally, the Department should orient its programs to demonstrating that Iowa is a profitable and otherwise attractive location for new industries. Once established, that fact should be used in marketing efforts to attract businesses in the same, or related, or complementary (input-supplying) industries.

2. Retention

Emphasis on diversification does not rule out efforts to retain and expand employment in sectors that are currently a significant part of Iowa's economic base. Those efforts, however, should have a lower priority than actions aimed at expanding industries that are either new to the state or still a small part of its economy. Retaining industry should be secondary to diversification not because jobs in established industries are less valuable than those in new industries. Instead, the reason is that for established industries, there is little need for Department actions to demonstrate the suitability of an Iowa location because the economics of operating in Iowa are presumably well understood. If the basic economics of these industries favor Iowa locations, Department efforts to encourage expansion will not be needed. If Iowa locations are not competitive, then it is questionable whether the Department should provide financial or other assistance to retain or expand the industries. Regardless of its desire to retain jobs, Iowa certainly cannot subsidize on any significant scale a major sector for which Iowa has become a relatively unprofitable location. Stated differently, information and other assistance provided by the Department's programs may be needed to demonstrate the suitability of Iowa as a location for industries that are not yet well established, but it should not be needed for established industries.

Iowa government can perhaps best help in retaining business by operating and carrying out its traditional functions so that government is a good buy--so that there is a favorable balance between the public service benefits enjoyed by potentially mobile businesses and the taxes, fees, and charges they pay to support government. In particular, government should not impose taxes and costs on existing, potentially mobile businesses and their employees in an effort to attract new businesses through direct and indirect subsidies.

IV. ISSUES AND POLICY ALTERNATIVES

Previous studies, DED staff, and the Partnership for Economic Progress have identified a number of factors and conditions, including some current state government policies, that may be inhibiting Iowa's economic growth. There are a number of programs in place to deal with these perceived problems, and many others have been suggested. This section evaluates these programs using the criteria defined above, as well as considering other policy options.

A. Financial assistance

The state presently provides financial assistance to businesses through a number of programs, the more important of which are the Economic Development Set-Aside (EDSA) portion of Community Development Block Grants, the Iowa Housing Finance Authority's Small Business Loan Program and its Economic Development Bond Bank, Community Economic Betterment accounts (CEB), Financing Rural Economic Development (FRED), and several Small Business Administration programs. EDSA and FRED are federally funded, CEB is funded with lottery proceeds, and IFHA is funded through the issue of bonds.

In addition to programs that provide assistance for capital investment, Iowa's Industrial New Jobs Training Program (H.F. 623) provides funds for investment in (training of) workers. Similar assistance is available to small businesses under the Small Business Training Program (H.F. 766). Although these worker training programs usually are not regarded as instruments for financial assistance, their main effect is to channel government funds to eligible businesses. They differ from programs explicitly labelled as financial assistance only in allowable uses of funds.

Financial assistance programs have been implemented to deal with two perceived problems. One problem is capital gaps--private sector funds are either unavailable or too costly for some business investments that would

prove profitable and beneficial to the state if undertaken. The other is that financial assistance programs of other states will pull jobs away from Iowa if Iowa does not have competing programs. Whether Iowa's growth would be significantly curtailed by a failure to address these problems is unclear on available evidence. We cannot within the scope of this report deal with this question, but it is an issue that should be high on the DED's research agenda.

Although they differ in funding source, administration, and often in stated purpose and rationale, mechanisms of financial assistance have one common effect: they enhance the profitability of the assisted enterprises. They essentially provide a subsidy to the assisted businesses.

Regardless of the form of assistance, its value to the assisted business can be reduced to a common denominator: the increase in the (present) value of the business that can be attributed to the subsidy. This fact suggests it may be advantageous in terms of administration to reduce the number of programs that provide financial assistance. It also raises the question of whether the criteria and guidelines applied should be uniform across programs. It does not mean, however, that the state should move to a single form of assistance provided by a single program. Different programs will be needed for different funding sources, and different assistance forms (grants, interest buy downs, etc.) may be needed in particular instances. These issues are discussed more fully below.

In the remainder of this section, we first discuss the main considerations involved in disbursing financial assistance. Then we make general recommendations that should apply to all assistance programs, as well as recommendations specific to existing and proposed programs. In most of the discussion, we take the existence and budgets of programs as given and ask how the funds should be disbursed to best promote development. However, we also

discuss several concerns that raise questions about the desirability of assistance.

1. Considerations in allocating assistance

The broad guidelines that should determine the disbursement of financial assistance are clear. Ideally, assistance should be provided only to businesses that would not otherwise locate or continue or expand their operations in Iowa. The assistance should be distributed among mobile and potentially mobile enterprises so as to provide the greatest employment and income gains to Iowans. These income gains should exceed the cost of the assistance, in which case the provision of financial assistance would be efficient, making Iowans better off as a group. Many would also argue that the gains and costs of the policy should be distributed fairly.

The main task of administrators is to discover which uses of financial assistance resources are efficient. To identify the industries and businesses to which financial assistance can be directed with the greatest advantage, they must make judgments about the answers to two distinct questions. First, are the benefits from attracting a business to Iowa greater than the cost of assistance? Second, are the benefits greater for business A than for business B? The first question is the more difficult to answer. But an answer is necessary if we are to reach a judgment about whether the financial assistance makes Iowans better off. Only the second, less difficult question need be answered if the existence of the financial assistance program and the total funds to be disbursed under the program can be taken as given. In this latter case, the adminstering agency need only rank the applicants for assistance according to the benefits generated per dollar (present value) of assistance and then disburse assistance to the higher ranking applicants until the budget is exhausted.

The preceding may seem an overly complicated and difficult procedure for determining when assistance is justified. It is complicated and difficult, but it is not overly so if the objective of assistance is to increase income generated in Iowa. Applying the efficiency criterion is the only way of determining whether financial assistance (or any other form of assistance for that matter) accomplishes this objective. A conclusion that the criterion is unworkable is a conclusion that it is impossible to determine whether financial assistance will in any particular instance increase the incomes accruing to the owners of resources employed in Iowa. It should lead us to question the whole idea of using financial assistance programs to promote development. What needs to be stressed is that there is no case for different criteria simply because they are more workable.

Determining a business' need for assistance

When is assistance necessary to attract a business to Iowa? In general assistance is necessary when the business cannot otherwise earn a competitive rate of return on its investment in Iowa. This would obviously be the case if the business would not be economically viable in the absence of the assistance. Economic viability means that the business would be able to pay prevailing commercial interest rates to finance its activities and still expect to break even or better.

Even if a business would be economically viable in Iowa, it might not choose to locate here if it could earn a higher return on its equity investment in another state. In this case, some form of financial assistance (subsidy) would be required to make the expected return on investment in Iowa competitive with the highest expected return at another location. When making comparisons, returns should be calculated net of all applicable taxes.

For example, suppose a manufacturing operation involves an investment of $1 million, of which $600,000 is to be borrowed from a commercial lender and the remainder is equity capital to be supllied by the individuals (or corporation) who will be the owners. The borrowed funds are available at a 10 percent rate from commercial lenders in either Iowa or the alternative state. However, costs are such that the expected return on equity is, say, 10 percent, in Iowa and 12 percent in the best alternative location. Under these conditions, a subsidy, financial or otherwise, sufficient to raise the expected return on equity in Iowa to at least 12 percent, would be necessary to attract the business to Iowa.

This example shows what information is needed to determine whether financial assistance is necessary. It does not show how that information can be obtained. The required information would be obtained ordinarily by the business in the process of deciding whether and where to invest, but it would not be to the advantage of the business to provide this information in full to the administering agency. Instead, the business seeking financial assistance has an incentive to provide information that supports the case for more assistance than it in fact needs. The administering agency can of course audit the financial analysis that the applicant should be required to submit to support its request for assistance. Auditing will be costly, and uncertainty about the true needs of the business is likely to remain. The administering agency can rely to some extent on the assessments of costs and returns that private lenders will make as they decide whether to make loans. But these assessments may not be available in full to the agency.

Assessing benefits from assistance

Broadly speaking, the benefits from having a particular business in the state accrue in the form of higher incomes for owners of resources presently

employed in Iowa, both capital and labor.[7] In addition, there may be a public sector benefit if the business pays taxes that more than compensate for any public expenditures necessitated by its presence. Any environmental and amenity gains and losses from the business' operation should also be included. Stated differently, the benefits from having a particular business investment located in Iowa are the amounts that others than the investor would be willing to pay if necessary to assure that the business locates in Iowa rather than elsewhere.[8]

When assessing benefits, it is important to recognize that jobs are not created by state development policies. Rather, when successful, those policies attract jobs. Jobs are created by the demand for goods and services. That demand cannot be significantly increased by state economic development actions.

The wages paid to employees of a business will ordinarily greatly overstate the gains that those workers derive from the location of the business in the state. The reason is that they would have found employment elsewhere in most cases. For mobile workers the main gain is that they do not have to move to the job; rather the job comes to them.

More generally, the main beneficiaries of policies that increase economic activity in the state are the owners of resources that cannot move from the state in response to better opportunities elsewhere. Owners of these immobile resources may gain substantially when new businesses locate in the state or existing businesses expand. Owners of mobile resources stand to gain relatively little. This fact suggests that the costs of economic development policies should be borne primarily by owners of immobile resources, since they are the primary beneficiaries. Only land is absolutely immobile. In-place capital, such as existing factories and buildings, is immobile in that it

cannot be moved. However, from an economic development perspective, it is appropriately treated as mobile since its owners can decide against maintaining and replacing it in a given location. Among workers, secondary workers in a household may be relatively immobile, since they are tied to the location of the primary worker. Non-farm labor supply by farm households falls into this immobile category. The household must stay in Iowa to farm, but household members would be willing to work off the farm if employment is available.

Obtaining meaningful quantitative estimates of the benefits of attracting a business to Iowa will in most cases be impossible. However, in reaching a judgment about benefits, the DED can look at a number of factors that would likely be associated with their magnitude. Several factors that may influence and be indicators of benefits are discussed below.

Private sector and local government contributions. The benefits from having a particular business in Iowa will accrue primarily to owners of the resources that are "tied" to the community in which the business is located rather than to the state population as a whole. Also, the workers, business owners, and government officials of that community will likely have a better grasp than state officials of the potential benefits (and costs) of the business. For both of these reasons, the willingness of the private sector and local government to share the costs of financial assistance is an indicator of the benefits that the location of the business in Iowa may generate. Indeed, absence of a willingness to share costs might be taken as an indication that benefits are negligible. Stated differently, the state should not use funds taken from all of the state's taxpayers to increase business activity in a particular community when neither the local government

of that community nor its private citizens are willing to provide funds for that purpose.

Local government and/or private cost sharing should be a requirement for state financial assistance. The main argument for doing so is, as noted above, cost sharing can provide information about the magnitude of the benefits from attracting a particular business. Arguing against the requirement is the time and other costs of collecting the cost sharing funds. The required local cost share should in principle reflect the division of benefits between the locality and the state at large. However, because of the difficulty of determining this division, any required cost share should be the same for all cases. Priority for funding should increase as local (private and government) contributions increase relative to the amount sought from the state.

Local employment conditions. A common view is that locating new businesses in areas of relatively high unemployment is likely to produce greater benefits than locating them in rapidly growing areas with relatively low unemployment rates. While there is some validity to this view, the increase in total employment and job availability in the state will not be significantly greater if assistance is focussed on high unemployment rather than low unemployment areas. Even if the new employment is initially in an area with low unemployment, higher labor demand in that area will ultimately draw labor from the ranks of the unemployed or underemployed if there is in fact an increase in total job availability in the state. Workers may be drawn from Iowa's unemployed or they may come from other states. In either case, the increase in total employment will be approximately the same as when the workers are drawn from the community in which the new business is located. Focussing assistance on localities with high unemployment does have the

advantage of bringing jobs to workers rather than creating jobs to which workers have to move at costs that are often significant in both financial and human terms. Bringing jobs to workers can be important when they are immobile, as might be the case for secondary workers in farm households.

Population size and growth. The benefits and costs of locating a business in Iowa will usually not be independent of where within the state it locates. In the short run, the gains may be greatest if the business locates in a small town with a falling population rather than a growth center. The reason is that such a community may have excess infrastructure capacity and therefore may be able to provide public services to the business and its employees at a lower cost than a growth-center city. The latter would tend to have little excess infrastructure so that additional industry would mean additional infrastructure investment.

However, in the long run the infrastructure in the low-growth town will have to be replaced. The cost of doing so may be greater on a per capita basis than in a larger city. That is, having population and industry dispersed among a number of small towns may in the long run be inefficient. If so, encouraging industry to locate in small towns that are presently experiencing high unemployment, excess infrastructure capacity, and population loss may delay or prevent adjustment to a more efficient pattern of location.

The efficient location pattern of population and economic activity within a state will be strongly influenced by transportation costs and economies of scale in private and public production. There is a danger in the state trying to counter these influences and <u>direct</u> the location pattern by focussing financial assistance or by other measures such as the location of infrastructure. For example, a policy of using sales, income, and road use tax revenues collected in Iowa's major urban areas to finance roads and other

government services in rural areas and small towns could well be counter-productive from an economic development perspective. It would obstruct the evolution of an efficient regional distribution of population and industry. And the taxes paid by urban area residents and businesses that go to support provision of services in rural areas would act as a deterrent to economic development in urban areas.

Wage levels. The wage levels to be paid by the prospective business may be an indicator of benefits. Higher wages are more likely to result in income gains (above what would have been received if the business had not located in the community) than lower wages. Also, high wage industries are usually those that require highly skilled labor. Such industries, once located in Iowa, are less likely to be attracted away to areas of the nation and the world where low-skill labor is abundant and inexpensive. Stated differently, manufacturing operations located in Iowa (or elsewhere in the U.S.) cannot compete in the production of products that can be produced abroad with low wage labor and then imported into the U.S. market. An exception to the preceding occurs when the business would employ immobile secondary workers that do not have the skills for high wage jobs.

Local income levels. Will the benefits of locating a business in Iowa be greater if the business locates in a poor rather than a relatively rich community? There is little possibility that such will be the case unless the relative poorness reflects excess capacity in public infrastructure and private commercial capacity. Even then, as explained above, relatively higher benefits in the poor community may be a short run phenomenon. If the relative poorness reflects high unemployment, then there may be some advantage, as noted above, of bringing the jobs to the workers rather than having workers move to the jobs. On balance there seems little justification <u>on efficiency</u>

grounds for treating local income level as an independent factor to be considered in allocating assistance. There could be an equity case for doing so if it is thought that the new jobs will go to the relatively poor and those same poor persons would not have similarly benefited by expansion of employment in another relatively rich community.

Size of business. There is no reason for thinking that the benefits per dollar spent to attract businesses to Iowa or to retain and encourage the expansion of existing businesses will be greater if the effort is focussed on large or small businesses.

Industry or product type. The benefits from a business locating in Iowa will depend in some instances on the products and services it produces. This fact has several implications for the type of business to be assisted.

First, assistance should not be extended to businesses that produce products or services that by their very nature must be produced in Iowa. Examples are retail establishments, restaurants and hotels, and housing and other construction firms. In these cases, a new entry will with rare exceptions only displace sales by existing businesses and not increase total employment and income. Assisting such businesses will merely shift employment and production between businesses and locations.

Second, total employment and incomes in Iowa will increase only if the product or service is either exported (bought by a person of another state or nation) or substitutes for a product or service that was previously imported. Priority should therefore be given to assisting businesses that would produce exports or import substitutes.

Third, businesses differ in the extent to which they buy inputs from other Iowa businesses. If businesses can be reliably scored on this dimension, it would make sense to target assistance to businesses that if

located in Iowa would buy a relatively large share of their inputs from Iowa producers and if located elsewhere would not buy inputs from Iowa producers. The reason is that the "multiplier" effects of the initial expansion of production and employment will be greater when the new businesses buy inputs from Iowa producers. The difficulty with this prescription is that reliable information about the extent to which inputs would be purchased from Iowa producers is difficult to obtain. It should be requested as part of the application for assistance. A rough idea of the magnitude of interindustry purchases is available from input-output tables. Note that the businesses assisted because they buy a large share of inputs from Iowa producers should still be producers of exports or import substitutes. Businesses that necessarily produce their products or services in Iowa should not be assisted even if they buy a large share of inputs from Iowa producers.

Fourth, businesses that add diversity to the Iowa economy should be favored over those that do not, other factors equal. Iowa's economy is presently heavily concentrated in agriculture and related sectors. The consequences of such concentration can be favorable, as in the 1970s when the state seemed to be recession proof because of the boom in commodity prices. However, they can also be unfavorable, as the experience since 1981 well illustrates. Trends are such that Iowa's economy will become less closely tied to agriculture regardless of the focus of state economic development efforts. Relatively slow growth of demand for agricultural products will assure this outcome. However, the state may be able to speed this adjustment by targeting financial and other assistance to businesses that are not agriculturally related.

Forms of assistance

As explained above, financial assistance is currently provided through a number of programs and in a variety of forms: cash grants, interest and principal buy-downs on private sector loans, government loans at below-market rates, tax-exempt bonds, funds for worker training, and tax credits and exemptions. Is there need for assistance in such a variety of forms?

The main purpose of assistance, regardless of its form, is to increase the profits of the assisted business enough that it will choose to locate in Iowa when it would have located elsewhere in the absence of assistance. Since a required increase in profitability can in principle be generated by any form of assistance, none is inherently more effective than another. The key concern of the assisted business is the amount of assistance and not its form. For example, a tax credit can be just as desirable as a cash grant if it has the same present value; a credit that saves $1,000 per year in taxes for five years is equivalent to a cash grant of $3,791 if the discount rate is 10 percent. Likewise, one might argue that from the perspective of the state, the key number is the present value of the assistance and not the manner in which it is delivered.

There is, however, one sense in which the manner of providing assistance matters--namely its distribution through time. In general, assistance should be delivered over time in roughly the same pattern that the benefits from having the business in Iowa accrue. If the benefits that justify the assistance accrue uniformly over a ten-year period, then the assistance should be paid out uniformly over that period. The main reason for this guideline is to reduce the risk that assistance will be provided to a business that fails before the benefits from the assistance can be realized. It may also reduce the difficulty of obtaining local government and private sector matching

funds, since they could be contributed over a number of years rather than as an immediate lump-sum payment. Of course, to be equivalent from the perspective of the business, the total dollar amount paid out over a number of years would have to exceed the immediate dollar payment. But it would be equal in present value.

Interstate competition in financial assistance

Because other states offer financial and other assistance, it is argued that Iowa must do likewise. It is feared that failure to meet this interstate competition for business will lead to businesses not locating in Iowa even when it is the location with the lowest economic costs. The reason is that other states may offset their cost disadvantages with financial and in-kind subsidies. Is this view valid? Should Iowa always meet the competition?

The answer is that the principles presented above should be applied. First, it should be established that assistance is in fact necessary to attract the business to Iowa. If it is, then the next step is to determine whether location of the business in Iowa will generate private sector income gains and a fiscal surplus that in combination exceed the cost of the assistance. If it will, then it must be determined whether assisting this particular business will preclude assistance to other businesses that would generate greater public and private sector gains per dollar of assistance. If it does not, then all three criteria have been met and assistance should be provided.

When these criteria are not met, assistance should not be provided because doing so will make Iowans worse off. For example, suppose a company has decided to build a new plant in either Iowa or Illinois. Suppose also that in the absence of subsidies the company is indifferent to location because the plant would generate the same profit in either state. This is a

rather common situation because the economics of the market place seldom dictate a unique location for a producer's activity. In such situations, the company has a clear incentive to ask Iowa and Illinois to "bid" for the plant. Should they respond and if so, how much should they bid? How much should be bid depends on the amount that Iowans would be willing to pay to attract the plant, which would not exceed the present value of the gains in private income and fiscal surplus generated by the plant's location in Iowa. If these gains are estimated to be $200,000, then that is the maximum that Iowa should offer in financial assistance or in-kind subsidy as it bids for the plant. Of course, the amount required for a successful bid would depend on Illinois' bid. Iowa would have to bid more if Illinois bids more. But in any such "bidding war," Iowa should limit its bid to $200,000 even if doing so means that Illinois will "win" the plant. A higher successful bid would only make Iowans as a group worse off despite bringing jobs to the state.

Intrastate competition in financial assistance

Localities often compete with one another for businesses. We have already noted that it is of doubtful value for the state to try to favor one locality or class of localities over another. For the same reasons, the state should not allow Iowa localities to use state (or federal) funds to compete among themselves for businesses. Should it go further and try to limit competition based on local funding?

The fact that one locality is willing to provide a business more in assistance <u>from its own sources</u> than another locality is by itself an indication that benefits are greater if the business locates in the first locality. This is the main advantage of competition. The main disadvantage is that competition tends to maximize the assistance to the business and minimize the benefits that the successful locality realizes from attracting

the business. For example, a principal buy-down of $100,000 might be sufficient to induce a business to locate in any one of a number of Iowa communities, but by playing one community against another the business may obtain greater assistance. On balance it is difficult to know whether the effect of competition is positive or negative. It would also be difficult for the state to limit competition.

2. Recommendations

To ensure that financial assistance programs actually promote development, program administrators must determine whether assistance is required for the applicant business to operate in Iowa. If it is, they must then determine whether having the business in Iowa generates gains that warrant the cost of assistance. This section presents a number of recommendations regarding administrative procedures and award guidelines that should be helpful in making these determinations.

General recommendations

Uniform procedures and guidelines. The fact that all assistance programs have their main effect on the "bottom line" or profitability of a business points to the need for uniform application procedures and award criteria for all state administered assistance programs. Ideally, all applicants for assistance would be required to submit the same information in support of their application, and all applications would be processed in the same manner. Centralized administration of all or most financial assistance programs so that businesses can go to a one-stop service center, recommended by Garfield Schwartz ("Cost and Quality of Production Factors," p. 20), should also be considered. It is recognized that legal restrictions may prevent

complete uniformity, particularly in the case of federally funded programs that have objectives other than state economic growth.

Private and local government matching. The local government (municipality and/or county) and private sector of the community in which the business would locate should be required to share the cost of providing financial assistance as a condition for state assistance to the business. If cost sharing is not required in some or all cases, the guidelines and procedures for requesting assistance should make clear that voluntary cost sharing will strengthen any request for assistance because it can be taken as an indicator of the magnitude of benefits. When calculating the amount of private sector contributions, the investment of the assisted business should not be included. Calculations of the local government contribution should not include outlays that it would make even if the assisted business does not locate in the locality. The issue of local private and public matching is not addressed in the Garfield Schwartz plan and underlying studies.

Private lender participation. A business seeking state assistance should ordinarily be required to obtain the majority of its funding from private lenders. The willingness of banks and other commercial lenders to supply funds to a business is an important indicator of its economic viability, which is relevant because expected benefits, no matter how large, will not be realized if the business fails. Requiring some funding from commercial lenders will bring the investment banking skills of those lenders to bear on the problem of assessing the prospects of the applicant. Such a requirement is therefore a means of obtaining information that would be costly for administrators to obtain otherwise. This requirement combined with a requirement for local government and private sector (non-lender) sharing of

the cost of assistance provides evidence that the three groups expect the business to be viable and desirable in its impact on the Iowa economy.

Information supplied by applicant. Applications for assistance, which are ordinarily made by a local government on behalf of the assisted business, should document the need for assistance by showing that without assistance either the business could not operate profitably (is not viable) or it could not operate as profitably in Iowa as in another state. The application should also include qualitative and, to the extent possible, quantitative benefit assessments by both the applicant business and the sponsoring local government. These assessments should be developed using guidelines provided by the administering agency that define benefits and indicate how they should in principle be measured.

