Staff Papers Series

P85-24 June 1985

REDIRECTING STATE ECONOMIC GROWTH

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Staff Papers are published without formal review within
the Department of Agricultural and Applied Economics

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Prepared for the 17th Annual Meeting of the Mid-Continent Regional Science Association, Duluth, Minnesota, June 6-8, 1985.

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1. INTRODUCTION

State and local governments actively participate in economic development efforts through their traditional powers of taxing, spending and regulating and, more recently, promoting industry expansion. They are now turning to various indirect methods of affecting business and household location decisions by stimulating private investment and building community infrastructure.

The principal purpose of this paper is to examine the expanding role of state and local governments in affecting private investment decisions and to explore its implications for state economic growth and development. Specific objectives are to review recent efforts of state and local governments in economic development; and to present alternative decision criteria for state and local government intervention in business and household location and investment decisions. These objectives address, also, the role of regional economic information and analysis in the design and assessment of state economic development strategy alternatives.

State economic development efforts to affect the location of economic activity stem, in part, from reduced federal expenditures for regional economic development. Also, recent shifts in the location of jobs, income and population, which are associated with state-to-state differences in the growth of gross state product and population, provide an additional impetus to the resurgence in state economic development activities (Maki, 1984).

The differential growth in value added (i.e., gross state product) less employee compensation sharply increased the capital financing leverage of industries in the South and West and, hence, their job-creating capabilities.

State governments in the above-average growth states also gained a population growth dividend because of rapid increases in taxable income and expenditures which momentarily, at least, exceeded the increases in state and local spending.

The continuing geographic shift in job-creating potential is accompanied by an increasing commitment of state and local governments to economic development as manifested by an expanding array of tax breaks. The new war between the states on tax breaks has escalated, in the opinion of some writers (Rosenberg, 1983), into a domestic arms race in which each state tries to demolish its tax base just a little more thoroughly than the next to attract new industry to build it back up. Kale (1984) has presented factual evidence showing how the tax incentives were prevasive in all states in the 1970's and how they are competitively increasing.

The mounting evidence thus points to a need for careful review of alternative forms of state and local government intervention in business and household location decisions. State and local governments perform functions that enhance resource productivity and reduce economic disparities between and within substate regions. This paper addresses the contrary notion, however, that much of current state and local economic development effort neither enhances resource productivity nor reduces economic disparities, particularly at the local level. Alternative approaches are presented, therefore, that are designed to reduce the public costs of excessive interstate and interurban competition for new industry and jobs.

2. JOB CREATION

Job creation is popularly viewed as a primary,if not the principal, purpose of state and local economic development efforts. (Beyers, Alvine, and Johnson, 1985). Each development approach, whether industry recruitment, plant modernization, or technology transfer, focuses on the acquisition of new

jobs and payroll in a particular region.

Industry Recruitment

Industry recruitment is "front page" exposure for a state economic development agency and its leadership. Business-specific tax breaks and "free" use of newly constructed public facilities are often the "carrots" of industry recruitment efforts while the fiction of cost-free job creation is the "stick" that drives its proponents to even greater concessions.

Economic development efforts in stimulating private investment undeservedly receive credit for job creation in the recovery and post-recovery states of the business cycle, particularly where industries are responding most sharply to changes in both national and local market conditions. In Minnesota, all of the recent growth in industry output and employment can be attributed directly or indirectly, to the above-average cylical sensitivity of its basic industries. The recovery stage of the business cycle lends itself to the most intense industry recruitment efforts.

During the recession stage, cyclically-sensitive, multi-establishment businesses reduce their fixed costs by consolidating operations, typically closing facilities at high-cost sites in the case of multi-establishment firms. Business terminations increase sharply for both single- and multi-establishment businesses. Much of the anticipated failures of nonfarm businesses in rural Minnesota, for example, is likely to occur in the next recession.