Audit capability. Because an applicant business has an incentive to overstate its needs--more assistance means greater profits--the DED should develop and maintain a capability for assessing the accuracy of the information supplied by the applicant, including the local sponsor's estimates of the benefits from having the business in the community. A key input in this audit should be the private lender's estimates of the cost and revenue flows associated with the business' operations.

In reviewing applications, the DED should also be concerned that the private lender is not "capturing" part of the assistance. For example, a lender may in the expectation of an interest buy-down overstate the rate at which it is willing to lend. More generally, the availability of public funds for debt service may induce lenders to raise interest rates asked for loans on investments eligible for assistance. To guard against this outcome, DED must be able to determine whether lenders are earning higher profits on loans that involve state assistance than on other loans.

Two recommendations by Garfield Schwartz (Rebuilding..., pp. 18-19) for a study of bank lending practices and for training of bank loan officers, would be helpful in developing audit capability. Ideally, loan officers should fully understand the objectives of financial assistance programs, their award criteria, and the key role that private lenders can play in managing them.

Aggregation of assistance costs. When weighing the benefits against the costs of assisting a business, costs should be calculated as the total assistance being provided under all state administered programs. Also, published indices of the effectiveness of assistance programs, such as "cost per job," should be based on all assistance costs and not on the assistance provided under a single program. In addition to aggregating state government assistance costs, the DED should collect information about the amount of financial and other assistance provided by local governments. Comparisons will be facilitated by stating costs in present value terms. The purpose is to determine the total government subsidy provided to each business. This information will be needed by legislators as they make decisions about the continuation of various programs and by the DED as it gauges the effects of its policies.

Targeting. The goal in disbursing assistance is to generate the greatest possible income gains for Iowans. Thus, assistance should be targeted to particular industries, types of firms, or regions only if there is some reason for believing that greater income gains per dollar of assistance are generated in some industries, regions, or types of business than in others. Applying this general principle, the preceding analysis points to several conclusions regarding targeting.

1. There is at best a weak case for targeting assistance to localities with relatively high unemployment and relatively low incomes.

2. The case is even weaker for targeting to localities with small and falling populations. Targeting to these communities could in the long run hinder rather than promote economic development.

3. More generally, financial assistance should be disbursed so as to be neutral regarding the location of businesses within the state. The amount of assistance available should not depend on where within the state the business locates.

4. There is no basis for favoring one size of business over another independent of other factors. However, businesses that have greater potential for growth should be favored, other factors the same.

5. Higher wage businesses should usually be given priority over lower wage businesses. An exception might be a low-wage business that would employ relatively immobile secondary workers, such as secondary workers in a farm household.

6. Targeting by type of product or service can be appropriate, but the product and service categories to be targeted are difficult to define except in general terms. Thus, we concluded that assistance should be directed to businesses that produce exports or import substitutes. Among such businesses, those that purchase a larger share of their inputs from Iowa producers should be given priority if they can be identified.

7. Other things equal, businesses that add diversity to the Iowa economy should be favored over those that do not. To promote diversity, a major concern in disbursing assistance should be to demonstrate that Iowa is a profitable location for industries that presently do not operate in the state. Requests for assistance that would bring a new industry to the state should therefore receive very high priority. The assistance should be regarded as a <u>demonstration grant</u> to help offset the costs of gathering

information needed to determine the profitability of an Iowa based operation. Assistance should be provided only if there is good reason to believe that the business would over the long run be profitable without assistance. Iowa should not subsidize firms on a continuing basis, whether they represent new or existing industries. Once the profitability of locating in Iowa is established, that fact should be used in marketing efforts to attract businesses in the same or related industries or in complementary (input-supplying) industries.

8. Businesses that produce products or services that by their very nature must be produced in Iowa should not be assisted. Most retail and restaurant services fall into this category.

9. Assisted enterprises could be those considering an expansion that might be located in Iowa. They also could be enterprises presently located in Iowa but considering a move out of state because of the prospect of higher profits elsewhere. Or they could be new start-up enterprises. That is, the basic objective of financial assistance, which is to make Iowa's economic base larger than it would otherwise be, can be served by retaining economic activity in the state as well as by fostering new enterprises and attracting businesses to the state.

The preceding recommendations are not fully consistent with the targeting priorities stated in the Garfield Schwartz plan (Rebuilding..., pp. 3-5). In particular, that plan would give higher priority to assisting an existing or start-up retail business than to attracting a new firm that produces exports. Yet the latter would increase Iowa's economic base while the former probably would not. More generally, Garfield Schwartz states that assistance priorities should depend on whether the business produces exports or import substitutes and whether it is an existing, start up, or out-of-state

business. There is no economic basis for these distinctions. The income gains and jobs generated by the business' operations in Iowa are the relevant concerns; it matters not whether the business produces exports or import substitutes or whether it is new, existing, or from another state.

Like assistance itself, information and marketing related to the availability of assistance should be aimed at businesses that are on the margin between Iowa and other locations, businesses for which assistance is likely to influence location decisions.

Form of assistance. Assistance should ordinarily be provided in the form of a principal or interest buy-down on a private sector loan. Essentially, the state would pay part of the business' debt service costs. From the perspective of the state, the buy-down is desirable because payments are staged over time and because a private sector lender has passed a favorable judgment on the financial feasibility of the investment being funded. The assisted business will ordinarily have no strong preferences regarding the form of the assistance because any improvement in profitability needed to assure its location in Iowa can be obtained by any of the commonly used forms of assistance. This guideline cannot be applied rigidly. Assistance from Iowa Housing Finance Authority programs must be in the form of loans because of the source of its funds--it borrows to relend. Also the state may at times find it advantageous to make a cash grant or to become the primary lender, but in doing so it should recognize that it is assuming more risk.

Monitoring and evaluation. Because the information needed to determine whether assistance is efficient is difficult to obtain, there will be uncertainty about whether assistance programs are in fact promoting development. This seems especially likely for the next few years when a new department will be working with new programs. The possibility that assistance

programs may be counter-productive points to the desirability of starting small and expanding assistance programs slowly and only after firm evidence that income gains exceed assistance costs. It also means that DED needs to develop procedures for monitoring and gathering information about the effects of its activities. In particular, the Department should determine the extent to which the assisted businesses are:

1. creating the expected number of jobs.
2. simply displacing the sales and employment of existing businesses.
3. purchasing inputs from Iowa producers.
4. adding to tax revenues.
5. creating additional costs for government.

It should also implement cost-accounting procedures that track and make available to the public the costs of its assistance programs. The purpose is to gather information needed to determine how successful policies have been. The DED should continually seek to improve its procedures and capabilities for evaluating requests for assistance. The task is to translate the general criteria of section IV into operational guidelines for evaluating requests and for obtaining needed information from applicants and other sources.

Research. Financial assistance programs have been implemented to deal with two perceived problems: capital gaps and competing financial assistance programs of other states. This has been done, however, without solid evidence that the problems are serious. Are capital shortages for particular borrowers significantly inhibiting growth? Are the financial assistance programs of other states attracting businesses that would otherwise locate in Iowa? To date, research on these questions suggests that financial assistance and other forms of subsidy, such as tax concessions, have relatively little effect on location decisions. A key research goal of the DED should be to gather

additional and more conclusive evidence on these questions. In particular, it should obtain information about how economic activities vary in their profitability between Iowa and other states. As the department administers and evaluates its own programs, it will generate evidence on these basic questions. Garfield Schwartz (Rebuilding ..., p. 27) also calls for research on capital gaps, and a related recommendation (p. 18) calls for a study of bank lending practices.

Additional funding. The DED should not seek additional funding for financial assistance; rather its central concern should be to improve administrative procedures and award guidelines. The main reason for not increasing funding is the previously noted difficulty of determining whether assistance is needed to assure that a particular business locates in Iowa and whether the benefits of doing so exceed the costs. Consequently, there is and will likely continue to be considerable uncertainty about whether assistance programs are in fact promoting development. This uncertainty has led other economic development plans, those of Michigan and Minnesota in particular, to recommend a limited role for financial assistance, tax concessions, and other subsidy programs. In particular, the Michigan plan (Path to Prosperity..., p. 90) recommends that "business attraction strategy focus more on the provision of quality business services, and less on the financial giveaways that are the centerpiece of traditional state programs." Similarly, Balderston (1986, p. 31) notes that states are shifting from "industrial attraction activities to emphasizing small business assistance and entrepreneurial development..."

A second reason is that studies show that the cost and availability of financing are not major factors in location decisions (Barker, 1983, pp. 17-19). A third consideration is that erring in the direction of under-assisting may be preferable to over-assisting. Failure to assist a particular business

may result in the loss of that business. However, assisting a business when the benefits of doing so fall short of the costs may make the state a less attractive location for all mobile businesses. Fourth, in a study of state and federal financial assistance programs undertaken as part of this project, David Lawrence (1986, p. 12) of Drake University concludes "Taking financial intermediation in Iowa in its totality, it is difficult to believe a business that wants to produce in Iowa and has a good plan cannot obtain funds from one of the myriad sources."

As a practical matter, the scope of assistance programs cannot be expanded to meet the "demand" for assistance. Most of the businesses that constitute Iowa's (or any other state's) economic base can in the long run operate in other states. (The exceptions are those that are exploiting land and other natural resources that are geographically fixed.) Therefore, most can apply for assistance in either maintaining or expanding their present operations, and they have an incentive to do so even if assistance is not needed to assure their continued presence in the state. The existence of assistance programs literally invites businesses to declare that they will not come to (or remain in) Iowa without assistance. The number of businesses requesting assistance is likely to increase, as will the task of sorting out valid requests. There will be pressure to increase the funds available for financial assistance, and to increase the scope of other in-kind subsidy programs as well. The danger is that significant amounts of aid will go to unqualified businesses that would either locate in Iowa without assistance or generate insufficient income gains to justify their assistance, in which case assistance progams could be counter-productive. The DED cannot put itself in the position of having to consider and possibly negotiate an assistance package for each of the geographically mobile enterprises that presently make

up Iowa's economic base. The only practical way of limiting the demands for assistance is to place firm limits on the available funds.

Recommendations for specific programs

The preceding recommendations are applicable, with noted exceptions, to all programs. Some of the recommended procedures are either being followed or are under consideration in the administration of the CDBG and CEB programs. Suggestions regarding particular programs, both existing and proposed, follow.

Industrial New Jobs Training Program (INJPT). This program, authorized by H.F. 623, is not administered by DED, although it has oversight responsibilities. In dollar costs, it is the most expensive of present programs. Furthermore, it is an open-ended program; there is no specific limit to the dollar amount of subsidies that can be provided per year. Instead, the amounts disbursed are determined by the training agreements made by businesses with community colleges. New federal rules regarding the issue of tax-exempt bonds and the total amount of bonds that may be outstanding will be developed in connection with the pending tax reform bill; these rules may place some constraints on funding for this program.

DED approval of the training agreements that are the vehicles for assistance under this program is not required at present, but it should be. The amount of assistance provided to a business under this program should be a consideration in determining the amounts provided under other programs and vice versa. Awards under INJTP should be determined by the same guidelines as awards under other programs.

House File 766 established a similar program for small businesses. The same recommendations apply.

Iowa Housing Finance Authority (IHFA) Programs. The IHFA serves as a financial intermediary by selling tax-exempt bonds and then relending the

proceeds for various purposes. The programs relevant for economic development are its Small Business Loan program and the Economic Development Bond Bank, the latter being a new program. The Bond Bank can be an effective means of reducing the interest rates paid by local governments and private purpose borrowers. It would do so by pooling bond issues to reduce flotation costs and the risks that lenders face in buying the bonds.

The Bond Bank should be implemented as soon as possible and operated without subsidy from state government. It should aid in the marketing of private purpose and local government bonds only when there is the expectation that the loans will be fully repaid. Some state funds will be needed to provide the initial capitalization of the bank. These funds should essentially serve as a reserve; appropriations on a continuing basis should not be needed.

Tax concessions. Tax credits and exemptions are widely used to promote economic development. Iowa has several such concessions, and more were recommended in the Garfield Schwartz Plan. Specifically, that plan recommends a "Buy Iowa" tax credit or deduction to encourage import substitution (p. 9), a 1 percent reduction in the insurance premium tax for companies that "make Iowa investments that they would not ordinarily make" (p. 20), and exemption from Iowa income taxation of a specific proportion of the income and capital gains generated from investments in new product development and first stage venture.

Although it enhances the profitability of operating in Iowa, a tax concession is a poor tool for promoting development for several reasons. First, lower taxes for favored enterprises mean either higher taxes or lower service levels for some persons and businesses, the effect of which may be to partially or fully offset the favorable effect of the tax concession. Second,

once in place a tax concession is difficult to remove, even though it may be ineffective or counter-productive from a development perspective. Third, it is a blunt instrument; it is difficult to make the financial advantage that the concession provides commensurate with a business' favorable effect on growth. For example, the new jobs credit provided by INJTP, up to $720 per job created, does not vary with the benefits generated by the new job.

In short, direct and flexible methods of assistance, such as loans, grants, and principal and interest buydowns, are strongly preferable to tax concessions. Furthermore, tax concessions provided for other purposes can be deterrents to growth. For example, reducing property taxes on land in the name of property tax relief will be counter-productive from a development perspective. Land, being immobile, will not be attracted to the state by lower taxes, while the tax increases or service reductions necessitated by lower land taxes will make the state less attractive for mobile resources.

Lender commitment program. The DED should establish a lender commitment program following the example of Illinois. Under the program, Iowa lending institutions would be asked to set aside a fraction of their loan portfolio for designated categories of borrowers. Assisted borrowers would be those facing a presumed shortage of capital such as small and new businesses. The existence of the commitments would then be publicized to eligible businesses as part of DED's information and marketing programs.

The program should be administered with other assistance programs and be subject to the same app_ication procedures and award guidelines. That is, the program should be regarded as another source of funds to be allocated by the Department upon application by a business and sponsoring local government.

A lender commitment program may promote development in several ways. First, by identifying lenders willing to lend to small and new firms, it may

reduce any capital shortages that such firms face. Second, publicizing the program may improve Iowa's image as a place to do business. Finally, in the process of obtaining commitments, the Department can educate private lenders about Iowa's development needs and options and make them more development conscious.

Interstate banking. It is doubtful that Iowa's restrictions on interstate banking are significantly inhibiting economic development. Nevertheless, relaxing the restrictions would likely prove beneficial from a development perspective. Banking competition in medium and large cities would increase, and the range of banking services would likely improve. Having offices of the large national and international banks in Iowa would improve its image and be helpful in attracting out-of-state businesses. Therefore, the Department should first survey what other states have done and then propose legislation for changing Iowa's banking regulations. The research and debate generated by the proposed legislation should further clarify the issue. .Efforts to better understand interstate banking issues seem warranted because they are unlikely to fade away given the on-going deregulation of financial intermediaries by the federal and other state governments.[9]

3. Relevance for other forms of assistance

Much of the preceding discussion of issues that arise in connection with financial assistance is also relevant for other forms of assistance, such as technical assistance provided through incubators or other mechanisms and infrastructure subsidies. In particular, the assessment of benefits, the desirability of local government and private sector cost sharing, and the targeting issues are the same whether assistance is financial or in-kind. Recommendations regarding information supplied by applicants, auditing,

aggregating and publishing assistance costs, and monitoring and evaluation are also generally applicable.

B. Information and marketing

The objective of information and marketing efforts in support of economic development is to persuade businesses to move to or remain in the state. These efforts are geared toward providing businesses with information intended to convince them that Iowa is a location where the returns from mobile resources at their disposal will be attractive.

Iowa, like many other states, has devised programs for providing business information that is intended to fill information gaps and to correct misperceptions that are inimical to development. The key assumptions underlying state involvement in this area are twofold: (1) information can be provided that will influence location decisions and (2) the private sector either does not have this information or will not choose to incur the cost of acquiring it. If these assumptions do not pertain in a given circumstance, a marketing program is unlikely to be justifiable.

It is important to recognize that information programs which help businesses make profitable location decisions are a form of assistance. Applying the same efficiency criterion as used in financial assistance and other types of programs, an information program should bring about economic gains to the state that at least equal its cost. This assessment must be made over a period of time; it cannot be made on a case-by-case basis. Not every business that is provided information can be expected to locate in Iowa.

1. Current approaches to marketing

The Department has been active on a wide variety of marketing fronts. Marketing is carried out by advertising placements in general and industry-specific publications; by developing promotional literature and brochures for

direct mailing purposes; and through telemarketing, trade shows, and personal contacts with businesses throughout the U.S. and in foreign nations. Within the DED, the Services and Distribution Section directs its efforts to attract businesses in the general area of business service and distribution centers. The Food Production and Processing Section focuses on agricultural products. The Manufacturing and Technology Section is concerned with manufacturing companies, as well as technology transfer opportunities. Geographically, various DED staff are responsible for different regions of the U.S.

2. Setting the tone of information

The tone of Iowa's information efforts should follow the state's tradition for understated excellence. There is evidence (and general agreement) that the state's greatest strength is its human resources. Information on labor force quality and educational excellence should constitute the centerpiece of Iowa's marketing efforts. Government efficiency, favorable tax policies (e.g., a single-factor formula for allocating corporate income, exemption of machinery and equipment sales and use taxes), and tangible quality of life indicators (environmental quality, public safety, health care, cultural and recreational opportunities, shopping facilities, among others) also should be presented. Selective comparisons with regional or national data could highlight Iowa's strengths.

Iowa's commitment to facilitating a healthy business environment should be stressed. Technical assistance programs and cooperative arrangements between businesses and the state's institutions of higher learning are good examples of this commitment. Fair taxation, as well as good infrastructure and accessibility to major markets, are worthy of inclusion because they are areas where Iowa is comparatively strong.

3. Providing needed information: two strategies

The Department's information and marketing programs should be oriented toward providing businesses with specific facts on the costs and benefits of operating in Iowa. A business should be able to acquire from the Department much of the information needed to assess the potential of Iowa locations. This information not only must be detailed, it also must be credible.

Surveying business executives

To obtain information needed in marketing efforts, interviews should be conducted with executives from businesses that recently have decided to locate in Iowa. Executives from businesses that have decided to significantly expand their operations in Iowa and those from businesses that are leaving the state also should be interviewed. While it may not be feasible to interview all such executives, an effort should be made to speak with as many as possible. The state cannot rely on anecdotal, second-hand, or fragmented information on so vital an issue as why businesses come to or leave Iowa. Data obtained from a well-designed survey instrument would provide more useful insights about Iowa's image and business climate than either the Grant Thornton or Magid studies.

Information obtained from these executives would be useful in two ways. First, it would enable a relatively objective assessment of Iowa's business climate. If executives from a sufficiently diverse array of businesses were interviewed, it would be possible to identify the factors that have been most important in decisions about Iowa as a location for business. Ways to build on the strengths and to counter the weaknesses thus exposed could then be contemplated. Second, subsequent information and marketing efforts could stress the factors that actually are significant to business executives. The

interviews, then, would constitute a form of "reality check" that would help focus the state's efforts to attract businesses.

A program of demonstrations

The root problem facing DED's information and marketing program is Iowa's image in more distant parts of the nation. Because Iowa is regarded as primarily agricultural, many types of businesses may not be looking at Iowa locations even though they in fact would be comparatively attractive. The need, then, is to convince businesses to look more closely at what the state has to offer. One way to do this is through a carefully designed demonstration program. The theme for the program could be "Give Iowa a Try." Its purpose would be to demonstrate that Iowa is a profitable and otherwise attractive location in comparison to other states for industries that are not presently part of its economic base.

Through a national marketing program, businesses would be encouraged to apply for the demonstration program. Those selected would be offered financial and technical assistance. This assistance would be intended to remove the risk borne by the business in trying Iowa. Relocation and start-up costs would be borne by the state. Because the purpose of the demonstration program would be to prove the viability of new types of economic activity in Iowa, any financial assistance or other subsidy should not be needed on a continuing basis. The expectation would be that once located in Iowa, the business would be profitable. In future marketing efforts, the state could point to the successes of the pilot businesses as it worked to attract other businesses in the same general industry. The fact that another business has proven successful is likely to be more convincing than any other form of literature or promotional material could be.

similar businesses, observing that they too might find Iowa a desirable location.

Industries that not only are viable in Iowa but also would further other objectives (e.g., environmental quality, employment stability) should be targets of specially-designed marketing programs. Attracting such industries as printing and publishing, communications, finance and real estate, and professional services would help counter the exodus of well-educated persons and in the process strengthen the state's future prospects for economic growth. The information and the style of presentation that are likely to influence these industries will differ from that important to most agriculture-related industries.

5. Product-services catalog

One information program initiative is the product-services catalog now being developed by the DED. This catalog will provide computerized information about products and services supplied by Iowa businesses. It is expected that this information will be helpful in several ways.

First, it will make clear the opportunities that producers and consumers have to buy Iowa products. Thus, it would be helpful in any "Buy Iowa" campaign; indeed, the availability of the catalog is itself such a campaign.

Second, if information in the catalog is more detailed than that available from current sources, primarily Census Bureau publications, it will be helpful in establishing the potential for substituting Iowa-made inputs for those made in other states. The Garfield Schwartz plan recommended that the state actively promote such substitution and estimated that up to 90,000 jobs could thereby be created. This estimate assumes that Iowa-made inputs are available if there is an Iowa plant with the same Standard Industrial Classification (SIC) four-digit code as the input. However, this does not

In announcing the demonstration program, two strategies should be followed, one that is general and one that is specific. Material should be included in widely-read national publications that have no industrial focus. Casting a broad net may lead to applications from businesses that ordinarily would not be targeted but which could prove to be profitable in Iowa. Specific announcements could be geared toward attracting businesses in a particular industry that, while not yet represented in Iowa, is considered both potentially viable and desirable.

4. Targeting information

The demonstration program, if successful, would generate highly useful information to be included in marketing programs. This information would be, of course, directed toward specific industries. In its other, general information and marketing efforts, cost effectiveness is of major importance. Cost effectiveness dictates that a preliminary assessment should be made of the viability of a particular industry nationally and in Iowa before embarking upon an effort to tailor information to it. Several industries that are growing nationally also are expanding in Iowa: printing and publishing; finance, insurance, and real estate, and professional services. These industries represent a beginning point for focussing information programs.

It is more likely that marketing programs will be efficient if they concentrate on industries that are well suited to Iowa. Information distributed by DED should document the types of businesses that recently have located in Iowa or expanded or begun new types of operations in the state. The fact that they have done so is evidence of Iowa's attractiveness as a location. Information on these businesses' decisions should be sent to

mean that the input is in fact available because the four-digit classification is very broad. The plant might therefore be producing other four-digit products, but not the needed one. A product-services catalog with more narrow classifications would help remedy this problem and allow a firmer judgment about the validity of the Garfield Schwartz estimate of the potential for substituting Iowa-made for imported inputs. Of course, the extent of such substitution will depend on the cost as well as the availability of Iowa inputs. The fundamental weakness of the Garfield Schwartz recommendation and its projected employment gain is that neither is based on evidence that available Iowa inputs are cost-competitive.

Third, the catalog will be useful to businesses considering location in Iowa and wishing to know about availability of suppliers. It will also provide indirect information about the costs of operating in the state. The fact that an existing business is profitably producing a product in Iowa is useful information about costs for a potential entrant producing the same product.

Whether the catalog produces benefits greater than its costs (is efficient) will depend to an important degree on the extent to which it adds to and supplements available information rather than simply duplicating it. It will also depend on the currency of the information; dated information will have little value for business decisions.

Businesses have a financial incentive to gather and use information about the availability of alternative sources of supply and the location of customers. They seek the least-cost sources of inputs and the most profitable outlets for outputs. Likewise, consumers have an incentive to seek out least cost sources of supply. Therefore, much if not all of the information to be placed in the catalog may already be available to and in use by economic

decision makers. It is, of course, not collected and available from a single source. At this point, one can only guess whether the state through its efforts can add to the availability and use of information. There is necessarily a great deal of uncertainty about whether a catalog will be worth its costs.

Nevertheless, it seems a prudent gamble for several reasons. First, there is the research dimension; we will learn more about the Iowa economy and the interconnections among sectors within it. Second, there are economies of scale in information gathering and dissemination that may make centralized government activity cost-effective in comparison to private sector alternatives. Finally, the process of collecting information on a continuing basis will inform both government and businesses about what is happening in Iowa.

Although the initial decision to prepare the catalog seems appropriate, that decision should be evaluated periodically as more information about the usefulness of the catalog and its cost becomes available.

6. "Buy Iowa" campaign

One of the main reasons for developing a product-services catalog is to encourage Iowa-based businesses to purchase goods and services from other businesses within the state. The rationale is that import substitution will allow more dollars to be retained, thereby stimulating in-state spending and economic growth. In addition to the catalog, other efforts to promote the purchase of goods and services within the state should be made by DED.

A "Buy Iowa" campaign essentially would be a marketing campaign urging businesses within the state to seek out Iowa suppliers. For this approach to be as effective as possible, background research would be useful. Surveys should be carried out of a wide spectrum of Iowa businesses regarding the

types of goods and services they now routinely purchase outside the state but which they feel could be produced within Iowa. The businesses contacted may or may not be correct in their assessment of possible import substitute products, but a first cut at identifying possible activities would result. The feasibility of producing these goods or services then could be evaluated by the appropriate Iowa businesses and by DED. This information may be of value in soliciting and reviewing applications for the demonstration program.

7. Involving Iowa executives in marketing efforts

Many of Iowa's business leaders are impressive people who are able to convey a positive and progressive image for their businesses. They could do much the same for the state. The concept of asking business executives to participate in state-level marketing efforts is not new. The potential of executive participation in DED's marketing efforts is noted in the Report of the Committee for Iowa's Future Growth (1984). Recently the Governor was accompanied by several executives on an east-coast "blitz trip" to emphasize Iowa's favorable business climate. This is a practice that should be expanded.

Whether they participate in video presentations or "blitz trips" to other parts of the nation (or world), their insights are of great value. It would be difficult to find one who is better qualified to inform others about the potential for competitive returns in Iowa than an executive who has assessed the options and chosen this state. The point to be emphasized is that business executives from the same general type of industry are likely to have a relatively high degree of credibility with executives of businesses for which Iowa is a possible location. Those who have chosen Iowa are direct indications that attractive returns on mobile resources are obtainable in Iowa.

8. Policy analysis and public information

The Department should assume responsibility for keeping the public informed about its activities and the performance of the Iowa economy. Included in this task would be routine collection and publication of economic statistics. More important, economic statistics should be interpreted and put into perspective so that the public in general and the business community in particular have an accurate perception of their meaning. The effects of national and international events, trends, and policies on the Iowa economy also should be explained on a timely basis. For example, widespread press accounts of bank failures and farm foreclosures have heightened the perception that the Iowa economy has been and continues to be in a deep recession. In fact, there are many bright spots. As the statistics in Section V show, sectors that are not agriculturally dependent are recovering well from the recession, and Iowa's current economic performance relative to the nation is consistent with historical patterns. An annual or semi-annual report on the state of the Iowa economy might be useful in carrying out this public information function.

The Department should also assume responsibility and develop a capability for analysis of the economic development implications and impacts of current and proposed policies in all areas of Iowa government activity. The Governor, legislators, and public officials should be able to turn to the Department for analytically sound and non-partisan analyses of the development effects of proposals to change taxes, environmental regulations, government organization, state aid, and the like. In many instances, Department staff would not carry out the policy analyses; instead, they would be responsible for having it done by contract with either a private consultant or a university.

9. Summary of recommendations

Efficiency in marketing programs is most likely to occur if they are targeted toward industries and activities that not only are viable in Iowa, but also that would enhance the state's quality of life. Industries that are environmentally clean and that would employ the sorts of well-educated Iowans who now are leaving the state in search of opportunity are examples of those worth targeting.

To expand upon DED's present efforts in the area of information and marketing, several strategies are recommended. First, a program should be established for interviewing executives from businesses that recently have come to Iowa, expanded their operations in the state, or decided to leave Iowa to determine the key factors in their decisions. This survey would generate information useful in tailoring future marketing efforts.

Second, the Department should consider developing a program aimed at demonstrating Iowa's potential as a location for selected new industries. Under the program financial and technical assistance would be provided to a business in a new (to Iowa) industry with the expectation that the business' success would aid in attracting other businesses in the same and related industries to the state. Successful locations resulting from this program could be the basis for future marketing efforts.

Third, the participation of executives from Iowa businesses in actual marketing efforts, such as video presentations and blitz trips, should be continued and reinforced. Straight-talking discussions by these executives would have as much credibility with other business leaders as anything the state could do. Also, the Department should establish a network of influential persons with Iowa connections who would promote the state's interests in economic development. Members could be recruited from prominent

former Iowans who are graduates of Iowa universities, CEO's of major firms, or have retired outside the state.

Fourth, other information and marketing efforts to encourage the purchase of Iowa products should be undertaken. The product-services catalog now being developed by DED will provide information that could encourage businesses within the state to substitute Iowa-made inputs; it also would inform businesses considering location in the state about the availability of suppliers. A "Buy Iowa" marketing campaign should be established to urge businesses within the state to seek out Iowa suppliers.

Fifth, the Department should keep the public informed about its own activities and the performance of the Iowa economy. It should also assume responsibility for providing the Governor, legislators and public officials with analytically sound and non-partisan analyses of the development effects of existing and proposed public policies.

In summary, the role of information and marketing programs is not to actually change the returns to business, per se, but to improve perceptions of the opportunities that exist within the state. The strategies followed in these programs should be well focussed, directed toward the types of industries and businesses that Iowa can attract and that it wants.

C. Technical assistance and research support

The goal of technical assistance programs is the same as that of other economic development efforts, to increase income and employment in the state, but the means employed are different. Traditional technical assistance programs provide managerial and technical advice that businesses need to plan and carry out their operations. These programs assist mainly small and new firms without regard for their significance in the growth process. Indeed, their clientele is predominantly retail and trade rather than firms that

produce exports or import substitutes. In Iowa, the Small Business Development Centers typify this approach to technical assistance.

In recent years, the focus of technical assistance programs has shifted to stimulating the development of new and innovative businesses that would contribute directly to state growth by producing exports or import-substitutes. While assistance may be provided to larger businesses that are embarking on efforts to increase their productivity or launch new products, most often the beneficiaries are small businesses.

The mechanisms for providing this newer type of assistance are varied and still evolving. They include programs for financing basic and applied research aimed at developing and speeding the commercialization of new products and technologies, business incubators, and centers for developing and marketing new products, which are often linked to research universities. A model system under the new approach would include a technical center allied with a research university, a source of funding for product and technology development, an information network linking university researchers and businesses, and a business incubator. Services that can be provided through an incubator include assessing technical feasibility and market potential, developing and testing prototypes, and providing advice on filing patents and licenses, as well as advice on more routine business matters such as inventory and procurement, financial planning, statistical quality control, and marketing.

1. **Efficiency of technical assistance programs**

The desirability of technical assistance programs should be judged in the same manner as financial and other forms of assistance. Determining whether the benefits arising from technical assistance programs are greater than their costs will be more difficult than in the case of most other forms of

assistance, such as financial or infrastructure. Despite the difficulty in doing so, the efficiency criterion should be applied in evaluating technical assistance programs. It may be that this evaluation can consist of little more than identifying and listing the benefits and costs arising from these programs. It must also be recognized that small businesses of the type that are likely to benefit from state-level technical assistance often involve a sizable risk; not all will succeed. Furthermore, some of the successful businesses will leave the state. Payoffs from these programs, then, must be viewed in the aggregate.

When targeting technical assistance, the same criteria as in financial assistance should be applied. Priority for technical assistance programs should be given to businesses that produce exports or import-substitutes. These businesses, if successful, will increase the flow of dollars into the state. Retail and commercial businesses, on the other hand, are far less likely to increase the aggregate income generated within the state. Hence, technical assistance to them is unlikely to be efficient from an economic development perspective.

2. Existing programs in Iowa

There are several state-level programs, in most of which provide services free of charge. Overall coordination of these programs is the responsibility of the Small Business Division of DED.

Center for Industrial Research and Studies (CIRAS)

CIRAS is a program administered by Iowa State University that operates analogously to the traditional agricultural extension service. It has several field offices at strategic locations across the state, with a primary mission of offering technical assistance to industrial businesses. Assistance is provided in such areas as: production, sales and marketing, applied research,

and finance. CIRAS produces management guides, conducts seminars and workshops, and provides various problem-specific services.

Small Business Development Center (SBDC) program

The Iowa SBDC program was established in 1981 as part of a national network of centers sponsored by the federal Small Business Administration. Counseling, training programs, and workshops are available to Iowa businesses with 500 or fewer employees or $3.5 million or less in annual sales. Centers are found at the three state universities, Drake, and five community colleges, as well as in two communities. The main purpose of the SBDC program is to provide management assistance to small businesses. By far the most common beneficiaries of the SBDC program are retail and commercial establishments. To the extent that these types of businesses are the clientele of the program, it should not be viewed as an economic development mechanism.

Small business incubators

Incubators provide facilities and services for new businesses or existing businesses proposing new ventures. The facilities offer their tenants low rents, access to computer and other business equipment, bookkeeping and secretarial services, capital market linkages, and access to university and other professional expertise. Incubators also may offer seed grants. Tenancy generally is for no more than two years. A primary role of incubators is to facilitate the transfer of technology. Discoveries and innovations are developed to the point where the capital market sees a promising product that it is willing to finance. The technology transfer role of incubators argues for their location near or as part of a university. At present, incubator facilities are located at the University of Iowa, Iowa State University, and the Des Moines Area Community College.

3. University collaborative arrangements

One of the principal resources for technical assistance to Iowa businesses is the state's research universities. There are various ways in which relationships between universities and businesses can be fashioned, including:

1. commercialization of research results.
2. advice on technical matters.
3. direct collaboration on research.
4. research on product and process development.

Particularly in areas such as medicine, engineering, biological and physical sciences, and computers, considerable potential exists at Iowa's universities. Beginning in 1986, research on product and process development at the state's universities is being funded through lottery revenues. Initial allocations have been in the areas of biotechnology, laser science and engineering, hydraulic engineering, manufacturing processes, entrepreneurial studies, and electronic and robotic training.

A potentially fruitful opportunity exists for cooperative university-private business proposals for grants from lottery funds. Iowa businesses with expertise in areas such as those listed above would collaborate with university researchers to the advantage of both. However, several barriers impede extensive university participation in collaborative efforts. First, the objectives of university researchers and business managers are quite different. Researchers have clear incentives to conduct research at the leading edge of their fields, not to seek out commercial applications to their previous research. Put another way, the professional rewards are greater to advance the state of the art than to advance the state of the practice. Business managers have an incentive to apply advancing technology so as to

gain a commercial advantage over their competition. While both managers and researchers are committed to technical progress, merging their interests is not a simple matter.

A second barrier is that universities usually lack the personnel and resources to develop basic research results into marketable products that are attractive to investors. The needed staff would have to understand the terminology and concepts of the researchers and yet have a sufficiently pragmatic view of product development to work effectively with private businesses interested in marketing advanced products. It well may be that DED should consider funding university staff to facilitate the commercial application of research results.

4. New business opportunity program

As a supplement to the incubator approach to fostering new businesses, the Department should investigate the potential of a "New Business Opportunity Program" to which persons and businesses could apply. Like the "Give Iowa a Try" program discussed in section B above, this program would help demonstrate Iowa's suitability as a location for new industries, but it would be aimed at Iowa businesses and persons. Applicants could be large businesses wanting to develop a new product as well as new start ups. The grant application would state the business' needs for financial and technical assistance, as well as what the business would bring to the state. Awards would be competitive. When the required assistance could not be purchased in the market place, the applicant would be put in contact with an appropriate supplier--SBDC, CIRAS, or an incubator.

The advantages of this approach are several. First, it would be easy to implement on a statewide basis, whereas an expansion of incubators would be geographically limited. Second, the publicity of the program would be a

positive factor for the state's image. It would likely start a lot more businesses and persons thinking about new products, processes, and the like. Third, the state would not commit resources in advance of the need for those resources as revealed by the applications. In contrast, incubators involve start up outlays for facilities and staff. Fourth, even when applications are not funded, something has been produced; the idea has been hatched. People can then further refine it or seek assistance from other sources.

5. Job training programs

Job training can be treated as a form of in-kind technical assistance to businesses, as well as a means of providing workers with marketable skills. Because it may lower labor costs for firms starting new operations when the labor force does not have the specific skills required, it can also be viewed as a means of financial assistance.

Iowa is a leader in the area of job training. Two programs are currently in place: the federal Job Training Partnership Act and the state program Industrial New Jobs Training Program (INJTP). INJTP provides job training at Iowa area schools. To provide immediate funds for the programs, an area school can borrrow money and issue and sell certificates payable from the additional property and state income taxes generated by the new jobs. The state reimburses only local school districts for the loss of property tax revenues, with the reimbursement being made through the state school foundation formula. The program will pay up to one half of the wage costs during the training period. Apart from wage costs, the full costs of implementing the training agreement can be paid by the program.

INJTP has several very desirable features. First, workers are trained to the demand of the employer. Therefore, the problem of not having a job upon completion of training, which has spoiled the effectiveness of many programs,

does not arise. Second, it can be a very useful tool in retraining persons released from agricultural employment because the delivery system, the Community Colleges, is decentralized. Businesses that are willing to locate in a small Iowa town can literally have their workforce assembled and trained under INJTP. Finally, because other states do not have a similar program, it gives Iowa a competitive edge.

The main weakness of the program is the difficulty of determining whether assistance is in fact necessary for the business to locate in Iowa. Because a business need not pay any of the cost of a training program, it has an incentive to apply for assistance even if it would locate in the state without it. Also, there is always the question of whether the employees of the assisted business would have found other employment in the absence of the training program, in which case there is no net increase in state employment. To deal with these weaknesses it is recommended that the assisted business share part of the cost of the program (at least 25 percent) and that assistance be awarded under the guidelines recommended for financial assistance programs.

6. Technical assistance to local governments

While most state-level technical assistance is directed toward businesses, assistance to communities striving to develop their economies also is an appropriate role for the state. The Iowa Community Economic Preparedness Program (CEPP) is a step in this direction. CEPP, which is administered by the Department, is intended to help communities plan and prepare for economic change and to develop positive efforts that operate in tandem with state programs.

Many communities in Iowa do not have the resources to inventory and assess their strengths and limitations regarding economic development. The

abilities to enter into innovative arrangements with businesses also are limited. Technical assistance in such areas as goal formulation, resource evaluation, public-private cooperation, and financing options would be of great value to many Iowa communities that do not have the staff to carry out these actions unassisted. Circuit-riding advisors and a Department hotline are possible components of an expanded technical assistance program for Iowa communities. Both could be carried out as part of the Department's Outreach Coordination Section.

7. Summary of recommendations

Management assistance. The Department should determine whether the SBDC, CIRAS, and other programs are delivering adequate management assistance to businesses involved in the production of exports and import substitutes. Depending on the outcome of this evaluation, the Department may need to work for coordination and reorientation of those programs or establish a management assistance system to supplement them. A decision to develop a system should be based on firm evidence that it would produce sufficient development benefits to warrant its costs.

Incubators. The progress of the three existing incubators should be monitored and evaluated during the next year to determine whether they are cost effective means of promoting development. Additional incubators should not be implemented until more experience with existing ones is gained. This recommendation is consistent with the Garfield Schwartz report, Cost and Quality of Production factors: Infrastructure, which recommends only the evaluation of the need for incubators and not an increase in their numbers.

Research funding. Lottery funds for research aimed at developing new products and technologies should be available to both private firms and universities. Private sector-university collaborations should be

encouraged. Application procedures and award criteria should be developed and publicized widely; awards should be competitive.

New business opportunity program. As a supplement to the incubator approach for fostering new busnesses, the Department should investigate the potential of a "New Business Opportunity Program" to which Iowa persons and businesses could apply for financial, technical, and other assistance needed to launch a business in a new (to Iowa) industry. Awards would be competitive.

Information flows. Efforts to promote development by increasing research and speeding technology transfer and the commercialization of research findings will require increased flows of information and ideas between universities and businesses. Some linkages are in place, but the department should develop a more extensive system. The Bureau of Technology and Innovation within the DED could be the hub of such a system.

Local government assistance. While most technical assistance programs are oriented toward private businesses, there is a role for technical assistance to local governments. This assistance would enable communities to pursue innovative arrangements with businesses and to adapt to economic change. One possibility is to develop a program involving circuit-riding advisors. A DED telephone advisory service is another possible mechanism for rendering assistance to local governments. The Department should examine the potential for education and training programs for economic development professionals and other state and local government emplovees and officials. The programs would provide information about the nature of the development process and government's role in it, as well as the state's development programs and activities.

D. Infrastructure

Infrastructure is the set of basic support facilities that government provides to foster economic activity and a quality living environment. It includes roads, bridges, airports, water and sewer lines, and waste disposal plants. This discussion focuses on these capital facilities, as opposed to what might be termed social infrastructure, such as schools and institutions of higher learning and medical and cultural facilities. Because infrastructure is necessary for economic activity and growth, infrastructure policies cannot escape having an effect, planned or otherwise, on economic development. These policies also can be used actively and intentionally in an attempt to attract new industry and to retain and encourage expansion of existing industry.

1. The efficiency criterion for infrastructure investment

Decisions to build a new infrastructure facility or to not replace an existing one are investment decisions that should be guided by the efficiency criterion. That is, an infrastructure investment should be made when those who will use the services provided by the facility, both directly and indirectly, are willing to pay the full cost of its construction, operation, and maintenance. If users are not willing to pay these costs, they are effectively saying that the value of the services provided by the facility are less than its costs; resources used to provide the facility would generate more value in alternative uses.[10]

The need for responsive infrastructure policy

The consequences of not following the efficiency criterion when making infrastructure decisions can be severe. Underbuilding infrastructure--that is, not providing services for which users would be willing to pay the full costs--can inhibit economic development. Problems arising from underbuilding

include the costs associated with traffic congestion (longer commuting times and higher transportation costs), insufficient sewage treatment facilities (an increased risk of public health problems), and deteriorated water and sewer lines (health hazards and ruptures that bring economic activity to a halt).

Overbuilt infrastructure can also deter growth. Facilities put in place at an earlier time often do not match today's needs or those anticipated in the future. Shifts in population and business activity, as well as changes in technology and demand, frequently render infrastructure economically or technologically obsolete. Maintaining facilities for which demand has fallen entails real costs that must be borne by infrastructure users (often, users of other facilities) or by taxpayers generally. The result is loss of the fairness of cost-occasioned financing and an increase in the overall cost of doing business in Iowa. That is, excess infrastructure costs function as a tax on economic activity and are therefore a barrier to economic development. To reduce this barrier, portions of overbuilt systems can be closed or allowed to decline to a lower level of service. With either action, the supply of infrastructure can be adjusted to conform to revealed demand.

Responding to the need to adjust infrastructure capacity upward or downward is important to maintaining the capability to support business activity in Iowa, while keeping costs as low as possible. Although it rarely is possible to make these adjustments immediately, a commitment should be made to continually assess demand and to adjust infrastructure capacity as quickly as possible.

Cost allocation principles

The efficiency criterion suggests that an infrastructure investment should be made if and only if the present value of the stream of services it provides exceeds the costs of constructing, maintaining, and operating the

facility. Assuming this criterion is satisfied, how should the costs of the facility be apportioned?

The first principle is that costs should be borne by those individuals and businesses whose economic activities, production and consumption, use the services of the facility. It is these activities that generate the demand for the facility. Individuals and businesses may use a facility either directly or indirectly. Indirect use occurs when they buy products the production and distribution of which make use of the facility. The second principle is that the users of the services provided by the facility should pay in accordance with the costs occasioned (caused) by their use. Allocating costs in this manner is fair. More important, it prevents businesses and households from demanding more than the efficient level of infrastructure, since they would have to pay for the excess; it helps to make the efficiency criterion operational.[11]

Infrastructure is typically financed in a variety of ways: property and other taxes, fees, special assessments, and user charges. The statement that the costs of infrastructure should be allocated on a cost-occasioned basis means that these taxes, fees, and charges should be so allocated. Also, the total amount collected should be sufficient to replace infrastructure for which there is continuing demand. Typically, replacement cost will be rising, so that the amount collected would exceed the historical cost of putting the infrastructure facility into place.

Infrastructure subsidies

In an effort to attract or retain business, Iowa's state and local governments often depart from these cost allocation principles. They do so when they provide infrastructure services to a business at less than the cost occasioned by its use of those services, thus lowering its costs of operating

in Iowa. In this case, through its operations in Iowa, the business occasions more in infrastructure expenditures for Iowa governments than it pays in taxes, charges, and fees to support that infrastructure. The difference between the costs it occasions and what it pays to support infrastructure is a subsidy.

When is such a subsidy justified as a means of promoting economic development? The answer is the same as given above to the question of when financial assistance is warranted. The subsidy should satisfy the efficiency criterion, which requires that the amount of the subsidy not exceed the present value (discounted future stream) of the benefits that will be realized if the business chooses to locate in Iowa.

In practice, this subsidy could be implemented by having the favored business pay lower property taxes, user fees (e.g., lower water and sewer rates), or special assessments than other businesses. Alternatively, the subsidy could be in the form of financial assistance, with the business receiving no tax or fee concessions. The business' costs of operating in Iowa could be reduced in the same amount by either subsidy mechanism. The latter financial assistance mechanism has two advantages over the former. First, the existence and amount of the subsidy is clear. Second, businesses are not treated differently when it comes to paying for infrastructure services, which is desirable from a fairness perspective. Saying that a financial subsidy is preferable is not saying that infrastructure needed by mobile businesses should not be put into place. As explained above, facilities should be provided when they meet the efficiency criterion. The amount and form of subsidy are issues in allocating the costs of providing a facility, given that it has passed the efficiency test.

2. Managing investment risk

While careful assessments of probable benefits and costs should be a standard practice in decision making about infrastructure investment, some level of risk is unavoidabale. The level of risk, however, differs significantly between "bird-in-hand" and speculative projects.

Bird-in-hand projects are those where negotiations are taking place with a specific business, and infrastructure is an issue in whether the business will choose to locate in Iowa. If the benefits of the state investment being contemplated exceed the costs, the use of available funds is warranted. Actual expenditure of state funds beyond those needed to defray start-up costs should await a firm commitment by the business, however. An Iowa business that has indicated publicly it is considering relocating outside the state should be afforded the same priority as a business being recruited.

Speculative infrastructure projects are far more risky. Generally speaking, they are attempts to make a specific location more attractive to business investors. An example might be an improved industrial park site, with access roads and water and sewer facilities available prior to obtaining firm commitments from businesses to locate there. Once built, these facilities amount to sunk costs, and unless demand for the site is high, businesses are in a relatively strong bargaining position to obtain service at less than an amount equal to the cost occasioned. A related problem is the uncertainty as to whether businesses will find the site attractive; that is, other factors may render the site less appealing than competing locations. It might be that the state could have obtained greater benefits from participating in the development of another site. For these reasons, state funding of new speculative facilities can rarely be justified.

This is not to suggest that it is inadvisable to build a reasonable level of unused capacity into water and sewer facilities at the local level. Often increasing capacity after a facility is built entails a high unit cost, while initially constructing facilities capable of accommodating additional users may cost very little extra.