While tax breaks and other expenditures associated with industry recruitment efforts may be targeted by industry and place, the job creation strategies generally ignore systematic appraisal of their costs and benefits. Such an appraisal, as proposed here, would start by documenting public costs as well as private benefits. For job seekers, private benefits are manifested in new job openings and income-increasing job transfers, while tightening of

local labor markets is viewed as a private cost for already established local businesses and households. For state and local governments, growth in the tax base is viewed as a public benefit while the related growth in public expenditures becomes a public cost. Existence of excess capacity in the public sector would, of course, reduce the adverse effects of rapid industry expansion as would existence of excess capacity in the private sector. However, the "multiplier" effects of a new business would be reduced also, particularly if it shipped most of its output to out-of-state buyers, that is, if it were an export-producing business.

The clear distinction in the roles of export-producing and residentrary employment is well-recognized: one produces for an out-of-state market, the other for a local market. An export expansion strategy in industry recruitment focuses on export-producing business in the state while an import substitution strategy focuses on potentially export-producing businesses that currently function in the role of residentiary activities, that is, serving only local markets.

For one reason or another--oftentimes lack of comparative advantage, a potentially export-producing business may be limited to its local market, and then only a part of it. A strictly residentiary business, like personal service, is protected from outside competition by its small scale of profitable operation and customer preferences for close proximity to its services.

While the distinction between export expansion and import substitution is addressed in state industry recruitment efforts, changes in industry market share, labor productivity, and return on investment are seldom monitored. By targeting tax expenditures on the export-producing component of an industry, an increase in market share is sought which would trigger a long-term multiplier effect in new opportunities for residentiary industry expansion. If

industry recruitment were to seek more than front-page exposure, credible validation measures of the long-term effects of industry recruitment efforts would be sought, also.

Plant Modernization

Both export-producing and residentiary industries benefit from new, output-increasing investment which leads to increases in labor productivity. These increases vary from industry to industry, however, depending on the level of capital investment per worker. The plant modernization approach to job creation addresses fundamental barriers to, and means of, achieving resource productivity gains that improve a firm's long-term competitive position in its export, and even local, markets, but in the short-term it may reduce jobs by increasing output per worker more rapidly than output.

A plant modernization strategy is less favored now in Europe than more direct efforts in job creation simply because of its locally adverse short-term effects on total employment. In short, job creation strategies have shifted in their rationale and justification from economic to social policy (Pickvance, 1984). Reducing unemployment levels immediately is of higher political priority than achieving sustainable improvements in labor and capital productivity that lead ultimately to corresponding improvements in the competitive position of a region's export-producing industries.

Much of the current record-breaking private capital formation in the U.S. is attributed to labor-saving expenditures. Expected return on plant modernization is generally favorable enough, at least for large businesses with easy capital market access, to warrant a significant shift to capital-intensive, particularly electronic-related, processes. Small business, on the other hand, may lack comparable access because of the initial high servicing costs and associated risks of small business loans.

Small business enterprise is now viewed as a high priority focus for

state ecocnomic development efforts. It is a dominant force in job creation, accounting for 70 to 80 percent of all new jobs (Birch, 1979).

Most small business (i.e., those with less than 50 employees) serve local markets. In some areas, however, an increasing number of small businesses are engaged in export-producing, activities. Generally, their average payroll per worker is lower than it is for large businesses. Gross profits also are low, because of low capitalization. Thus, financial risk and cost indicators for small businesses are generally less favorable than for large businesses (Mikesell, 1982; Shane, 1974).

Technology Transfer

Facilitating technology transfer is another long-term strategy for job creation that is seldom included in currently popular state economic development strategies. It offers a unique advantage to those metropolitan areas with a well-developed economic and social infrastructure, including educational, research and financial institutions, and skilled work force (National Governors Association, 1983). In the Minneapolis-St. Paul Metropolitan Area, for example, the technology-intensive industries, such as nonelectrical machinery and scientific and controlling instruments manufacturing, account for much of its recent above-average growth in total employment and earnings. This area ranks among the top few areas in the U.S. in the intensity of its business entrepreneurship as represented by new business formation and employment growth.