3. Divesting excess infrastructure

The other side of the infrastructure investment decision is disinvestment, the phased elimination of underutilized or obsolete facilities. Conceptually, the same criterion applies for continued public involvement in financing existing facilities as for investing in new ones: the present value of the services provided by the facility should at least equal their costs. The clearest indication of the advisability of continuing the operation of a given facility, then, is whether users value its services enough for them to be willing to pay the full cost of its operation and maintenance (assuming that no significant external benefits exist). If they are not, continued operation of the facility is inefficient.

Excess capacity in the county road system

The problems of excess capacity and cross-subsidy are most severe in the case of the state's largest infrastructure holding, the road system. On a per capita basis, Iowa has one of the most extensive road systems in the U.S. Its rural road system has an overall length of slightly more than 100,000 miles. While the state is twenty-fifth in land area, it has the seventh largest rural road system in the nation.

By far the most sizable component of Iowa's road system is its county roads. Table IV-1 shows that whereas the primary road system has only 10,464 miles, the county road system consists of 89,527 miles. Usage rates, as reflected in the annual vehicle miles traveled (VMT) per system mile, are very

different for the two classes of roads. Average annual VMT per system mile on the primary road system are 27 times greater than on the county road system. The county road system in Iowa with 80.1 percent of the total road mileage in the state acounts for only 18.3 percent of the VMT.

A major cross-subsidy exists from users of primary roads and municipal streets to users of county roads, as Table IV-2 shows. It is true that annual per mile Road Use Tax Fund (RUTF) expenditures for county roads ($1,692 in 1985), are less than for primary roads ($18,865 in 1985). In the aggregate, however, the motor fuel tax and registration fee contributions paid by users of the county road system fall considerably short of what is spent on these roads. Table IV-2 shows that in 1985 fully $61.2 million more RUTF dollars were spent on county roads than were collected from the users of these

Table IV-1

Usage Rates Among Road Classifications: 1985

Road Classification	System Mileage	Millions of Vehicle Miles Traveled (VMT)	VMT Per System Mile
Primary	10,464 (9.4%)	11,619 (57.8%)	1,110,378
County	89,527 (80.1%)	3,686 (18.3%)	41,172
Municipal	11,780 (10.5%)	4,799 (23.9%)	407,385
Total*	112,080 (100.0%)	20,104 (100.0%)	179,372

* Total includes 309 miles of state parks and recreation areas.

SOURCE: Calculated from data provided by the Iowa Department of Transportation.

Table IV-2

Cross Subsidies Among Road Classifications: 1985

Road Classification	RUTF Allocation	User Tax Revenue*	Difference
Primary	$141,951,500	$205,986,000	-$54,034,500
County	124,937,000	63,646,000	61,291,900
Municipal	60,780,600	68,038,000	- 7,258,400
Total	$337,670,000	$337,670,000	$-0-

* Motor fuel taxes and registration fees only.

roads.[12] Without the cross subsidy, county road user charges would have to be increased by 1.6 cents per mile traveled (the approximate equivalent of a 22 cent per gallon additional motor fuel tax).

It is unlikely that sufficient revenue could be obtained from users of county roads through traditional fuel and license taxes to pay the full cost of operating the present 89,527 mile system. The efficiency criterion suggests that if those who benefit from the accessibility afforded by the county road system are willing to pay for this accessibility no reduction in system mileage is warranted. In this case some form of access charge would be appropriate, such as a tax on frontage or land area. As Table IV-3 shows, in Iowa county funds defray a comparatively small portion of the costs associated with providing county roads. Increased reliance on funding mechanisms that are more closely tied to the benefits received (e.g., access) would improve both the efficiency and equity of road finance in Iowa.

If, alternatively, users of county roads are unwilling to pay, through a combination of motor fuel taxes, registration fees, and access charges, for the existing system, efficiency considerations would suggest shrinking the county road system. Segments that serve the fewest average daily trips and those for which suitable alternative routing is available would be candidates for elimination or downgrading.

Implications for the primary road system

The massive cross subsidy from users of the state's primary roads to the county road system has important implications for economic development. It is the primary road system that constitutes the principal transportation linkage with locations outside the state. While the primary road system represents only 9.4 percent of the total road mileage in Iowa, 57.8 percent of the 1985 VMT occurred on primary roads. Because of its high usage rate and the

Table IV-3

Sources of County Road Financing: 1983

State	Percentages of Financing		
	County	State	Other*
Illinois	64.4	29.7	5.9
Iowa	27.0	63.1	9.9
Michigan	35.4	46.8	17.8
Minnesota	43.3	51.6	5.1
Missouri	57.8	22.0	20.2
Nebraska	56.2	31.4	12.4
Wisconsin	72.1	20.6	7.3
Average	50.9	37.9	11.2

* Includes municipal, federal, and bonds.

SOURCE: Federal Highway Administration, Highway Statistics (Washington, D.C.: 1984), Table LF-1

critical role it plays in linking the state to markets, resources, and goods, the primary road system must be kept in good operating repair.

Data from the Iowa Department of Transportation (DOT) suggest that the primary road system is being allowed to deteriorate. The Iowa DOT projects that by 1990 34 percent of the primary road system will be in poor/fair condition and another 45 percent will be in critical need of rehabilitation (Iowa DOT, 1980, p. 37). The Iowa DOT has estimated that $7.2 billion will need to be spent to repair and maintain the primary road system through the end of the century (Iowa DOT, 1982, p. A-40). With sizable rehabilitation costs looming for the primary road system--costs greater than can be met with current user taxation levels--Iowa can ill afford to divert funds from the primary road system to county roads.

Revision of the RUTF formula

At present the Iowa Code specifies that each year 45 percent of the RUTF will be distributed to the primary road system, 37 percent to the county road system (specifically, 9 percent to farm-to-market roads and 28 percent to secondary roads), and 18 percent to the municipal street system. This allocation is what produces the massive cross subsidy just discussed. The Governor's Blue Ribbon Transportation Task Force (1982) recommended that the Legislature alter the RUTF formula to more closely reflect the use and/or benefits that accrue to the public. An Iowa DOT report (1980) suggested a shift to 52 percent to the primary road system, 24.3 percent to the county road system, and 24.7 percent to the municipal street system. The recent report of the Committee for Iowa's Growth (1984) recommended that the RUTF be "rearranged to more accurately reflect the heavy burden borne by the primary road system" (p. 44).

Based on the calculations presented in Table IV-2, cross subsidies among the three components of Iowa's road system would be eliminated by a formula that distributes 61.0 percent of the RUTF to the primary road system, 18.8 percent to the county road system, and 20.2 percent to the municipal street system. Doing so would have the effect of increasing the state's potential for economic development by enabling the primary road system to be better maintained without an increase in user charges.

4. Upgrading the primary road system

Over the past few decades Iowa's larger metropolitan areas generally have grown faster than smaller urban areas. From 1950 to 1980 metropolitan suburban communities within the state grew by an average of 282.4 percent. Inner satellite communities, those which are not continguous to a metropolitan area but are only a few miles away, grew by an average of 165.1 percent. Communities more distant from metropolitan areas grew by only 13.2 percent on aerage over the 30-year period. The greater accessibility to markets, resources, and goods appears to have contributed to the growth of communities located within or near metropolitan areas.

Effects of highway improvements

The extent to which better accessibility for Iowa communities located greater distances from metropolitan areas or Interstate highways would improve their competitiveness for attracting mobile resources is quite limited. In the case of a community located within an hour of a metropolitan area, a high capacity, limited access link could prove beneficial. Being able to transport goods more quickly and conveniently to locations outside the state would be likely to strengthen the competitive position of certain communities within Iowa. In many cases, however, upgrading primary roads leading to major

metropolitan areas in other states would not be likely to pay good dividends because the connecting roads in adjacent states have not been upgraded.

Furthermore, it would be exceedingly sanguine to anticipate significant economic returns in all communities with improved access to Interstate highways or metropolitan areas. Research has shown that upgrading two-lane primary roads to four lanes with limited access actually can render smaller, nonmetropolitan communities along the route worse off (Briggs, 1980). Whereas a two-lane road may run through the community, providing visibility to its businesses, a limited-access highway is more likely to pass it by. The only reference to the community very well may be an exit sign.

The net effect, then, of upgrading more heavily traveled two-lane primary roads to four lane, limited access highways would be to further strengthen larger population centers' competitive advantage within the state. Only larger metropolitan areas with relatively poor access at present would be likely to experience positive effects of any real consequence.

The basis for additional investments

For development of the state as a whole, additional road capacity is needed if the present road system does not serve enough developable sites to support continuing economic growth. If, however, a sufficient number of suitable sites already exist, additional investment in roads is unlikely to result in aggregate economic growth within the state. Indications are that an abundance of developable sites now exist at strategic locations in Iowa. Thus, while an argument for selectively upgrading roads of Iowa's smaller communities that are not near to metropolitan areas might be made on the basis of equity, doing so probably would not significantly bolster the Iowa economy. In fact, the costs of upgrading would add to the overall cost of

government in Iowa and, on that score, decrease the attractiveness of the state.

From an efficiency perspective, if the average daily trips along a road segment are sufficiently high, upgrading that segment may be warranted. More specifically, if users are paying sufficient charges not only to properly maintain the existing road segment but also to finance improvements, upgrading is efficient; the willingness of these users to pay is evident. This suggests that traffic and cost data should be the basis for investments to upgrade primary road segments, rather than the anticipation of economic growth in the affected area.

5. RISE (Revitalize Iowa's Sound Economy)

The most sizeable program for financing infrastructure improvement to promote economic development in Iowa is the RISE program. Established in 1985, RISE is funded through a two-cent tax on motor fuel which generates approximately $28 million annually. It is administered by the Iowa DOT, and only public access roadway improvements are eligible for funding. Three general types of projects are possible: immediate opportunity, competitive rating, and regional development.

Program structure

Immediate opportunity projects are those where an applicant city or county is in the process of negotiating a location decision with a developer or business. The business must be willing to provide written assurance that the job creation or retention in question would not take place in Iowa without the RISE investment. The local government must demonstrate that all other infrastructure needs are or will be met. A 20 percent funding match for RISE funds from the private business or the local government is required. In evaluating immediate opportunity projects, two performance measures are taken

into account:

1. Cost effectiveness: the amount of RISE funding per job created or retained should not exceed $3,000.
2. Capital leveraging: the ratio of non-RISE total capital investment to that provided by RISE should be at least five to one.

Competitive rating projects, which hold a lower priority, are funded on the basis of a competitive rating using funds unspent on immediate opportunity projects. Twice a year a quantitative evaluation and rating is conducted, using the following criteria:

1. Development potential (30 points possible)
2. Economic impact (30 points possible)
3. Local commitment and initiative (30 points possible)
4. Transportation need (5 points possible)
5. Area economic need (5 points possible)

It should be stressed that competitive rating projects often are given low interest loans, rather than outright grants.

Regional development projects are intended to improve the accessibility of Iowa communities to Interstate highways and other communities. The objective of these projects is to strengthen the competitive position of a larger geographic area than local development projects. Programming for regional development projects is done in conjunction with the Iowa DOT's normal planning process.

Evaluation of RISE

RISE's structure enables the state to enter into cooperative arrangements with private sector investors through its immediate opportunity projects. The Transportation Commission has adopted a policy whereby all fully prepared applications for immediate opportunity funds will be processed within 15

working days. Given the speed with which development decisions often proceed, this is a highly positive feature. Also favorable is the distinction between bird-in-hand and speculative projects. In actual practice, most competitive rating projects have been funded through loans rather than grants.

The RISE program does not actually call for a comparison of benefits and costs. RISE, however, has several important safeguards to lessen the possibility of funding a project that is inefficient. It is, of course, difficult to estimate with accuracy the present value of the increased earnings that will result from a certain project. Lacking precise information, rules of thumb may be appropriate. In the case of RISE, the upper limit on the state contribution is $3,000 per job created, for immediate opportunity projects. Less assurance is present with competitive rating or regional development projects. Careful assessments of benefits and costs for these projects are needed. In this regard, the guidelines for awarding financial assistance, discussed above, are also applicable for infrastructure assistance.

6. Promising infrastructure financing innovations

Two closely related programs could assist local governments in acquiring necessary funds for infrastructure investments.

Infrastructure bank

The purpose of an infrastructure bank would be to make available to local governments below-market loans for infrastructural improvements. Upon repayment of the loans, the funds would be available for a second round of projects. The infrastructure bank would represent a long-term commitment to meeting the infrastructural needs of developing areas. The major requirement would be initial legislation establishing a revolving fund, so that repaid loans could be reinvested.

To ensure the viability of the infrastructure bank, it would be prudent to make loans for water or sewer systems only on the condition that full-cost pricing is practiced. User fees should be sufficient not only to repay the debt, but also to sustain a long-term capital repair and replacement program. Doing so would curb the now-frequent practice of disinvestment in infrastructure because something less than full-cost pricing is applied. To ensure favorable bond ratings and thus lower interest rates for bond issues by the infrastructure bank, a provision could be established for the Legislature, at its discretion, to replenish the reserve fund should that become necessary for the bank to meet its obligations. A bank of this general sort has been proposed for New Jersey and one presently is operating in Georgia.

State-level bond bank

A variant of the infrastructure bank concept is a state-level bond bank, such as the Bond Bank that the Iowa Housing Finance Authority (IHFA) is authorized to operate. This bank can pool local bond issues associated with infrastructure (and other) projects and issue its own bonds secured primarily by the local obligations. Local revenue bonds and general obligation bonds would be eligible.

7. Summary of recommendations

Infrastructure policies are important elements in a state's economic development strategy. Underbuilt or overbuilt infrastructure reduces Iowa's ability to serve businesses' needs at a cost that helps them be competitive. Infrastructure investments should be based on users' willingness to pay. If users are not willing to pay the full costs of providing a particular service, they do not value the service as much as other possible uses of the same resources.

The surest way to ensure adequate but not excess infrastructure over the long run is to follow a policy whereby users are asked to pay for infrastructure according to the costs actually occasioned. Excess infrastructure is most likely to develop when those whose activities generate the need for the infrastructure are not called upon to pay the full costs of building, operating, and maintaining it. An important instance in which a subsidy of this sort arises is in the financing of rural roads. With the present distribution of the RUTF, motor fuel taxes generated by traffic on municipal and primary roads are used to finance rural county roads. With such a cross-subsidy, an excess demand for county roads is likely to be expressed through the political process, accommodation of which means an overbuilt rural road system.

When new or upgraded facilities are needed by a business that Iowa wishes to attract or retain, it very well may be in the state's best interests to defray part of the cost of the facilities. The guiding principle as to how large a share is contributed should be the present value of benefits that will accrue to others in Iowa than the proprietors of the business. A distinction should be drawn between bird-in-hand situations where a specific business is actively engaged in negotiations and speculative projects. Spending state funds on projects of the latter type rarely is advisable.

The Iowa highway system is large relative to systems found in other Midwestern states. An extensive county road system, portions of which support very little travel, is being maintained to a significant extent through cross subsidization from other components of the state's road system. Specifically, the many miles of county roads account for 18 percent of total vehicle miles, yet the current formula allocates 37 percent of available RUTF revenues to them. The formula should be restructured to decrease the allocation to

counties. The Iowa DOT should study the feasibility of shrinking the county road system, with actual choices left to the counties. Alternative financing mechanisms, including "access" fees or taxes, should also be explored.

Upgrading two-lane primary road segments to four-lane, limited access highways generally would bring mixed blessings. If accessibility to markets, goods, and resources at locations outside the state is improved, the state's development potential would increase. Generally speaking, the benefits of upgrading primary roads will accrue to metropolitan areas and nearby communities. Smaller, more distant communities may be made worse off. From an overall state perspective, gains are likely only if insufficient developable sites now exist. Otherwise, redundant capacity is added and the costs of upgrading would increase the overall cost of government, thereby reducing development potential.

Two relatively recent innovations in financing local infrastructure improvements are worthy of serious consideration. State-level infrastructure and bond banks have proven successful in other states. They have the potential to assist local communities in obtaining needed funds quickly and at relatively low interest rate. As recommended in the section on financial assistance, the recently authorized bond bank should be put into operation.

In short, efficient investments in infrastructure are a key ingredient in a strategic plan for economic development in Iowa. Ill-advised, excessively speculative investments, or sizable cross subsidies between user groups are almost certain to impede economic development.

E. Education

Iowa is widely recognized as having a high quality public education system at all levels. The primary purpose of this system is to educate young Iowans so that they may participate fully in society and enjoy an adequate

standard of living. However, the state's education policies may also affect its growth prospects. Indeed, all of the strategic plans that we have reviewed place a great deal of emphasis on education as a key to growth. This emphasis is explained by several generally accepted facts. First, only by maintaining a technical edge can U.S. manufacturing pay wages at current levels and still remain competitive in a world of low cost labor. Investment in education is a necessary foundation for the research and innovation required to maintain this edge. Second, international competition means that real wages for raw, unskilled labor in the U.S. are likely to fall. Therefore, for American labor to earn wages at current levels, it must be educated. Third, training programs are needed to facilitate the adjustment of the labor force to changing demands, especially in the case of persons being released from agricultural employment. Finally, application of university research findings can generate growth through product innovation and improved production techniques.

1. Iowa's human resources

A common perception Iowans have is that their state produces workers who are bright, capable, and endowed with a strong work ethic. This belief appears to be shared by out-of-state business leaders (see Frank Magid study). Tangible measures of loyalty, reliability, and other desirable qualities for an entire state's labor force are difficult to produce, but data on educational attainment of entrants into the labor force are available.

Educational attainment in Iowa

By the time they complete their formal educations, many Iowans are well prepared to enter skilled professions. Iowa is fourth among the 50 states in terms of high school completion rate. Its 86.0 percent completion rate is well above the national average of 70.9 percent. Not only do the vast

majority of young Iowans complete high school, they emerge with comparatively good educations--the average ACT score of 20.6 achieved by Iowa high school students in the 1985-86 school year is the highest in the U.S. Iowa also has the second highest SAT score in the nation (1,095), but because only 3 percent of the state's graduating seniors take this test, it is a less valid indicator.

The frequently cited Coleman report (1966), a study of factors contributing to performance on standardized tests by high school students, pointed to home environment and parents' commitment to personal development as the most important factors. The report did not diminish the importance of excellence in educational programs, but it found that parents' values are of critical importance. Given Iowa's sustained supremacy in standardized testing, the emphasis its residents place on personal development appears to be strong.

Outmigration of educated Iowans

The preceding discussion portrays Iowans as well educated and having a value structure that encourages personal development. Yet the median years of school completed for adults aged 25 years or more for Iowa, 12.5 years, was exactly the national average in 1980. It was only high enough for Iowa to rank twenty-fourth among the 50 states. Why is the median years of education attained not higher if relatively few Iowans drop out of high school and a large number (63.9 percent in 1985) continue their educations beyond high school? The answer probably lies in the outmigration of educated Iowans. Between 1975 and 1980, 8,254 more Iowans 25 years or older with four or more years of college left the state than entered it. Furthermore, outmigrants during these years (the latest for which data are available) included twice the percentage of persons with four or more years of college (34.3 percent) as the overall Iowa population (16.8 percent).

Further evidence regarding the exodus of relatively well educated Iowans is found in Table IV-4. Of the total University of Iowa graduates between 1981 and 1985, only 48.1 percent currently reside within the state. Among earlier graduates the percentages are lower. The greatest percentage of those leaving move to states adjoining Iowa, particularly Illinois. Comparing this table with Table IV-5, it is clear that many more graduates leave Iowa than originally came from other states.

A recent University of Northern Iowa study (Yousefi and Rives, 1986) indicates that graduates of Iowa's three universities plan to leave Iowa primarily because they perceive a lack of employment opportunity. Of the 1,437 students interviewed, 49.5 percent expressed plans to leave the state upon graduation, and 80.0 percent intended to leave the state at some time in the future. One respondent observed, "I'd love to live in Iowa, but the poor economy and no jobs are terribly depressing" (p. 19). There can be no mistaking the fact that Iowa is experiencing a "brain drain."

This exodus has led Garfield Schwartz (Rebuilding..., p. 38) and others to propose that tax credits, tuition reimbursement, and forgiven loans be used as incentives to retain college graduates in Iowa. However, such financial incentives are likely to prove ineffective in increasing total employment of college graduates in Iowa. They may result in the substitution over time of Iowa graduates for graduates from schools in other states. If so, the latter would then leave the state. The brain drain would not be stopped because total demand for college graduates would not be increased. That demand, as well as the demand for any other category of labor, depends on the level of production in the state which depends in turn on the demand for Iowa products. There is no reason for expecting the demand for Iowa products to be increased by these incentives.[12]

Table IV-4

Percentage Distribution of Current Residence Locations of UI Graduates

Current Residence	Year Graduated 1981-85	1976-80	1971-75
Iowa	48.1	39.8	36.3
States Adjoining Iowa	20.1	19.8	18.8
Western States	10.9	13.4	14.4
Eastern States	8.8	11.0	12.2
Southern States	7.8	9.0	8.7
Foreign Countries	2.2	2.4	2.1
Unknown	2.1	4.6	7.5
Total	100.0	100.0	100.0

SOURCE: University of Iowa Alumni Association

Table IV-5

Percentage Distribution of Origins of
UI Students

Origin	Year Enrolled 1981-85	1976-80	1971-75
Iowa	70.8	73.7	74.3
States Adjoining Iowa	17.2	13.7	12.6
Other States	6.8	8.5	10.4
Foreign Countries	5.2	4.1	2.7
Total	100.0	100.0	100.0

SOURCE: University of Iowa Office of the Registrar

Financial incentives to retain college graduates, like any subsidy, have to paid for through either higher taxes or lower levels of public services. Either means of paying can make Iowa a less attractive location for business. Thus, incentives may not only be ineffective in increasing the stock of college graduates employed and living in Iowa, they may be a deterrent to growth.

Unemployment rates and outmigration

As many college graduates and other members of the labor force have left Iowa, the state's unemployment rate has rather consistently been below the national figure. Since 1976 Iowa's unemployment rate has averaged almost 1 percent less than that of the nation. Significantly, the states with the lowest average ACT scores (Arkansas, Louisiana, and Mississippi) have experienced unemployment rates in the range of 1.2 to 1.9 percent higher than the national norm over the past decade. Their outmigration rates, however, have been considerably lower than Iowa's.

A possible explanation of Iowa's relatively low unemployment rate is that Iowans' educations and values make them attractive employees in businesses outside the state. When insufficient employment opportunities exist within their home state, Iowans appear to be able and willing to move to other locations. Thus, Iowa's exemplary education system may be serving to hold unemployment rates down.

2. Building on Iowa's human resources

The preceding discussion makes clear that Iowa has a comparative advantage in industries that require relatively large proportions of educated workers. Many people would prefer to remain in their home state upon completing their educations; thus, Iowa can offer a pool of unusually well educated workers who would like to live in this state. The risk of a business losing its skilled employees or experiencing difficulty in recruiting well-

educated staff is particularly small in Iowa.

Positive trends in Iowa's industry mix

The U.S. economy is undergoing structural change, and Iowa is greatly affected. As agriculture-based industries decline in relative importance within the state, other industries are showing increasing strength. Among these industries are:

1. Printing and publishing
2. Communications
3. Finance and real estate
4. Professional services

Nationally, these industries, which may be referred to as producer services, are expected to account for 78 percent of the net increase in total service employment through 1990 (Hanson, 1983, p. 21). Producer services are forecasted to be the fastest growing industries in the U.S. economy during the next decade. Particularly encouraging is the fact that these industries employ sizable proportions of workers from relatively high wage occupations. These occupations are entered by relatively well educated persons, the type that Iowa is producing.

Table IV-6 shows the percentages of total employment found in the U.S., Iowa, and the above-listed industries in the major categories of occupations that pay higher wages and require higher educations. The highest wage category is managerial and professional. The technical, sales, and administrative category also tends to include skilled persons with above average educations. In Table IV-6 the managerial and professional category is divided into (1) executive, administrative, and managerial and (2) professional specialty (i.e., engineers, architects, scientists, lawyers, etc.).

Table IV-6

Higher Wage Occupations as Percentages of Total Employment:
Selected Industries in Iowa: 1980

Occupation	Total Iowa	Total U.S.	Printing & Publishing	Communi-cations	Finance, Real Estate	Professional Services
Managerial and professional-total	20.0	22.7	22.5	26.5	25.6	65.7
Executive, administrative, and managerial	8.9	10.4	10.2	12.2	24.1	12.6
Professional specialty	11.2	12.3	12.3	14.3	1.5	53.1
Technical, sales, and administrative support-total	16.8	30.3	36.1	46.4	65.9	8.7

SOURCE: 1980 U.S. Census of Population, Volume I, Characteristics of the Population, Iowa Volume.

The table indicates that Iowa continues to lag the overall nation in professional employment by about three percentage points. On the other hand, some industries that are posting relatively high growth rates within the state tend to employ higher percentages of both categories of professional workers than is true of the overall U.S. economy. If these sectors of the Iowa economy continue to grow and flourish, increased opportunities for Iowa's educated labor force are a certainty.

Human resources and marketing programs

While no definitive study exists on how Iowa is perceived by owners of mobile resources across the nation, it seems reasonable to suppose that this image could be improved. As the nation moves toward greater emphasis of service-related activities and away from traditional "smoke-stack" industries, Iowa's human resources become a more important factor in the state's economic future.

State-level efforts to disseminate information about Iowa as an investment opportunity should stress the state's human resources and the growing presence of activities that best are able to benefit from these resources. Surveys could be completed of businesses that have come to or originated in Iowa that employ highly skilled professionals. The surveys would document the competitive strength of the state in supplying educated workers. This information could be useful in a marketing campaign to increase the attraction of businesses requiring high skill employees.

A longer term view: manufacturing potential

Much has been said about the decline in manufacturing within the U.S. economy. The primary reason for this decline has been much lower labor costs in other nations. Resurgence of manufacturing in this country will require

continuing increases in productivity because labor cost differentials are unlikely to disappear in the foreseeable future. Increases in manufacturing activity, to the extent that they occur, are likely to be tied to increased capital productivity. Recent use of robotics and other sophisticated techniques suggests that important gains in productivity are possible.

If manufacturing technology makes significant strides forward, allowing this sector to compete more effectively within the world economy, notable changes are likely. It will be far less important for many types of manufacturing to be located within major population centers where large labor markets exist. Rather, more importance may be attached to business climate and quality of life. Higher technology manufacturing will employ fewer, more highly skilled workers, such as are emerging from educational institutions in Iowa.[14]

Whether manufacturing will follow this course is not entirely certain. Iowa should, however, stand ready to capitalize on its greatest resource, a pool of educated workers, if the scenario sketched out in this discussion begins to unfold. A marketing strategy based on Iowa's human resources is an appropriate means for ensuring that the state's potential is met during a time of great economic change.

3. Higher education

An economic development strategy that depends upon the availability of a well educated labor force requires excellence in higher education. This fact is recognized in recent studies of Iowa's economic future. The report of the Committee on Iowa's Future Growth (1984) and the report of the Partnership for Economic Progress (1985) both stress the importance of higher education in Iowa's development. Building on the strengths of Iowa's institutions of

higher education can be a key element in a strategy for improving Iowa' economic prospects.

Higher education as an industry

As observed earlier, Iowans place considerable emphasis on the education of their children. The demand for higher education by Iowans is only partially conditioned by the presence of three state-supported universities and other institutions. Were these universities and colleges not located within the state, Iowans would go elsewhere for higher education. That is, Iowa would import education and dollars for that purpose would leave the state. Colleges and universities add to the state's economic base because they produce import substitutes.

Colleges and universities also add to the economic base by producing exports in the form of education for out-of-state students. These students are a source of export earnings just as surely as are the kitchen appliances sold by Maytag. Moreover, if out-of-state students pay tuition and fees that exceed the costs that they generate by attending Iowa's state universities, then educating out-of-state students is profitable in the same sense that private sector businesses are profitable. In short, Iowa's institutions of higher education are a major industry. Barnard and Boe (1984) estimate that the University of Iowa alone generates state income of nearly $500 million each year, largely due to the goods and services consumed by students, faculty, and staff.

A second consequence of having high quality higher education opportunities within the state is that many of the brightest high school graduates remain in Iowa. While nearly half of the state's university students now leave the state upon graduation, many remain. It is likely that if more students went to college outside the state, fewer ultimately would

seek positions within the state. Iowa's human resource base would erode. Iowa's institutions of higher learning must, therefore, actively pursue excellence and thereby increase their attractiveness to the best students of Iowa (and elsewhere).

University research

The combined research dollars obtained through grants, gifts, and contracts by the University of Iowa and Iowa State University during the 1984-1985 year exceeded $100 million. Because most of these funds were from grants and contracts with the federal government or national foundations and institutes, a considerable number of external dollars was brought to Iowa. Applying even a conservative multiplier, university research adds over a quarter billion dollars to the Iowa economy each year.

University research, however, may be able to do more for the state's economic development than secure external funds. Direct involvement in product development and pointing the way to more profitable methods for conducting business also are central roles for research. Doing so assists business in competing more effectively in national and international markets, thereby strengthening the state's export base.

Promising approaches are emerging for making university research findings and capabilities more accessible to Iowa businesses. Among them are incubation centers and public-private research development corporations

Incubation centers. In a market economy, businesses form to meet identifiable needs for goods and services. In the case of technology-dependent needs, a gap often exists between what is technologically possible and what is readily available for marketing. University-based incubation centers are a method for closing the gap between basic research and business applications. Small businesses are formed around a concept, often one

developed in university research, and applications are determined. As these businesses routinize their operations, their need for the incubator facility diminishes and they move to another location, to be replaced by other new businesses. Both of the state's major research universities have established small incubator programs. Their progress should be monitored and evaluated to determine whether incubators, tied to universities or otherwise, are cost-effective means of promoting development.

Research development corporations. Another form of direct cooperation between research universities and the private sector are product development corporations. While they can take a variety of forms, several characteristics are central to them:

1. They are market driven, in that what is produced is responsive to market forces.
2. They have a profit basis, seeking to earn a competitive return for their investors.
3. They are public-private ventures; an educational institution and private investors jointly establish them.
4. They have an advanced product line that is tied to a particular reserach strength of the associated university

Essentially, then, technology is transferred from university research to businesses in which one can invest. Product development corporations are growing in numbers across the nation; and Iowa's state government has established a Product Development Corporation.

Accessing university resources. Faculty and staff of state-supported universities have expertise of value to businesses, but often it is not easily accessible. When a business would benefit from conversation with a particular university faculty or staff member, the task of finding that person can be

rather onerous. Iowa's universities should explore ways of facilitating interaction between those outside the university and those within. Possible mechanisms include a central referral system and a topical directory.

Recently, the president of the University of Iowa convened a Task Force for University Strategies for the Future Development of Iowa. The task force's mission is to inventory resources and to explore ways that these resources could be made more accessible to Iowans. Task Force members--faculty, staff, and student representatives--have visited 20 communities and most state agencies. Recommendations to the president will be forthcoming early in 1987. The task force report should be useful in identifying possible new arrangements and mechanisms for increased university participation in economic development.

The universities also should be encouraged to hold a greater number of specialized conferences and seminars. By doing so Iowa businesses could become better acquainted with the most useful research results from the state's universities. The conferences also could become a vehicle for establishing contracts with university researchers.

4. Summary of recommendations

The Iowa education system is nationally renowned for its quality. The state is at or near the top in key measures of educational excellence. Largely because of the state's economic difficulties, however, many of Iowa's college graduates are leaving the state. Compared with states having lower quality education systems, Iowa has a higher outm'gration and lower unemployment rates. A national demand appears to exist for Iowa workers.

Iowa's economic development strategies should include efforts to retain productive, well educated persons. Several industries that employ relatively large percentages of professional workers have been experiencing above average

growth rates in Iowa. The state should support the continued growth of these and related industries through its financial assistance and marketing efforts. Similarly, higher technology manufacturing, which also could draw on Iowa's considerable human resources, may offer possibilities for employment growth in the state.

In its marketing efforts, the state should emphasize its human resources. It also should document the successes of higher skill firms and use this information in its marketing efforts.

The state's institutions of higher learning may be able to play a larger role in economic development. At the present time, they constitute an important source of out-of-state research dollars and they perform a vital educational mission. In addition, through incubation centers and product development corporations, university research can be transferred to Iowa businesses. These businesses, in turn, may increase opportunities for well educated, productive Iowans within the state. Iowa's universities should be encouraged to enter into arrangements with private investors to develop, produce, and market products based on university research. Doing so would help strengthen and diversify the state's economy. An increased number of conferences and seminars would improve the accessibility of faculty and staff to Iowa businesses.

F. Other state and local government policies

To this point, we have examined state government activities that have economic growth as a major and explicit objective. However, these are not the only, and perhaps not the major, ways in which government affects growth. Growth may also be affected by any state or local government activity or policy that alters the attractiveness of Iowa as a place to employ mobile capital and labor resources. Consequently, government in Iowa has the

potential for either inhibiting or promoting growth as it carries out its traditional duties. This section examines a number of such instances, the purpose being to recommend how Iowa governments can be more supportive of growth in all of their activities.

1. Streamlining government

A persistent theme in discussions of the state's growth prospects is that government inefficiencies are presently inhibiting development. Government must be "streamlined," it is argued, if Iowa's economic growth potential is to be realized. Reflecting this concern are two recent reports that recommended ways of reducing the costs of Iowa governments.[15] The most recent study is the basis for the state government reorganization bill passed in the 1986 legislative session.

In addition to state government reorganization, many believe that there is need for reorganization and consolidation of local government. In particular, it is argued that reducing the number of counties and school districts would promote development by reducing the cost of government, taxes, and the costs of doing business in Iowa.

County government

There seems little doubt that reducing the number of local governments could generate efficiencies, allowing either lower costs and taxes or more services without an increase in taxes. With modern means of transportation, counties need not be as small in area as Iowa counties. Certainly, counties in other states typically serve larger populations and contain larger land areas than Iowa counties. County land area averages 1,163 square miles for the U.S. but only 565 square miles for Iowa. Average county population in 1982 was 76,220 for the U.S. and only 29,353 for Iowa.

How much could government costs and taxes be reduced by consolidating counties? A firm dollar figure for this amount would be difficult to determine. Some costs would not be significantly affected by consolidation. For example, the manpower and other resources needed to build and maintain county roads would not be greatly reduced by redrawing county boundaries, but decreases in administrative and planning costs should be attainable by consolidating administrative functions. General fund expenditures account for about 20 percent of county government spending.[16] Some of these costs could be cut following consolidation. In addition, in the various functional areas (roads, law enforcement, judicial, corrections), consolidation may allow some reduction in personnel, equipment, and facility costs.

The amount that could be saved would depend on how well counties have already exploited opportunities for spreading overhead costs by contracting with other counties for the provision of particular services or by sharing the costs of specialized personnel, equipment, and facilities. In most instances, county governments have an incentive to pursue cost cutting measures because any cost saving can be translated into lower taxes or higher levels of public services. The exception occurs when expenditures are financed primarily by state aid and curtailment of costs and expenditures results in a loss of aid. In this case, county officials may see little gain fromm cost cutting. With the exception of the Road Use Tax Fund, Iowa's major state aid programs for county governments do not have this adverse incentive effect.

Given that consolidation would probably produce some savings, there is still the question of whether it would affect growth. Consolidation would generate savings primarily in the sparsely populated rural areas of the state. The reason is that in the more densely settled urban counties, most of the savings from scale economies in the provision of public services have been

realized. The relatively high costs in sparsely settled counties reduce the attractiveness of those counties as business locations. But there are similar locations within the state that do not suffer such cost disadvantages. Therefore, the state as a whole is not made less attractive as a location for business and industry by the relatively high costs in its rural counties, although the distribution of economic activity within the state may be affected.

The preceding conclusion must be qualified to the extent that relatively high costs of sparsely populated areas are subsidized by state aid programs. Subsidy occurs when such areas receive more in aid than they pay in state taxes to finance aid programs. The formula for distributing the RUTF generates a subsidy of this sort, but a comparison of tax flows from and aid payments to counties shows that other aid programs do not result in a significant net subsidy for rural counties. Whatever their magnitude, any existing net subsidies including the RUTF subsidy would not be eliminated by consolidating counties.

The speculative tone of the preceding analysis does not mean that we do not know enough to act. We do know that Iowa's county boundaries were drawn at a time when transportation was more time consuming and Iowa's population was more evenly dispersed than today. We know that most county governments in the nation serve both larger areas and larger populations than Iowa's less populous counties. We also know that some savings in administrative costs are likely to follow from consolidation. This information seems sufficient for action.

The Legislature should act as soon as possible to reduce the number of county governments. Doing so would increase the cost-effectiveness of Iowa government in sparsely settled counties, allowing either tax reductions or

public service increases that would make those counties more attractive as a location for economic activity. Regardless of whether consolidation is legislated, any legal obstacles to sharing of costs, services, facilities, and personnel among counties should be eliminated.

School districts

Like sparsely settled counties, school districts with small student populations have relatively high (per student) costs, reflecting the fact that small districts do not benefit from the scale economies that can be realized in urban districts. Rural districts must therefore have higher costs or less extensive programs or both.

Although outcomes will vary from district to district, consolidation would likely generate some efficiencies, allowing either reduced outlays or enriched programs. But per student costs would remain relatively high in sparsely settled areas of the state. Also, it would be a mistake to expect large cost savings from consolidation. The reason is that costs above the state average are now borne locally as additional property taxes. Districts that spend above this average, virtually all of Iowa's low student population districts, have an incentive to consolidate or take other measures that would cut costs without cutting quality. In addition, the Education Cost Efficiencies Act (HF2462) establishes incentives for districts to consolidate and to share administrators and teachers. The fact that small districts have taken a number of cost cutting measures including consolidation argues that they are responsive to these incentives. Therefore, the failure of some to exercise the option to consolidate may be evidence that they do not perceive a cost saving (unaccompanied by a quality reduction) from doing so.

The preceding argument would not be correct if a significant share of the above average costs of small districts were paid by the state. Present state

aid programs are not of this sort. However, if aid formulas were to be revised so that a large share of the costs above the state average were automatically offset by additional aid, then the incentive for small districts to implement cost cutting measures, including consolidation, would be greatly weakened.

Even if a large reduction in costs and taxes could be achieved through consolidation, there is little reason to believe that doing so would have a significant effect on the growth of the overall state economy. As was the case with counties, relatively high taxes in sparsely populated rural areas are not a deterrent to the location of business in Iowa because they do not increase the cost of doing business in more densely settled parts of the state. Alternative locations that do not have the cost disadvantages resulting from sparse population are available. But high taxes in the less populous areas of the state do work against their development. Therefore, the distribution if not the level of economic activity in the state may be affected by the efforts that school districts make to reduce their costs through consolidation or other means. Any reduction of the cost disadvantages of the sparsely settled areas of the state will tend to reduce the concentration of economic activity in urban growth centers.

Thus, from a development perspective, school district consolidation should not be a high priority concern. Measures to make the state's school system more efficient and to assure equal opportunity for all of Iowa's children should be pursued, but not with the expectation that doing so will have important effects on state economic growth.

2. Improving government finance

The means chosen to finance government determine how the costs of government are distributed among persons and businesses. The distribution of

costs may in turn affect the costs of doing business in the state and thereby affect economic development. In particular, some means of financing may be less desirable than others because they impose relatively high burdens on mobile resources.

When compared to other states, Iowa's tax system is not an "outlier." On some dimensions, such as the top rate on the personal income tax, Iowa compares unfavorably with many other states. But on other features, such as the single factor formula for allocating corporate income, it compares very favorably. On balance, there is little reason to believe that Iowa's tax system puts it at a competitive disadvantage with other states; Iowa's economic growth is not being significantly inhibited by its tax system. Therefore, it would be a mistake to think that the state's growth prospects can be greatly enhanced by changing taxes or, more generally, the means by which government is financed. Reinforcing this view are the results of numerous studies showing that taxes have relatively minor effects on business location decisions. Nevertheless, several actions that state government could take in the area of government finance would enhance the state's attractiveness as a location for business.

Tax system stability

Each session of the legislature sees a number of proposals for significant changes in Iowa's system of taxation and state aid for local governments. Most of these proposals are not enacted, but a few are. In combination, the proposals for change and the changes actually made add substantially to the uncertainty that businesses must cope with in their investment and operating decisions. This uncertainty is reinforced by the on-going debate about reform of the federal tax system.

Reducing the uncertainty that derives from the prospect of action by the General Assembly would enhance Iowa's business climate. Therefore, the General Assembly should commit itself to making changes in the state's system of government finance only infrequently and only after careful analysis of the effects of proposed changes. A resolution to this effect passed by the General Assembly would be helpful in communicating and making credible such a commitment. An appropriate time for a resolution might be following the tax legislation that will be required as a result of the federal tax reform bill. Regardless of whether the legislature makes a formal and explicit commitment to tax system stability, the Governor and the DED should communicate the need for stability on a continuing basis to the changing set of legislators.

Revenue structure

Iowa's system of government finance has changed dramatically over the past 25 years. The share of state and local government revenue obtained through property taxation has fallen by almost half, while the share derived from personal income taxes has tripled. Current charges are the only other component showing relatively rapid growth. Corporation income taxes continue to account for a relatively small share of revenue. (See Table IV-7).

Table IV-8 shows how revenues from various sources have changed when adjustment is made for inflation. The purchasing power (real value) of the revenue obtained from most sources has increased. The exceptions are property taxes and revenue from motor fuel taxes and vehicle license fees. Table IV-9 shows that the main shifts in the composition of the property tax have been from agricultural land and personal property to residential and commercial property.

Table IV-7

Changing Importance of Iowa's Major Taxes,
1960-1984

Revenue category	Percentage of total own-source revenue in: 1960-61	1970-71	1983-84
Personal income	4.5	7.0	15.3
Corporate income	0.6	1.6	2.5
General sales	10.2	12.8	14.3
Property	47.7	38.5	27.6
Motor fuel and vehicle license	12.4	11.3	6.7
Current charges and fees	16.0	22.0	28.4

Table IV-8

Real Growth in Revenue from Iowa's Major Taxes, 1960-1984

Ravenue category	Percentage change in inflation adjusted revenue: 1970-71 to 1983-84	Percentage change in inflation adjusted revenue: 1960-61 to 1983-84
Total general revenue	21.1	71.4
Personal income	155.8	396.5
Corporate income	74.2	582.2
General sales	29.8	108.5
Property	-15.1	-6.8
Motor fuel and vehicle license	-31.2	-19.7
Current changes and fees	51.3	186.5

Table IV-9

Changing Composition of Iowa Property Tax

Property	1960-1961	1970-1971	1985-1986
Agricultural land and buildings	32.4	32.0	25.5
Residential lots and buildings	28.2	32.2	39.3
Mercantile lots and buildings	9.6	10.5	15.6
Industrial and manufacturing real estate including machinery	5.8	7.2	7.3
Total public utilities	10.6	9.6	8.3
Total personal property	13.4	8.5	4.0
Grand total in state, real, personal, utilities	100.0	100.0	100.0

The share of their total revenue that Iowa's county and municipal governments obtain from property taxes has fallen sharply, from 54 percent in 1962 to 29 percent in 1982 in the case of municipalities and from 60 percent to 40 percent in the case of counties. Iowa's county and municipal governments currently obtain slightly less than three-fourths of their general revenue from their own sources; the remainder is in federal and state aid.

These changes in Iowa's revenue mix have by and large not been desirable from an economic development perspective. Taxes on an immobile resource, land, have been reduced while taxes that fall predominately on mobile resources, sales and personal and corporate income taxes, have been increased. The same shift has occurred within the property tax category--away from land and toward commercial, manufacturing, and residential property that in the long run is mobile (owners can choose not to replace it in its Iowa location).

The failure of road user tax revenues to keep pace with inflation has prevented needed maintenance of existing roads and increased the share of road expenditures financed by general revenue sources, currently about 5 percent.

The growth in state aid to local governments has meant that public services necessitated by the activities of persons and businesses in particular localities are financed increasingly by taxes levied on the state as a whole. Cross-subsidies can and do arise, with the result that local governments are not confronted with the full cost of their decisions to spend on a particular project or activity. They may therefore look at only the local cost contribution when deciding whether an activity is worthwhile, undertaking those activities promising benefits in excess of <u>local</u> costs. Such activities may not be efficient in the sense that they generate benefits commensurate with <u>state and local</u> cost contributions. That is, local

governments may be encouraged by state aid to spend when the benefits of the spending do not warrant the costs to state taxpayers taken as a whole.

It is beyond the scope of this plan to make detailed recommendations for changing Iowa's revenue system. However, several general recommendations seem appropriate.

1. The trend to financing a larger share of expenditures with charges and fees is a desirable one and should be continued to the extent possible. Linking the receipt of a service or the use of a facility to the payment that finances it aids in making a judgment about its desirability. It guards against the overexpansion of the public sector that may arise when people do not see a clear link between their demands for public services and the taxes they pay, as is the case when government is financed by broad based taxes.

2. Revenue system changes that would further reduce reliance on property taxes and increase reliance on state sales and income taxes would not be desirable from an economic development perspective. Such "property tax relief" has been an important if not the major thrust of tax policy in Iowa over the past two decades. The result is that a much larger share of total state and local taxes is now collected from owners of labor and capital, many of whom are free to relocate their resources to other states in response to higher taxes, and a smaller share is collected from owners of land, which is fixed in location. This shift in tax shares cannot have been helpful from an economic development perspective. Continuing the shift would likewise be unhelpful, it not damaging.

3. State aid to county and municipal governments should not be increased unless it is to fund a project or activity that is clearly of primary benefit and interest to the state as a whole. In that case, the alternative of state take-over of the activity should be given serious consideration. For example,

rather than providing state funds for maintaining a system of county jails, it might be more cost-effective to have a statewide system of prison and detention centers.

4. Motor fuel and vehicle license taxes decreased in real (inflation-adjusted) terms by 31 percent from 1970-1984. This erosion should be offset by increases in these taxes, with the additional revenue being used to maintain the existing primary road system and to improve key road linkages to out-of-state markets.

The danger of cross subsidy through state aid

As the rural-to-urban population shift continues, financial pressures on local governments in areas that are losing population will mount. Maintaining high schools, county judicial and law enforcement activities, and other facilities and services will become increasingly expensive for the remaining population. Aid programs to offset these rising costs have been and will continue to be called for. Whatever their merits on other grounds, such programs would if enacted make the state as a whole less attractive to mobile businesses. The reason is that state sales and income taxes collected in urban areas would be used to finance aid that subsidizes provision of public services in the sparsely populated areas of the state. This urban-to-rural cross-subsidy would take away part of the cost advantages that Iowa's urban areas realize from economies of scale in provision of public services. Urban areas would be made less competitive as locations for economic activity. Rural areas would be rendered more competitive, but even with subsidy, costs of government services would remain high relative to urban areas in Iowa and elsewhere.

State aid programs presently result in such an urban-to-rural cross-subsidy. It may be politically tempting to increase this cross-subsidy,

especially as a means of making county and school district consolidation more palatable, but doing so would hinder rather than help economic development in the state as a whole.

3. Regulations affecting business

The Department should review on a continuing basis Iowa's laws and regulations to determine whether they impose unwarranted costs on business. When such is determined to be the case, recommendations for appropriate changes should be made to the General Assembly. Several instances in which existing laws may be having adverse effects on development have been identified by Department staff and the Partnership for Economic Progress: unemployment and workers' compensation, tort liability, and farmland ownership.

Unemployment and workers' compensation programs

Currently there is a perception in the Iowa business community that Iowa's unemployment and workers' compensation costs are excessive and hamper economic development. Recent sharp increases in tax rates and premiums for unemployment and workers' compensation have certainly occurred, but there appears to be little reason to fear that these increases put Iowa at a competitive disadvantage. Other states have also suffered such increases and Iowa's costs remain average or below average when compared to costs in other states.

Unemployment compensation. The cost of the unemployment compensation program to a firm is determined by several factors: the stability of the employment record of the firm, the record of reserves in the individual firm's account relative to the amounts paid in and paid out, and the total reserves in the state unemployment fund. Payroll tax rates for firms can vary widely depending on past experience. Firms that have gone six years without any

layoffs have a zero tax rate, while firms with layoffs within the last three years are subject to the highest, 9 percent rate. Tax rates are currently applied to a payroll base of $12,000 per employee with the base scheduled to increase to $12,300 in 1987. The tax rate applied to new firms is 2.3 percent, with the exception of construction firms which must pay 9 percent. There are nine rate tables each having 21 rate brackets. Rates run from 0.5 to 7.0 percent on table 1 (plus surcharges for a maximum total of 9 percent) and from zero to 4.0 percent on table 9 with the other rate tables falling in between. The rate table used is determined by a formula based on the level of the reserve fund.

Businesses' current concern is that unemployment tax rates have recently increased. Tax rates are automatically adjusted up and down by a formula as reserves fluctuate. Fund reserves for recent years are:

Fiscal Year Ending June 30	Millions of Dollars
1979	$109
1980	148
1981	99
1982	4
1983	-166
1984	-95
1985	-2
1986	77

The high levels of unemployment from 1980 to mid 1983 exhausted the fund and ran up a deficit of $166 million for the fiscal year ending June 30, 1983. The exhaustion of the reserve fund and deficit automatically triggered higher tax rates. The state is currently at the highest rate (rate table 1) and will remain there until the reserve is $200 million. At that time the rates will

automatically decline. Thus, it is true the amount of unemployment payroll taxes have increased in recent years, but the schedule of rates has not changed. Other states which incurred high rates of layoffs and unemployment have faced similar increases in unemployment taxes. With continued economic stability or expansion the fund will soon reach the $200 million level where rates will be decreased.

A review of Iowa's ranking relative to neighboring states and the national average is reported in Table IV-10. This relative ranking will vary somewhat from year to year depending upon the unemployment experience of the various state economies for that year. Iowa's average employer contribution in 1984 was 3.2 percent of wages and salaries, the same rate as at the national level. The range of contribution rates varies widely among neighboring states with South Dakota at only 1.6 percent and Wisconsin at 4.7 percent. The simple average for this group of states is 3.1 percent. Iowa's average weekly benefits of $129 is slightly above the national average of $123. Iowa ranks sixth from the highest among the eight neighboring states in weekly benefits. Only one state, North Dakota, had a higher benefit payment as a percent of weekly wage at 47.8 percent, compared to Iowa's 43.7 percent. Iowa ranks fifth from the highest in average duration of payment of benefits. To sum up, Iowa ranks about average, to slightly better than average, on unemployment related cost factors compared to the U.S. and neighboring states.

The question of whether action should be taken to reduce the unemployment tax is an important and complex issue. The program's purpose is to provide a safety net for unemployed workers and a stabilizing effect to counter business downturns. The size of the safety net, measured by average weekly benefits and duration of payments, influences the degree that the economy will decline

Table IV-10

Selected Data on State Unemployment Compensation Program
Iowa and Neighboring States, 1984

	Average Weekly Unemployment Benefits		Average Duration of Benefits (weeks)	Average Employer Contribution Rate (%)	Total Assets (millions of dollars)
	Current dollars	Percent of weekly wage			
Iowa	129	43.7	13.0	3.2	-95
Illinois	134	36.3	17.6	4.5	-6
Kansas	130	40.8	12.8	2.9	201
Minnesota	146	42.1	14.0	2.8	1
Missouri	93	27.9	11.5	2.6	130
Nebraska	103	35.5	12.4	1.9	62
North Dakota	139	47.8	14.8	3.6	-1
South Dakota	105	41.3	10.6	1.6	20
Wisconsin	136	41.9	13.5	4.7	42
United States	123	35.9	14.4	3.2	5,708

SOURCE: 1986 Statistical Abstract of the U.S.

given a specified level of unemployment. To reduce the safety net would tend to increase the length and depth of cyclical fluctuations in the economy.

A second issue concerns the increase in the taxable payroll from its current base of $12,000 to $12,300 in 1987. This is not a significant increase for even at the 9 percent tax rate it raises cost by only $27/worker or 0.2 percent. While payroll taxes have been high during the past three years, they can be expected to soon decrease when the reserve is back to the $200 million level.

Workers' compensation. The workers' compensation program essentially operates as a payroll tax and is viewed by firms as a part of the cost of labor. The Iowa workers' compensation program was established by state law to require employers to carry liability insurance on their employees, or be self-insured, so that in the event of work-related accident and/or injury or disability the employee is compensated for injury and/or loss of earnings. All employees are covered by the program with the exception of a small group of part-time workers classifed as casual workers.

Premiums can vary among states for two reasons: (1) the occupational and industry structure of a state, and (2) because of differences in law among states on the rate at which benefits are paid in the event of loss of work from injury or disability. Insurance premium rates are determined by the National Council on Compensation Insurance based on data on frequency and severity of injury cases associated with occupational and industry structure and insurance claim experience. Premiums also depend on the rate that state law requires workers be compensated in the event of loss of earnings because of injury or disability. Under Iowa law, benefits are paid on the basis of 80 percent of spendable earnings (wages less federal and state income taxes). In other states payment is made on the basis of 66.67 percent of gross wages.

Generally, the computation of benefits under the rule of 80 percent of spendable earnings yields a lower rate than would the 66.67 percent of gross earnings. Finally, workers' medical costs and workers' compensation benefits are paid by the insurance company to the worker under the provisions of the program. If there is disagreement between the worker and the insurance company on the amount of benefit, the case is submitted to the Iowa Industrial Commission which hears the case and determines the settlement amount.

Iowa businesses' current concern with the workers' compensation insurance program reflects the fact that premiums jumped 25.2 percent for 1986 after declining steadily since 1980. The increase is a result of insurance companies having to raise premiums nationwide by this amount to meet recent increased costs according to Mr. Robert Landers, Iowa Industrial Commissioner. Since this price increase was nationwide it has not changed Iowa's cost relative to other states, but an increase of this magnitude all at once can present a problem for firms with tight margins struggling to recover from recession.

A second issue of concern to Iowa businesses on the workers' compensation program is the maximum weekly benefit of $600 workers might collect. The record shows Iowa is not a state where large awards are made, hence this appears not to be a problem with the Iowa program. According to the Iowa Industrial Commissioner's newsletter (April 1986), average benefit awards for 1985 were $194.41 per week, and the median was $189.31 per week.

In the report by Grant Thornton Associates (1986) Iowa ranks very favorably on payroll costs for workers compensation in manufacturing. The Thornton report ranks workers' compensation costs fourth most important of 22 factors used to measure the manufacturing business climate. It indicates that the cost of worker compensation insurance for Iowa manufacturers is 59 percent

of the national average. Of Iowa's neighboring states, only South Dakota had lower cost at 57.2 percent of the national average. The ranking of the other neighboring states is: Nebraska 65.7 percent, Missouri 71.0 percent, Wisconsin 80.5 percent, Illinois 95.3 percent, and Minnesota 168 percent.

Summary. Iowa's unemployment and workers' compensation programs do not appear to have rates that are excessive, or out of line with the average national rate, or the rates of neighboring states. Recently payroll taxes have increased significantly. In the case of unemployment insurance, rates should decline soon as the maximum reserve fund target is reached. Given that the rates are in line and that the program has stabilizing effects to counter business downturns, there is strong reason not to change the tax rates. In the case of the workers' compensation program, it is unfortunate that the insurance companies reduced premiums from 1980-85, then had to raise premiums by 25.2 percent. Major price increases are a shock to firms and not easily absorbed. The history of frequency and severity of injury, and hence benefit awards, are reflected in insurance premium rates. Given Iowa's favorable ranking in workers' compensation costs, there is little reason to lower either average benefits or the maximum benefit that a worker might collect.

Tort liability limits

The cost of liability insurance has increased sharply since 1981 for many Iowa businesses and governments. In some cases, insurance is unavailable. Increases in liability insurance premiums and the costs of defending lawsuits have undoubtedly increased the cost of doing business in Iowa. However, these increases have not necessarily made Iowa less attractive relative to other states as a location for business because other states have experienced similar increases. Therefore, it is unclear that limits on liability are needed for economic development purposes.

A recommendation regarding liability limits should wait the findings of the Citizen's Committee on Tort Liability Reform, appointed and funded by the Legislature and chaired by Representative Jay and Senator Doyle.

Preliminary evidence suggests that the rate of premium increase is lessening. Also, it seems that large awards may not be a major source of increased premiums. The largest award in Iowa over the past three years was $540,000. Rather, premiums have increased because of increasing defense costs and the underpricing of liability insurance in preceding years. Pain and suffering and punitive components of awards are small relative to total awards; therefore limiting those award components would not prevent premium increases such as have occured. In short, early indications are that limiting punitive and pain and suffering awards would probably not significantly reduce either current premiums or their future growth.

Restrictions on farmland ownership

The decline in farmland prices and current lack of buyers has raised the question of whether Iowa's restrictions on farmland ownership are limiting purchases. The restrictions are imposed by 1975 legislation which prohibits corporations with more than 25 shareholders from owning Iowa farmland. It also prevents non-resident aliens from purchasing Iowa farmland with the exception 320 acres can be purchased and held for non-agricultural purposes.

According to Professor Neil Harl, economist and farm legal expert at Iowa State University, these restrictions are sufficiently broad that they pose no barrier to the flow of capital into agricultrure. The fact that the law limits number of stockholders but not the amount of funds or acres is the key to its ineffectiveness.

The depressed land market is the result not of a capital barrier but of great uncertainty and pessimism about future commodity prices, costs,

inflation, and other variables. Part of the uncertainty is connected with government farm programs and the possibility that the Gramm-Rudman-Hollings deficit reduction act may sharply limit government agricultural support programs. World-wide excess farm commodity production capability depresses price expectations.

G. Improving regional and national economic policies

A key element of Iowa's long-run economic development strategy should be a push for national policies that are favorable to development of Iowa. The state should also work for interstate coordination of tax, expenditure, and economic development policies so that self-defeating competition for industry is minimized. National monetary and fiscal policies, especially as they affect interest rates and the foreign exchange value of the dollar, should be a key concern in these efforts. A replay of the early 1980s with high real interest rates and a high value of the dollar should be prevented.

Forums for pursuing this broad objective should include the national and regional conferences and organizations for governors, legislators, and Congressional delegations. The Department should maintain close contact with Iowa's Congressional delegation, keeping it informed of the likely development consequences of national policies and legislation.

V. ECONOMIC GROWTH IN IOWA: PERFORMANCE AND PROSPECTS

This section examines the performance of the Iowa economy 1950-1985 and compares it to the performance of the economies of the nation and neighboring states. Principal sources of past change and the major national and international trends that will influence Iowa's future growth are identified.

A. Performance of the Iowa economy: 1950-1985

1. Employment

The Iowa economy enjoyed almost 30 years of relatively uninterrupted growth in employment, personal income, and population from 1950 to 1979. Over this period, Iowa had the distinction of being one of the states least sensitive to the national business cycle (Bretzfelder, 1973). However, in late 1979 the Iowa economy turned down with the onset of a national recession and over the next three years had a loss of 90,000 jobs: 50,000 jobs in manufacturing, 19,000 in trade, 22,000 in construction, 5,500 in the transportation, communication and utilities sector, and 2,000 in the state and local government sector. The only two sectors with gains were the finance, real estate and insurance sector and the services sector, with gains of 1,000 and 8,000, respectively (see Table V-1). Iowa's sensitivity ranking to the national business cycle moved up from 46th to 19th.[18] Iowa's economic performance in the 1970s and 1980s is an example of an inflationary commodity boom followed by falling commodity prices and the adjustments required to bring productive capacity into line with demand.

Iowa's prosperity during the 1970s reflected the expansion of agricultural commodity exports, high prices for agricultural commodities and high farm income. Both domestic and export demand for the output of Iowa's agricultural related manufacturing sectors was strong. Nonfarm employment

Table V-1

Total Nonfarm Employment, Iowa, Selected Years 1950-85

Sector	1950	1960	1970	1979	1983	1985
			(Thousands)			
Total Nonfarm Employment	609.6	681.0	882.8	1,131.4	1,040.1	1,075.0
Manufacturing	154.4	176.6	215.5	259.8	202.2	204.9
Construction	32.4	36.6	40.6	59.8	35.8	36.5
Mining	3.2	3.3	3.0	2.6	1.9	2.1
Transportation, Communication, and Utilities	61.0	53.6	51.1	58.2	51.3	51.4
Finance, Insurance and Real Estate	23.4	31.6	41.0	57.8	59.9	63.0
Services	72.1	92.6	146.7	203.4	217.1	231.4
Trade	162.7	169.8	209.2	286.4	268.7	277.1
Federal Government	{100.3}	{116.9}	{175.7}	19.9	19.6	20.2
State and Local Government				184.6	183.8	188.6

Annual Rate of Change (Percent)	1950-60	1960-70	1970-79	1979-83	1983-85
Total Nonfarm Employment	1.1	2.6	2.8	-2.1	1.7
Manufacturing	1.4	2.0	2.1	-6.1	0.7
Construction	1.2	1.0	4.4	-12.0	1.0
Mining	0.3	-0.9	-1.5	-7.5	5.1
Transportation, Communication and Utilities	-1.3	-0.5	1.5	-3.1	0.1
Finance, Insurance and Real Estate	3.0	2.6	3.7	1.3	2.6
Services	2.5	4.7	3.7	1.6	3.2
Trade	0.4	2.1	3.6	-1.6	1.6
Federal Government	{1.5}	{4.2}	{1.7}	-0.4	1.5
State and Local Government				-0.1	1.3

grew at an annual rate of 2.8 percent over the 1970-79 period compared to 2.7 percent at the national level. Growth in manufacturing employment was more than double the national rate, 2.1 percent versus 0.9 percent. The 4.4 percent growth rate in construction employment during the 1970-79 period, compared to 2.5 percent at the national level, reflected the strong local investment boom.

The 1979-82 recession was precipitated by tight monetary policy and high nominal interest rates resulting from inflation. Capital goods producing sectors and construction were severely impacted by this policy. Manufacturing and construction employment in Iowa declined at annual rates of 6.1 and 12.0 percent, respectively, from the 1979 peak of the business cycle to the beginning of the recovery in 1983. At the national level, the corresponding rates of decline for manufacturing and construction were 3.3 and 3.5 percent, respectively.

Iowa's cyclical decline from the fast pace of the 1970s was followed by a recovery that has been weak when compared to the nation and neighboring midwestern states. Iowa's rate of growth in nonfarm employment was only 1.7 percent for 1983-85 compared to 4.1 percent at the national level (Tables V-1 and V-2). Iowa's employment growth has been uniformly weak across all sectors relative to the nation. Furthermore, two of Iowa's major farm related manufacturing sectors--nonelectrical machinery (farm and construction machinery) and food and kindred products--have continued the employment declines which began in late 1979. Employment in the nonelectrical machinery sector has declined from 68,330 workers in 1979 to 42,580 workers for 1985. The farm machinery sector has been especially hard hit, with sales declining sharply as a result of declining farm incomes and an abundance of used equipment thrown onto the used equipment market by farm foreclosure.

Table V-2

Nonfarm Employment, United States, Selected Years 1960-85 and Forecast 1990 and 2000

Sector	1950	1960	1970	1979	1983	1985	1990	2000
				(millions of persons)				
Total Nonfarm Employment	45.2	54.2	70.9	89.8	90.2	97.7	106.7	120.1
Manufacturing	15.2	16.8	19.4	21.0	18.4	19.4	19.4	19.3
Construction	2.4	2.9	3.6	4.5	3.9	4.7	5.0	5.8
Mining	0.9	0.7	0.6	1.0	1.0	1.0	0.8	0.7
Transportation, Communication and Utilities	4.0	4.0	4.5	5.1	5.0	5.3	5.5	5.5
Finance, Insurance, and Real Estate	1.9	2.6	3.7	5.0	5.5	5.9	7.2	8.6
Services	5.4	7.4	11.6	17.1	19.7	21.9	25.5	29.8
Trade	9.4	11.4	15.0	20.2	20.9	23.2	26.1	30.1
Federal Government	1.9	2.3	2.7	2.8	2.8	2.9	3.0	3.2
State & Local Government	4.1	6.1	9.8	13.2	13.1	13.4	14.3	17.2
Annual Rate of Change (Percent)	1950-60	1960-70	1970-79	1979-83	1983-85	1985-90	1990-2000	
Total Nonfarm Employment		1.8	2.7	2.7	0.1	4.1	1.8	1.2
Manufacturing		1.0	1.5	0.9	-3.3	2.7	0.0	-0.1
Construction		1.9	2.2	2.5	-3.5	9.8	1.2	1.5
Mining		-2.5	-1.5	5.8	0.0	0.0	-4.4	-1.3
Transportation, Communications, and Utilities		0.0	1.2	1.4	-0.5	3.0	0.7	0.0
Finance, Insurance and Real Estate		3.2	3.6	3.4	2.4	3.6	4.1	1.8
Services		3.2	4.6	4.4	3.6	5.4	3.1	1.6
Trade		1.9	2.8	3.4	0.9	5.4	2.4	1.4
Federal Government		1.9	1.6	0.4	0.0	1.8	0.7	0.7
State and Local Government		4.1	4.9	3.4	0.2	1.1	1.3	1.9

SOURCE: Data Resources, Inc., U.S. Long Term Review, Lexington, Mass., Summer 1986.

Increased competition in foreign markets has also hurt the domestic farm machinery sector. The financial difficulties of farm machinery producers have led to the merger of a number of the major farm equipment manufacturing firms.

Employment in the food and kindred products sector has declined steadily from the 48,960 workers in 1979 to 41,040 for 1985. This decline reflects the growth of meat packing plants out of the state, reduced beef production in Iowa and the impact of productivity gains which has allowed fewer workers to produce the required output. Prospects for the recovery of employment to levels of 1979 in the farm related sectors do not appear promising. Moreover, consolidation of manufacturing firms is bringing the consolidation of retail dealerships and distributorships, and reducing employment in the small towns which service the farm sector.

2. Personal income and population

Growth of total personal income in Iowa and the nation over the 1950-1985 period closely mirrored the growth in nonfarm employment. Iowa's rate of growth lagged the national rate with the exception of the decade of the 1970s when Iowa personal income grew at an annual rate of 10.0 percent compared to 9.2 percent at the national level (Table V-3).

Table V-3

Annual Rate of Change in Total Personal Income 1950-1985

	1950-60	1960-70	1970-79	1979-82	1982-85
Iowa	3.3	6.8	10.0	6.9	6.3
U.S.	5.9	7.3	9.2	9.9	7.3

Table V-4

Per Capital Income, Iowa and the United States
1950-85

	1950	1960	1970	1979	1982	1985
				(Dollars)		
Iowa	1,523	2,000	3,792	8,689	10,650	13,296
U.S.	1,492	2,216	3,945	8,651	11,113	13,451
Iowa as Percent of U.S. Average	102	91	96	100	96	99
Annual rate of change		1950-60	1960-70	1970-79	1979-82	1982-85
Iowa		2.8	6.6	9.7	7.0	6.5
U.S.		4.0	5.9	9.1	8.7	6.6

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

State per capita income is a simple average derived by dividing total personal income by population. Next to household income data gathered as part of the decennial census, it is the best indicator of the level of relative incomes among states. Table V-4 shows per capita income for Iowa and the U.S. for 1950-86. Iowa's per capita income has been about even with the national average over the 1950-85 period. In years when farming is prosperous, Iowa's per capita income is about even to slightly above the national average; when farm incomes are down, Iowa's per capita income tends to run about 90 to 98 percent of the national average.

As a measure of current economic activity within the state, total earnings of employees and proprietors is better than either employment or total personal income. From 1978-83 total earnings grew more slowly in Iowa than in neighboring states (Table V-5). Earnings for the metro portions of Iowa grew at a rate of 5.0 percent compared to only 0.2 percent for the

Table V-5

Total Earnings by Place of Work and Growth Rate
Metro and Non Metro Areas,
Midwestern States, 1978-1983

State	Metro Portion			Nonmetro Portion		
	1978 (Mil. $)	1983 (Mil. $)	Annual Rate of Change (percent)	1978 (Mil. $)	1983 (Mil. $)	Annual Rate of Change (percent)
Iowa	8.4	10.7	5.0	9.3	9.2	-0.2
Illinois	68.1	88.7	5.4	9.8	11.2	2.7
Kansas	7.5	11.3	8.7	6.1	8.5	6.8
Minnesota	18.5	28.0	8.6	6.7	8.0	3.8
Missouri	22.3	32.0	7.5	6.1	7.5	4.4
Nebraska	4.9	7.2	7.7	4.1	5.0	4.2
N. Dakota	1.5	2.3	8.2	2.2	3.2	8.1
S. Dakota	0.7	1.1	7.8	2.7	3.4	5.1
Wisconsin	20.8	28.3	6.4	6.6	9.1	6.6
U.S.	1,090,601.8	1,1634,073.1	8.4	230,372.2	310,215.9	6.1

SOURCE: Bureau of Economic Analysis, U.S. Department of Commerce, Local Area Personal Income: 1978-83.

Table V-6

Population and Population Growth Rates, Iowa, Midwestern States, and U.S., 1950-1984

	1950	1960	1970	1980	1984
			(Thousands)		
Iowa	2,621	2,758	2,825	2,914	2,910
Illinois	8,712	10,081	11,110	11,427	11,511
Kansas	1,916	2,183	2,248	2,367	2,438
Minnesota	2,982	3,414	3,806	4,076	4,162
Missouri	3,955	4,320	4,678	4,917	5,008
Nebraska	1,326	1,411	1,485	1,570	1,606
North Dakota	620	632	618	653	686
South Dakota	653	681	666	691	706
Wisconsin	3,435	3,952	4,418	4,706	4,766
U.S.	151,326	179,323	203,302	226,546	236,158
Annual Rate of Growth:	1950-60	1960-70	1970-80	1980-84	1950-84
Iowa	0.5	0.2	0.3	-0.03	0.3
Illinois	1.5	1.0	0.3	0.2	0.8
Kansas	1.3	0.3	0.5	0.7	0.7
Minnesota	1.4	1.1	0.7	0.5	1.0
Missouri	0.9	0.8	0.5	0.5	0.7
Nebraska	0.6	0.5	0.6	0.6	0.6
North Dakota	0.2	-0.2	0.6	1.2	0.3
South Dakota	0.4	-0.2	0.4	0.5	0.2
Wisconsin	1.4	1.1	0.6	0.3	1.0
U.S.	1.7	1.3	1.1	1.0	1.3

SOURCE: U.S. Bureau of the Census, Statistical Abstract of the United States: 1986 (106th edition), Washington, D.C.

nonmetro areas. This clearly points out the dual nature of the Iowa economy, with the larger metro centers strongly outperforming the nonmetro areas. Illinois' performance is only slightly better than Iowa's. The growth rates of other midwestern states, for both metro and nonmetro portions, were more in line with the U.S. averages.

Iowa's rate of population growth for the period 1950-84 averaged only 0.3 percent per year compared to the national average of 1.3 percent. Iowa's population growth rate has been about the same as the North Dakota and South Dakota rates, two rural states with population bases of less than one million (Table V-6). Iowa's growth rate in nonfarm employment exceeded its population growth rate because of the exodus of workers from agriculture and the increasing participation of women in the labor force.

Iowa's slow rate of population growth reflects a high rate of population outmigration. Net migration over the decade of the 1950s, 1960s, and 1970s

Table V-7

Net Population Migration, Iowa
1950-1985

	Net Migration
1950-60	-233,000
1960-70	-184,000
1970-80	-61,000
1980-85	-120,000

was -233,000, -184,000, and -61,000. Net migration was negative even in the 1970s, when Iowa nonfarm employment was growing well relative to the nation. The sharp downturn in the economy and contraction of employment has produced -120,000 net migration for the years 1980-85. This rate of net migration is about the same as occurred during the major rural to urban migration of the 1950s and 1960s.

Over time, capital and labor resources tend to move in a manner consistent with interregional equalization of occupational real earnings and rates of return to capital. When the rate of earnings to labor and capital differs between regions, capital and labor movements tend to flow in opposite directions--capital to the low wage regions and labor to the high wage regions. This process tends to work for a convergence of real earnings. Over the years, earnings in the high income regions of the Northeast, Great Lakes, and Far West have moved downward toward the national average and the earnings of the low income regions have moved upward toward the national average.

Iowa's high population net migration is part of this national growth process. Iowans have moved to the more rapidly growing regions which were generating more job opportunities and to where real earnings were higher. Iowa's dedication to quality education for its population has played a significant role in this by providing the population with the education and job skills to compete in the national labor market.

3. Rural-urban population change

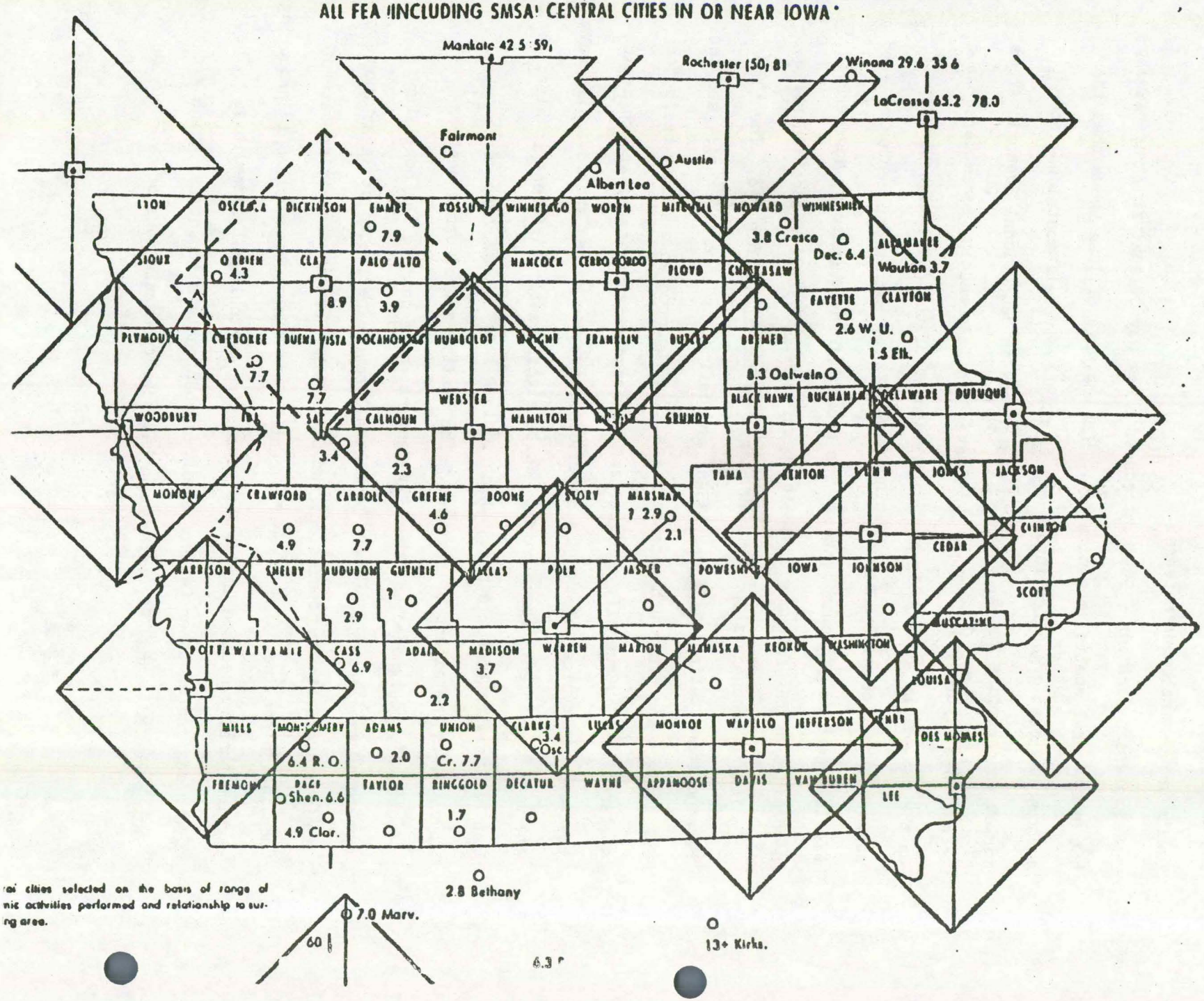
The transition of Iowa from a rural to an urban society has had, and will continue to have, profound changes upon the locational pattern of population and economic activity. Economies of scale in production of goods and services in both the private and public sector have been a dominant force in the growth of Iowa's urban areas. Iowa's road and highway system and the willingness of

the population to travel to work and to shop have had a strong influence on Iowa's urban settlement pattern.

Professor Karl Fox (1969) introduced a new way of analyzing and viewing the urban-rural spatial organization. His analysis of Iowa shows that the economy has been organized into a set of relatively self-contained labor market and shopping areas, which he designates as "Functional Economic Areas" (FEAs) (See Figure V-1). These FEAs have 50 mile commuting perimeters based on the use of the automobile and a willingness of the population to spend about one hour commuting to work and to shop. The main urban center of each FEA is viewed as a growth center. The growth of these centers, however, is determined by the fortunes of their specific set of local export industries.

Iowa's urban-rural population change is shown in Table V-8. The Metropolitan Statistical Areas (MSAs) are defined on a county basis, and the FEA centers and other urban centers are also reported on a county basis for comparability. Generally a higher and more consistent rate of growth decade-to-decade is typical of the MSA urban centers. Des Moines and Iowa City have the most consistent growth rates. While significantly different in size, both are cities with economic bases which include large and growing sectors involved in the export of services. The smaller set of urban centers (counties), designated as Other FEA Centers, have not had the consistent growth of the larger centers. In fact all have experienced at least two periods of declining population, and Ottumwa has had an increasing rate of population decline. The other FEA centers are basically involved in producing agriculturally related inputs and processing agricultural commodities. The group designated Other Centers include urban centers (counties) which are tied into other MSAs and FEA centers and have county populations of over 40,000.

FIGURE V-1 50-MILE COMMUTING DISTANCES FROM THE CENTRAL BUSINESS DISTRICTS OF ALL FEA (INCLUDING SMSA) CENTRAL CITIES IN OR NEAR IOWA*



rai cities selected on the basis of range of nic activities performed and relationship to sur- ng area.

Table V-8

Population and Population Growth Rates of Iowa Counties, Classified as MSAs, FEA, Other Centers, and Other Counties, 1950-85

County Classification	1950	1960	1970	1980	1985
MSAs:					
Cedar Rapids	104,274	136,899	163,213	169,775	167,600
Council Bluffs	69,682	83,203	86,992	86,561	87,800
Des Moines	267,429	311,267	339,647	367,561	372,000
Dubuque	71,337	80,048	90,609	93,745	93,000
Iowa City	45,756	53,663	72,127	81,717	81,900
Davenport/Bettendorf	100,698	119,067	142,687	160,022	159,200
Sioux City	103,917	107,849	103,052	100,884	99,300
Waterloo	119,332	142,590	155,653	162,781	157,500
Total MSAs	882,425	1,035,485	1,153,979	1,223,046	1,218,300
OTHER FEA CENTERS:					
Burlington	42,056	44,605	46,982	46,203	44,600
Fort Dodge	44,241	47,810	48,391	45,953	42,900
Mason City	46,053	49,894	49,223	48,458	47,800
Ottumwa	47,397	46,126	42,149	40,241	38,800
Spencer	18,103	18,504	18,464	19,576	18,700
Total Other FEA Centers	197,850	206,939	205,209	200,431	192,800
OTHER CENTERS:					
Ames	44,294	49,327	62,783	72,326	71,400
Clinton	49,664	55,060	56,749	57,122	55,000
Fort Madison/Keokuk	43,102	44,207	42,996	43,106	41,900
Marshalltown	35,611	37,984	41,076	41,652	40,900
Muscatine	32,148	33,840	37,181	40,436	42,100
Total Other Centers	204,819	220,418	240,785	254,642	251,300
OTHER COUNTIES	1,335,979	1,294,695	1,225,395	1,235,689	1,221,600
TOTAL IOWA	2,621,073	2,757,537	2,825,468	2,913,808	2,884,000

(continued next page)

Table V-8 (cont.)

ANNUAL RATES OF POPULATION CHANGE (IN PERCENT)

	1950-60	1960-70	1970-80	1980-85
MSAs:				
Cedar Rapids	1.8	1.8	0.4	-0.3
Council Bluffs	1 8	0.5	-0.1	0.3
Des Moines	1.5	0.9	0.8	0.2
Dubuque	1.2	1.2	0.3	-0.2
Iowa City	1.6	3.0	1.3	0.1
Davenport/Bettendorf	1.7	1.8	1.2	-0.1
Sioux City	0.4	-0.5	-0.2	-0.3
Waterloo	1.9	0.8	0.5	-0.7
Total MSAs	1.6	1.1	0.6	-0.1
OTHER FEA CENTERS:				
Burlington	0.6	0.5	-0.2	-0.7
Fort Dodge	0.8	0.1	-0.5	-1.4
Mason City	0.8	-0.1	-0.2	-0.3
Ottumwa	-0.3	-0.9	-0.5	-0.7
Spencer	0.2	-0.02	-0.6	-0.9
Total Other FEA Centers	0.5	-0.1	-0.2	-0.8
OTHER CENTERS:				
Ames	1.1	2.4	1.4	-0.3
Clinton	1.0	0.3	0.1	-0.8
Fort Madison/Keokuk	0.3	-0.3	0.03	-0.6
Marshalltown	0.6	0.8	0.1	-0.4
Muscatine	0.5	0.9	0.8	0.8
Total Other Centers	0.7	0.9	0.6	-0.3
OTHER COUNTIES	-0.3	-0.5	0.1	-0.2
TOTAL IOWA	0.5	0.2	0.3	-0.2

MSAs, FEA Centers, and Other Centers are defined according to the county in which the city lies.
The Des Moines MSA includes Polk, Warren, and Dallas counties.
The Waterloo MSA includes Black Hawk and Bremer counties.
1985 values are estimates by the U.S. Census Bureau for July 1, 1985.
All other values are from decennial censuses by the U.S. Census Bureau for April 1 of the given year.

SOURCES: 1980 Census of Population: Vol. 17 - Characteristics of the Population, Part 17 - Iowa; Provisional Estimates of the Population for Iowa: 1985, IPP - Iowa Census Data Center Program.

The population of these counties has grown more consistently than the other FEA centers.

The Other Counties classification includes the rural counties and clearly shows the declining population trend for counties without a fairly large urban center. The deceleration of the rural to urban shift is evident from comparison of the growth rate of the Other Counties group with the total Iowa population growth over time. Also, the rate of decline in population in the rural Other Counties group has been decreasing over time.

Population migration tends to be age selective. As each new generation enters the labor force many migrate to where they can find employment. Metro areas grow as a result of rural to urban migration as well as from natural increase. Since migrants are predominantly young, metro centers have younger populations than declining rural areas. Table V-9 shows Iowa's metro areas have more population in the 0 to 40 age cohorts, while the nonmetro areas have a larger distribution of their population in the over 50 age group. Iowa's population over 60 has continued to increase since 1960 (from 16.4 to 17.9 percent), but this group has increased even more at the national level (from 13.2 to 15.7 percent). Therefore, outmigration is not leaving Iowa with an increasingly aged population. However, the rural to urban migration within the state continues to leave a concentration of elderly in the nonmetro areas.

B. National and International trends

Iowa's economic growth is influenced by national and international economic conditions. This section discusses the main trends and events that have influenced Iowa's economy and the trends that will influence its future growth.

1. International trends

During the 1970s, growing international trade greatly influenced the Iowa and national economies. The foreign exchange value of the dollar fell 1973

Table V-9

Age Distribution of Population, U.S. and Iowa

Age Group	U.S.		Iowa			
	1960	1980	1960	1980	Metro 1980	Nonmetro 1980
Under 10 years	21.76	14.59	21.72	14.85	15.17	14.63
10-19 Years	16.73	17.40	16.75	17.48	17.80	17.27
20-29 Years	12.08	18.03	11.14	17.68	19.97	16.15
30-39 Years	13.62	13.92	12.16	12.60	13.84	11.78
40-49 Years	12.54	10.05	11.69	9.51	9.57	9.46
50-59 Years	10.06	10.30	10.16	10.01	9.47	10.38
60-69 Years	7.47	8.33	8.66	8.61	7.24	9.56
70-79 Years	4.35	5.12	5.62	5.90	4.56	6.80
Over 80 Years	1.40	2.28	2.11	3.35	2.41	3.98

SOURCE: 1980 Census of Population: Vol. I - Characteristics of the Population, Part 1 - U.S. Summary, Part 17 - Iowa.

through 1980 and the value of U.S. exports grew at an annual rate of 16.7 percent per year (Table V-10). The value of exports of foods, feeds, and beverages grew faster than any other category at an annual rate of 18.4 percent over the 1970-81 period. Food shortages in many parts of the world coupled with sharply increasing incomes in the oil producing and other commodity producing nations increased demand for U.S. grain and food products. Prices of Iowa corn and soybeans more than doubled from their pre-1970s levels. Iowa also benefited as exports in other sectors, particularly capital goods from the nonelectrical machinery sector, expanded during the 1970-81 period.

The value of U.S. exports peaked in 1981 and began to decline as a result of U.S. monetary policy which sharply increased interest rates and increased the value of the dollar on the foreign exchange market. From 1981-83 the value of U.S. exports declined by 7.3 percent per year. The increasing foreign exchange value of the dollar, sharp increases in the production of grains in many parts of the world in response to the high prices of the 1970s, and decreases in the income of the less developed nations as their economies went into recession combined to sharply reduce U.S. exports of foods, feeds, and beverages from the $37.9 billion level in 1981 to $24.0 billion in 1985. This had a devastating impact on the exports of U.S. grain and the dominant exporting states such as Iowa.

Growing international trade may favorably or unfavorably affect states involved in exports. Iowa's economy performed poorly over the 1981-85 period in part because of the decline in exports of foods and feeds. In contrast, states that are heavily involved in military goods production benefited from the strong growth in exports of those goods during the 1983-85 recovery.

Table V-10

U.S. Exports of Goods, 1970-85

	1970	1981	1983	1985
Exports of Goods (Billions of Dollars)	42.7	233.5	200.7	219.6
Foods, Feeds, and Beverages	5.9	37.9	30.9	24.0
Industrial Supplies and Materials	13.7	67.3	56.5	58.4
Capital Goods	14.4	80.2	67.2	75.7
Automative Vehicles and Parts	3.7	18.4	17.0	24.5
Consumer Goods	2.7	15.9	13.4	13.0
Military Goods and Re exports	2.9	14.1	15.4	24.1
Annual Rate of Change (Percent)		1970-81	1981-83	1983-85
Exports of Goods		16.7	-7.3	4.5
Foods, Feeds, and Beverages		18.4	-9.7	-11.9
Industrial Supplies and Materials		15.6	-8.4	1.7
Capital Goods		16.9	-8.5	6.1
Automotive Vehicles and Parts		15.7	-3.9	20.0
Consumer Goods		17.5	-8.2	-1.5
Military Goods and Re exports		15.5	4.5	25.1

SOURCE: Data Resources, Inc., U.S. Long-Term Review, Winter 1984-85.
Data Resources, Inc., Review of the U.S. Economy, August 1986.

Recent evidence on international grain production indicates that the 18.4 percent annual rate of growth in U.S. exports of the 1970s will not be attainable over the next decade. Expansion of grain production in other parts of the world, such as soybeans in Brazil and corn in China, will continue to hold down the rate of growth of U.S. grain exports.

Similarly, new manufacturing production capacity in nations with low labor costs will have a significant impact on production in many of the U.S. manufacturing sectors. In particular, production of steel, textiles, apparel, and leather goods is shifting to countries with lower wages.

Shifts in production to the countries with lower wages will require adjustments not only by U.S. producers, but also by U.S. manufacturing workers. U.S. producers must respond to competitive forces by reducing costs either through substituting capital for labor, or reducing wages, or both. International competition will undoubtedly play a major role in curtailing the expansion of U.S. jobs in manufacturing and in holding down the rate of increase in manufacturing wages.

2. National trends

Iowa's future growth in population, employment, and income will be shaped in large part by national economic growth and change. Data Resources, Inc. recently forecast real GNP growth at an annual rate averaging 2.5 percent to the year 2000, significantly less than the 3.3 percent growth rate from 1960-80. Nonfarm employment is forecast to grow at an average annual rate of 1.4 percent through the year 2000.

Iowa's sharing in national growth will be strongly influenced by regional population growth and the growth of the various industrial sectors of the economy. The growth of employment in an industrial sector is determined by the rate of increase in demand for the goods and services produced by the

sector and the rate of increase in labor productivity (rate of increase in output per worker). Demand for the output of a sector is driven by increases in population and income. For example, in the farm sector output per worker has been increasing at a rate of about 5 percent per year. Demand for agricultural commodities increases at a rate of about 2 percent per year. Accordingly, the agricultural sector can meet its demand with about 3 percent fewer workers each year. The trend in farm employment will be -3 percent per year. The employment trend in mining is similarly negative. For the manufacturing sector, the growth in productivity will about match the growth in demand yielding no trend in employment: there will be a constant number of manufacturing jobs to the year 2000. For the service and government sectors, strong positive trends imply an increase of about 22.5 million new jobs (See Table V-2). These forecast trends are essentially a continuation of past trends. Manufacturing employment increased by only 2.63 million workers over the 1960-85 peiod, while employment in the service sector and government increased by 40.9 million workers. Manufacturing's share of total employment has declined from about 35 percent in 1950 to its present level of about 20 percent. It is expected to decline to a level of about 16 percent by the year 2000.

Taking account of these expected employment trends, nonfarm employment will increase by about 20 million workers between 1985 and 2000 (See Table V-2). How will this employment increase be distributed among states and regions? Given that the major share of the employment growth will be in the service sectors, employment growth will to an important extent follow population growth. Population growth over the past decade and a half has been greatest in the West and the South, where population grew at annual rates of 2.3 and 1.8 percent, respectively. The North East and North Central regions

grew at only 0.3 and 0.7 percent, respectively, for this same period. Barnard and Krautmann (1986) show that growth within regions was spread rather evenly across all sizes of the metro areas.

Combining the strong growth trend in the service sectors with regional growth trends gives us an indication of where the strongest population and employment growth may be expected to take place to the year 2000. These trends indicate that the fast growing regions, the South and West, are likely to continue to lead in regional growth. However, rising prices for labor, land, housing, and other factors in the fast growing regions and metro areas will tend to dampen their growth relative to slower growing regions.

C. Iowa's advantages and weaknesses

Each state's economic growth depends on its existing resource base: population (its stock of human capital), the stocks of private and public capital, natural resources (climate, land, water air, etc.). It will also depend on locational factors and how the state is linked to regional, national, and international markets. Resources and locational advantages and disadvantages vary greatly among places, and they change with time as income and population grow, as population shifts, and as tastes and technology change.

From an economic development perspective, Iowa possesses a number of strengths:

- A well educated population and productive labor force.
  A top rated primary and secondary education system.
- An excellent public university system with its two largest universities ranking in the top 50 research universities in the nation.
- Excellent land resources and a productive agricultural sector.

- Many major national firms operate within the state.
- Good transportation linkages to national and regional population and market centers.
- Good access to inputs from the Great Lakes industrial belt.
- Good access to regional, national, and international markets for selected goods and services.
- A reputation for good state and local government.

In short, Iowa appears relatively well endowed with quality resources and a set of firms that find the state a profitable location.

Why then doesn't the state grow faster? The answer, of course, is that there are negatives that weigh against these plusses. Iowa's principal weakness is its current industry mix, which is dominated by agriculture and agriculture-related industry. Iowa also is disadvantaged by not having a large population center and by the fact that a relatively large fraction of its population still lives in rural areas and small towns.

D. Business climate and image

A number of private firms issue business climate reports and do business climate surveys for clients. Basically, these studies attempt to rank states, cities, and/or regions on the basis of factors that affect business costs. Among the factors considered in the ranking are business tax rates, personal tax rates, levels of total state government expenditures and taxation, population change, utility rates, environmental policy, labor costs, labor unionization, work stoppages, unemployment compensation benefits, quantity and quality of the labor force, crime rates, quality of universities and schools, and others.

Business climate is often confused with locational advantage and growth potential. They are in fact different concepts. Locational advantage and

growth potential depend on access to inputs and national and international markets. A given location can have an excellent business climate, measured by the factors noted above, and yet be a poor location for many types of business activity because it has poor access to inputs and/or markets.

Expected costs and profits at alternative locations which play a key role in the location decision of firms depend on many factors. It is also well documented that location decisions are influenced by personal factors, such as the quality of life available in a community. Thus, location decisions are difficult and complex. To attempt to capture all concerns in a single index is to greatly over-simplify the business location process.

Recently a Chicago firm, Grant Thornton (1986), released its annual manufacturing business climate ranking of the 48 contiguous states. The Thornton report ranks states on the basis of 22 factors that influence business costs such as state-regulated employment costs, labor costs, utility costs, environmental costs, etc. In this most recent report, Iowa ranked in the second quartile of the states with the most favorable manufacturing climate.

Although the Thornton study has been widely publicized and quoted, it has limited value as an indicator of the relative desirability of the various states as business locations. One reason is that important factors, most notably access to markets, are not included in the index. Another is that the weights assigned to various factors may not be in line with the relative importance of those factors to a particular business or industry group. For example, if a state has a good score on work stoppages and that factor is heavily weighted relative to energy costs, then the state will score well. But in the case of specific firms, energy costs may be of more importance. At best the study provides only a partial picture of how states differ in factors

that are important to business. We cannot conclude from it that there will be major (or any) shifts of manufacturing plants to states with the most favorable business climate.

The limitations of the study are well illustrated by considering the prospects for the Thornton report's top ranking state, South Dakota, and its bottom ranking state, Michigan. Although South Dakota scores well on the cost factors considered, it is locationally remote from the major industrial and population centers. Thus, it has poor access to inputs and to markets. Michigan, on the other hand, has good access to inputs and markets, despite its poor score on the business conditions index. Accordingly, there is little reason to expect that there will be a major decline in the outlook for manufacturing in Michigan relative to South Dakota.

Under contract to the Iowa Development Commission, Frank N. Magid Associates, Inc. interviewed corporate business executives about their perceptions of Iowa as a place for businesses to locate. While the report provides interesting and suggestive information, caution must be used in drawing generalizations about Iowa's image from the relatively small and non-random sample of the Magid study. To obtain information with any degree of statistical reliability would require a larger, more costly survey.

E. Prospects for growth

To accurately analyze the future prospects for Iowa's economy as well as its recovery from the last recession requires dividing the economy into its farm and agriculture-related industries and the sectors not closely related to agriculture. The sectors not related to agriculture turned around about the same time as the national economy and have performed about the same as the national economy to date. However, in the farm and related sectors, the decline is still taking place. Farm commodity prices for grains have trended

downward for three years. Cash prices are expected to stand at early 1970s levels this fall at harvest time.

The capacity adjustments and financial restructuring currently occurring in the farm and agricultural related sectors are permanent rather than a cyclical phenomena, necessitated by the build up of excess debt and capacity during the inflationary boom of the 1970s. Farmland prices are falling and farm firms with excessive debt contracted under the high prices of the 1970s and early 1980s are being foreclosed. Banks with large farm loan portfolios are failing. Farm machinery manufacturers have merged and shed a significant amount of excess capacity. Farm machinery retail distributorships in the small towns have similarly been consolidated.

A key question is, "When will the turn-around in agriculture come?" Any answer to this question will be speculative. But short of a major weather problem in the world that reduces supplies and increases demand for U.S. farm commodities, it could take another three to five years to clear up the financial problems of farm firms, get farmland that has reverted to banks in foreclosure back into private ownership, and reduce the excessive inventories of commodities. Federal government commodity programs continue to dominate production decisions of the major crops and the dairy sector. Therefore, the future of Iowa agriculture and the timing of any turnaround will likely be determined by farm policy. It will also be influenced by monetary and fiscal policy of the U.S. and its major trading partners.

At present, the best news for the farm sector is that low commodity prices and a depreciating dollar are expected to increase exports of U.S. farm commodities over the next two to three years. Also, it is likely that the federal government will continue to try to find effective supply controls and to support commodity prices. For farm firms with a sound balance sheet, the

prospects are favorable. However, farm programs that reduce output may have adverse impacts on farm input suppliers, as did the large acreage diversions of the 1983 Payment-In-Kind program. On balance, farming and agricultural related business continue to face depressed conditions for the next several years. Beyond that, recovery will depend on farm policy and growth of the U.S. and world economies.

Growth of Iowa's nonfarm sectors will be determined by the national growth of those sectors and whether Iowa's share of those sectors increases or decreases. Since national employment in the composite manufacturing sector is forecast to decline slightly, 0.1 percent per year over the 1985-2000 period, Iowa's manufacturing employment can be expected to decline slightly even if it maintains its share of national employment. Also, Iowa's manufacturing employment as a percent of total Iowa employment will contine to decrease as it has since 1970.

Although U.S. manufacturing employment will probably show no growth through the year 2000, there will be employment shifts within the composite manufacturing sector and regions and states. Data Resources, Inc. has forecast national employment for the major sectors of manufacturing to the year 2000. Food and kindred products, tobacco products, textiles and apparel, chemicals, leather and products, and transportation equipment sectors have a declining employment trend over the 1985-2000 period. This suggests that Iowa's large food and kindred products sector, which has had declining employment in recent years, will probably continue to decline as increases in productivity run ahead of increases in demand for the output of the sector. DRI forecasts an increase in employment for the printing and publishing, non-electrical machinery, and instruments and parts sectors. Iowa's printing and publishing sector has been growing steadily in recent years and can be

expected to continue. While an employment increase of 463,000 workers is forecast for the nation's non-electrical machinery sector, Iowa's non-electrical machinery sector consists mainly of farm and construction machinery manufacturing, cannot be expected to show much growth. Thus, overall Iowa has manufacturing sectors which will likely require fewer workers and sectors which will require more workers, but on balance manufacturing employment will remain about constant.

What are Iowa's prospects for employment growth in the expanding service sector? Since a large part of this sector serves local markets, employment gains in the service sector will occur predominately where population is growing. Projections are for the regions of the South, the West, and New England to continue to have the fastest population growth. Accordingly, they will get a large share of the national expansion in services employment.

However, there will be opportunities for Iowa to participate in the expansion of services that have a national market, such as in finance, insurance, and real estate, transportation, communications, electric utilities, and professional services. Iowa has firms, health care institutions, and universities involved in producing for export in the service sectors. Economic development efforts have traditionally focused on manufacturing firms, but there is strong reason to shift the effort to include these sectors, for they tend to offer the fastest growing markets.

In summary, there is little prospect of growth in Iowa manufacturing employment. International competition and increases in labor productivity will keep the national trend in manufacturing employment flat. There is little reason to expect Iowa will be able to increase its share of national manufacturing employment given the intense competition among states for manufacturing jobs.

The outlook for employment growth in the service sector for Iowa is promising. Iowa per capita income, especially in the metro areas, will grow at about the same rate as at the national level. This will provide increased demand for services and employment growth from the local population. Prospects for Iowa service sector firms that can produce for the national market are promising. Even so, growth in Iowa service employment will lag the national rate because of Iowa's relatively slow population growth, since many service sector jobs follow population growth.

Overall, Iowa's employment growth rate will fall short of the national rate. With employment expected to grow at the national level at a rate of about 1.4 percent per year to the year 2000, Iowa might expect a growth rate more in line with the 1 percent per year which occurred in the 1950s. The 2.7 and 2.8 percent growth rates of the 1960s and 1970s will likely not be possible. These trends for the U.S. and Iowa are depicted in Figure V-2. It should be recognized that this is not a pessimistic assessment. The years 1965 to 1979 when Iowa employment growth kept pace with the national growth were exceptions to Iowa's long-run experience.

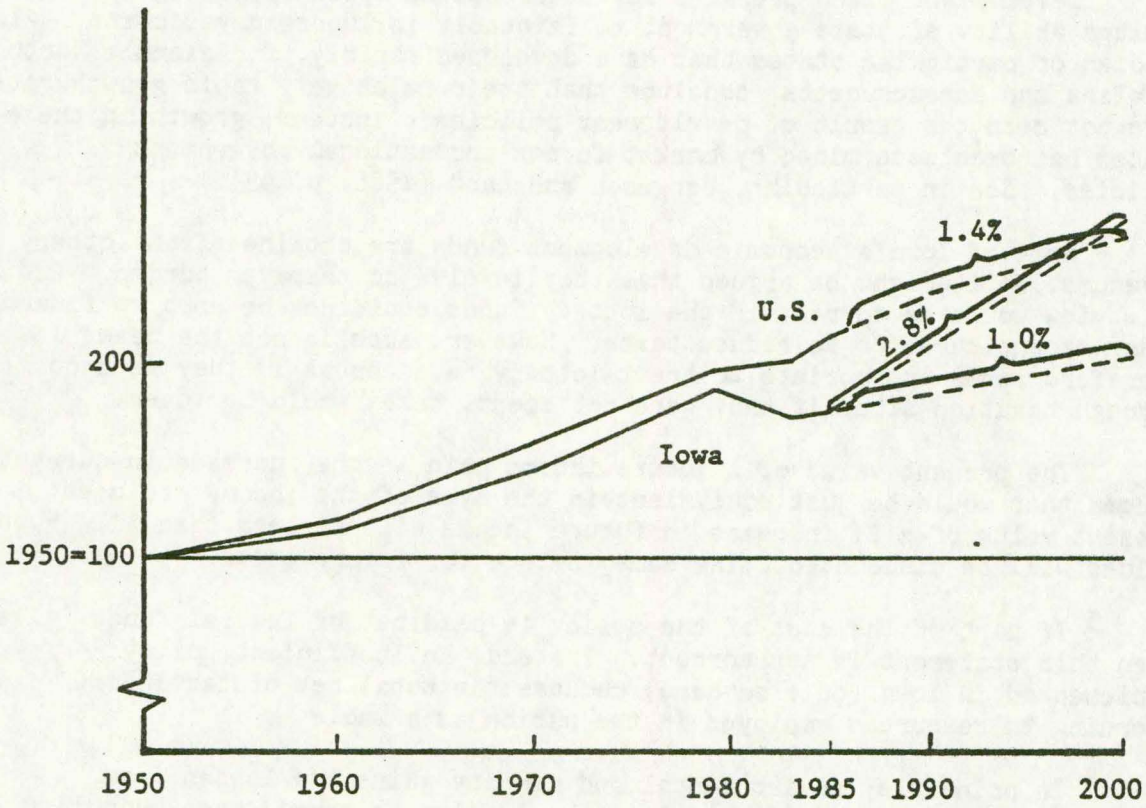


Figure V-2

Index of Nonfarm Employment Change,
Iowa and the U.S.
(1950=100)

Footnotes

[1] Although the recession of 1982-83 hit Iowa particularly hard and the farm economy remains depressed, it is not fair to say that the economy needs to be "rebuilt" as the title to the Garfield Schwartz report suggests. Such terminology creates and perpetuates a false impression and image of the state.

[2] Development plans prepared for other states typically recognize the limited ability of state government to favorably influence development. Also, studies of particular states that have developed rapidly, for example North Carolina and Massachusetts, conclude that their relatively rapid growth rates have not been the result of development policies. Instead, growth in these states has been determined by market forces and national government policies. See in particular, Ferguson and Ladd (1986, p. 43).

[3] Some of Iowa's economic development funds are obtained from lottery revenues, so it might be argued that they involve no taxpayer burden. And this view would be correct if the lottery funds could not be used to finance other expenditures or to reduce taxes. However, such is not the case; it therefore seems appropriate to treat lottery revenues as if they were obtained through taxation since if they were not spent, taxes would be lower.

[4] The present value of a future income gain is the increase in current income that would be just equivalent in the eyes of the income recipient. The present value of a $1 increase in future income will be less than $1. Future values will be discounted. The same is true for future costs.

[5] If part of the cost of the policy is paid out of federal funds (taxes) then this statement is not correct. Instead, an inefficient policy implemented in Iowa (or elsewhere) reduces the total net of tax income accruing to resources employed in the nation as a whole.

[6] In principle, environmental and amenity gains and losses from attracting economic activity to Iowa should also be considered. A policy that attracts business and raises incomes by more than it costs may nevertheless make Iowans worse off if it causes sufficient environmental damage.

[7] The value of the subsidy provided to the business, whether in cash or in services, should not be counted as part of the increase in income brought about by the location of the business in Iowa. The subsidy does not add to the income of the recipient; it merely compensates for the higher costs associated with the Iowa location.

[8] This willingness to pay may be less than the income gains that accrue to workers if they have to work harder or longer hours. For example, suppose the location of a business in Iowa means that some previously unemployed workers would earn $200 per week. The maximum that those workers would be willing to pay to attract the business to Iowa would likely be positive but less than their full income gain ($200 per week).

[9] For further discussion see Appendix A, which is taken from a paper prepared for this project by Professor David B. Lawrence of Drake University, entitled "Financial Intermediation for Economic Development: Institutions, Issues, and Options."

[10] The efficiency criterion is equally applicable to all infrastructure investments--those that would serve a newly attracted business or a business considering leaving for another state, as well as those that serve only businesses and households that are firmly rooted in Iowa.

[11] Impact fees as a means of allocating the local costs of infrastructure improvements are becoming commonplace nationally. These fees are imposed on developers to defray the infrastructure costs generated by a development. Impact fees can be levied in the form of a tax on such things as square footage or vehicle trips generated. Typically, payment of the impact fee is a condition for construction of the development to begin.

[12] It should be noted that only motor fuel tax and registration fee revenues are being examined here. The RUTF also derives revenue from the motor vehicle use tax (the 4 percent sales tax applied to vehicles) and driver license fees. These two types of revenue sources do not lend themselves to allocation to the three road systems. Motor fuel taxes and registration fees together account for 79.8 percent of state RUTF revenues.

[13] There could be some ncrease in employment without an increase n demand for products if the incentives result in lower salaries for Iowa college graduates. Iowa graduates might lower the salary they would accept for working in Iowa in order to take advantage of the tax credit, tuition rebate, or forgiven loan. if they did, employers might employ a few more graduates in total. But the overall effect on employment seems likely to be weak to non-existent.

[14] It is worth noting that the strategic plan developed for Michigan stresses the likely shift to a smaller, better educated work force in manufacturing. The Michigan report emphasizes the importance of the human resources needed to attract higher technology manufacturing.

[15] Governor's Economy Committee '79: Findings and Recommendations, Des Moines, Iowa, 1979. Peat Marwick, Inc., Report on Reorganization of the Executive Branch, December 1985.

[16] Robert Wessel and Dan Muhwezi, "The Cost of County Government in Iowa," submitted to Office of Planning and Programming, November 1984.

[18] Barnard and Kennedy (1986) have analyzed the changing response of the Iowa economy to the national business cycle. Iowa nonfarm income and employment are now more sensitive to national cyclical variables, such as the interest rate and industrial production shocks, than in the 1950s and 1960s. They measured the response of Iowa nonfarm employment to shocks from the interest rate for three specified periods. For the 1969-83 period, the response of Iowa nonfarm employment to an interest rate shock was much greater and it took about three years for employment to recover to trend.

References

Balderston, Kris M., "Plant Closings, Layoffs, and Worker Readjustment: The State's Response to Economic Change," National Governor's Association, Center for Policy Research and Analysis, July 1986.

Barnard, Jerald R. and Warren J. Boe (1984), The Economic Contribution of a Large University: A Study of the University of Iowa. The Institute of Economic Research, The University of Iowa, Iowa City, Iowa, January.

Barnard, Jerald R. and James E. Kennedy (1984), "A Method of Analyzing The Changing Impact of the Business Cycle on Regional Economics," The Institute for Economic Research, The University of Iowa, Iowa City, Iowa, October.

Barnard, Jerald R. and Antony C. Krautmann (1986), "Population Growth Among U.S. Regions and SMSAs: A Test for Causality," The Institute for Economic Research, The University of Iowa, Iowa City, Iowa, April.

Bretzfelder, Robert B. (1973), "Sensitivity of State on Regional Income to National Business Cycles," Survey of Current Business, Vol. 53, No. 4, 23-33.

Briggs, Ronald (1980), The Impact of the Interstate System on Non-Metropolitan Growth, U.S. Department of Transportation, Washington, D.C.

Coleman, James S., et al. (1966), Equality of Educational Opportunity, U.S. Government Printing Office, Washington, D.C.

Committee for Iowa's Future Growth (1984), We Are Iowans First, Des Moines, Iowa, December.

Ferguson, R. F. and H. F. Ladd, "Economic Performance and Economic Development Policy in Massachusetts," Discussion Paper D86-2, John F. Kennedy School of Government, Harvard University, Cambridge, Mass., 1986.

Forkenbrock, David J. (1985), An Analysis of Industrial Growth, Change, and Potential in Iowa, Iowa Department of Transportation, Ames, Iowa, September.

Fox, Karl A. (1969), "The New Synthesis of Rural and Urban Society in the United States," in Economic Problems of Agriculture in Industrial Societies, edited by Papi, Ugo and Nunn, Charles, St. Martins Press, New York, N.Y.

Grant Thornton, Accountants and Management Consultants (1986), General Manufacturing Climates of the Forty-eight Continguous States of America, Chicago, Illinois, June.

Hanson, Royce, editor (1983), Rethinking Urban Policy: Urban Development in an Advanced Economy. National Academy Press, Washington, D.C.

Iowa Department of Transportation (1980), The Iowa Primary Road System: Requirements for System Preservation and Uniform Service Improvements for the Next Ten Years and Funding Requirements, Ames, Iowa.

Iowa Department of Transportation (1982), A Study to Determine Alternative Primary and Secondary Road System Size, Ames, Iowa, January 29.

Lawrence, David B., "Financial Intermediation for Economic Development: Institutions, Issues, Options," Drake University, August, 1986.

Magid, Frank N., Associates, Inc. Summary Report for Iowa Development Study, March 1986, Cedar Rapids, Iowa.

Nourse, H. O. (1968), Regional Economics, McGraw-Hill Book Company, New York, N.Y.

Report of the Governor's Blue Ribbon Transportation Task Force (1982), Des Moines, Iowa, December.

The Path to Prosperity: The Findings and Recommendations of the Task Force for a Long Term Economic Strategy for Michigan, November, 1984.

Appendix A

The Interstate Banking Issue

In the United States, banks are subject to regulation by both federal and state governments. Under this dual regulatory system, a state has the right to limit the geographic expansion of banks and bank offices. In Iowa, banks can open offices only within their own county and any contiguous county. In-state bank holding companies (companies having control of at least one bank) are allowed, with regulatory approval, to purchase and control banks anywhere in the state. However, out-of-state bank holding companies are not allowed to buy in-state banks or bank holding companies. The only exception to this is the Minnesota-based holding company Norwest, which had a presence in Iowa prior to the passage of the key legislation on this matter, the Bank Holding Company Act of 1956.

Several forms of interstate banking can and do currently exist in Iowa. Although out-of-state banking organizations cannot own banks here, they certainly can make loans to individuals and businesses in this state. Also, with regulatory approval, an out-of-state banking organization can buy failed in-state Savings and Loans. Furthermore, with satisfaction of the Change in Bank Control Act of 1978, an out-of-state individual can purchase and control an in-state bank.

The largest bank holding company in Iowa, Banks of Iowa, has sold itself to First Bank Systems Inc. of Minneapolis, conditional on the passage of a law in Iowa making it legal. The General Assembly has several times failed to pass such a law. In addition, the former United Central Bancshares has franchised itself with First Interstate, a large western bank holding company, but this is not an agreement to sell in the event of appropriate legislation.

Iowa banks are criticized for their relatively low loan-to-deposit ratios, implying that Iowa banks are exporting capital excessively and not meeting community needs. They are criticized for not providing venture capital. The banking system as currently constituted is criticized for having many small banks that lack access to worldwide credit markets, fail to provide modern services for their customers, and have little capability and willingness to make loans to new, small, or non-traditional businesses.

Iowa bankers respond to these criticisms in the following ways. First, the low loan-to-deposit ratios are the result of the prolonged agricultural deflation and the lack of qualified borrowers. In fact, the banks being far from loaned up means there is a great source of potential credit waiting for qualified projects. Second, banks are not and never have been venture capital institutions. Banking is a highly leveraged business; it does not take very many laon losses to wipe out the net worth of the institution. Since banks are prohibited by law from taking equity positions and hence do not have the chance to receive large up-side benefits, those who advocate loans to risky new businesses are advocating unsound banking practices. Third, Iowa banks do have access to worldwide credit markets. The larger Iowa banks can borrow at rates very nearly the same as the largest worldwide banking organizations. The smaller banks have MASI,* and hence access to Rabobank, one of the largest banks in the world. Finally, Iowa bankers point proudly to the Iowa Transfer System (ITS), the statewide electronic banking system. People come from all over the world to observe how ITS works. This is hardly indicative of a backward banking system.

Options

As of August, 1986, 28 states have passed some form of interstate banking legislation. As is typical in the dual banking system, the state regulations

are quite diverse. Iowa's choices can be summarized by the following six options, not all of which are mutually exclusive.

No change. Iowa could simply view what is going on in other states as an experiment from which to learn the best course of future action. Some argue this would cause Iowa to fall behind other states. One way of potentially stimulating competition without interstate banking is to permit unlimited branching in the state. There is substantial opposition even to this.

Solvency restrictions. Iowa could allow out-of-state banking organizations to purchase only institutions that have failed, or institutions that are failing, or put no restrictions on the solvency status of purchasable banks. One disadvantage of allowing failing banks as opposed to failed banks is that the definition of a failing bank is rather subjective.

Organizational restrictions. Iowa could allow the purchase of bank holding companies only, individual banks only, or put on no organizational restrictions. In some previous years, the legislation rejected by the General Assembly seemed designed only to ratify the sale of Banks of Iowa.

Form of entry restrictions. Out-of-state banking organizations could be allowed only de novo entry into Iowa banking markets, meaning they could only start new banks. Another alterntive would be to allow foothold entry, letting them buy only the smaller banks in a particular market. Even if Iowa put no restrictions on the form of entry, certain purchases could still be stopped under the antitrust laws.

Geographical restrictions. This is the most discussed interstate banking option. Many states have passed regional reciprocal legislation in which a region is defined within which the states make a compact to permit interstate purchases. The idea is to try to keep local control within regions having similar economies. However, there is talk in Congress of legislation forcing

the end of all regional reciprocal agreements after a period of time and opening up the system to nationwide interstate banking. This is called the 'trigger.' After the trigger is pulled, a state would have the choice of either allowing or not allowing geographically unrestricted interstate banking.

No restrictions. Under unrestricted interstate banking any in-state bank or banking organization that is for sale can be purchased by anyone. There would, of course, still be the constraints under the antitrust laws.

Consequences of unrestricted interstate banking

Iowa is surrounded by money center cities larger than Des Moines and Cedar Rapids. It is generally agreed that large interstate banking organizations want to buy institutions in Iowa. But it is incorrect to believe that the very purchase of a bank in Iowa would directly provide capital for economic development. The sale is merely a transfer of ownership of existing assets. If the selling price of a bank is increased because of interstate banking, the main result is to provide more funds for individuals who want to get out of the business, not in.

A reasonable question is why the large interstate organizations might wish to come to Iowa. It is unlikely they want to come here to make loans; they can already do that. More likely, they view Iowa as a stable source of relatively low cost demand deposit funds. Having already expanded their lending worldwide, continued growth in profits requires moving in new directions. Lowering the average cost of funds by gathering deposits nationwide is the next logical step.

In the Iowa banking markets the interstate banking organizations choose to enter, the quickest way to a substantial low cost deposit base is through commercial business (i.e., deposits from and loans to business). To obtain

lucrative commercial deposit accounts, a bank must service the credit needs of the business. We can expect interstate banking organizations to aggressively seek new commercial accounts in the markets they choose to enter. In this sense, at least in the short run, interstate banking would stimulate competition in the market for business loans and aid economic development. However, in the long run, after the competitive shake-out, where the loans from the deposits gathered in Iowa are made would depend upon worldwide economic conditions; financial capital would flow to its highest return use in the world. Opponents of interstate banking argue this loss of local focus would do long run damage to Iowa's economic development.

We can expect the bank holding companies in Iowa, especially the ones with presence in the urban areas, and the large independent banks in the bigger cities, to be the primary takeover targets for interstate banking oranizations. This strategy combines an immediate source of deposit supply with market access to the large commercial accounts.

There is little reason to believe large interstate banking organizations would have any interest in rural banks. These banks are mostly small and their markets are growing slowly, if at all. Since 1972, the in-state bank holding companies of Iowa and Missouri <u>have not purchased a bank</u> in 101 of the 177 rural (non-MSA) county banking markets of those two states. If the geographically limited in-state holding companies had little interest in the rural banking markets during some of agriculture's best times, unrestricted interstate organizations are not going to be interested now. In fact, bank holding companies are leaving rather than entering rural markets: Hawkeye Bancorporation is selling 17 banks in Iowa and First Bank System has 45 banks for sale in Minnesota.

Although not directly affecting the availability of funds in the state, interstate banking could have an impact upon economic development by making Iowa appear more attractive in business locational decisions. Certainly it would not have a negative effect, but the positive impetus is difficult to assess. Perhaps allowing interstate banking would make Iowa appear more progressive and pro-business. In addition, the proximity of large interstate banking organizations could generate enough economic savings in transportation and other costs of obtaining credit to turn a locational decision towards Iowa. However, it is difficult to see how rural economic development and the survival of the small towns and rural banks of Iowa are going to be affected one way or the other by interstate banking.

* MASI is a joint effort of the state bankers associations of several states to give community banks access to worldwide financial markets. MASI operates by facilitating the sale to Rabobank Nederland of participations in agriculturally related loans made by the originating banks. Participations can be sold on both operating and on certain real estate credit.