If plant modernization efforts are difficult to initiate, deliberate efforts to build a technology-intensive metropolitan infrastructure are even greater challenges, particularly in periods of intense competition for sharply curtailed public financing (Heckman, 1980; Malecki, 1981; U.S. Congress, 1984). In Minnesota, for example, educational institutions have lost in relative share of the state budget since 1970 despite an earlier more generous

period of educational support upon which Minnesota's technology-intensive industry was built. Part of this loss may be attributed to a growing dissatisfaction with educational performance relative to its perceived importance.

Educational institutions, particularly post-secondary, are key agents of technology transfer. (Hudson, 1972). They facilitate learning opportunities for a rapidly changing work force by improving the delivery of educational services. Effective delivery of educational services depends, not only on up-to-date, well-designed, and well-taught curricula, but also on the productivity of professional and service staffs of educational institutions. Again, few, if any, state development strategies focus on the role of education, and its product (i.e., curriculum) mix and economic productivity, in technology transfer.

3. INCOME REDISTRIBUTION

Both intermediate-term and long-term job creation strategies are affected by state government efforts in income redistribution. Much of the impetus for the regionalization of post-secondary education systems in Minnesota, for example, centered on their potential role in substate economic development. Virtually every town in Minnesota with a large post-secondary education institution became a regional growth center in the 1960's and 1970's, not because of the synergistic role of the educational institution as a regional learning resources center but, rather, because of its payroll expenditures and local purchases. Building a regional higher education system with representation in each of the state's 13 substate regions was a popular (and populist) strategy for statewide sharing of the above-average income growth and tax receipts of the state's major metropolitan area.

Growing Regional Disparities

Income redistribution efforts of state government address issues stemming

from perceived regional disparities in population, employment and income growth. Existing disparities are widening as the metropolitan core region becomes increasingly dominated by information-producing and information-using industries. Erosion of union dominance in manufacturing centers outside the metropolitan core area and growth of trade and service employment in rural communities are likely to reverse trends toward convergence of non-metropolitan and metropolitan area income levels. In addition, shifts from blue collar to white collar occupations and to a service economy are accompanied by increasing disparities in earnings among socio-economic groups. Also increasing, but unevenly among substate regions and their communities, is the total population of aged and poor.

Centrality, or the lack of centrality, is an important factor in accounting for substate economic disparities. Centrality is represented in its highest degree in a state by its metropolitan core region. Substate regions furthest from the metropolitan core region are routinely penalized by the lack of proximity to the principal decision centers in finance, trade, and manufacturing. Employment and consumption opportunities in substate regions bordering the metropolitan core region are enhanced by their proximity to the core region and its diversity of economic and social activity.

Declining Middle Income Class

The recent decline in the proportion of middle income households is associated with an increasingly bimodal distribution of earnings per worker. For 1980, the U.S. Census of Population shows average earnings per worker of approximately $14.4 thousand in Minnesota. However, a majority of workers earn either more or less than the mean level. The lower employment mode is dominantly female and in administrative support, sales and service occupations. The upper employment mode is dominantly male and in managerial, professional, and technical occupations. The bimodality of the household

earnings distribution is reduced when both husband and wife are employed. Nonetheless, the bimodality in earnings per worker is gradually affecting the distribution of taxable income.

Economic implications of a declining middle income class are only faintly discernible from historical data series (Noyelle, 1983). Inter-occupational mobility may not adequately serve as a means of progression from a low-paying to a high-paying job. A non-metropolitan region typically lacks high-paying jobs in the same high proportions as in the metropolitan core region. This difference is likely to be more pronounced in the future than it is now. Meanwhile, metropolitan area labor markets are adjusting to changing industry occupational requirements and job preferences of a demographically changing labor force.

4. PRODUCTIVITY IMPROVEMENT

Productivity improvement rather than job creation or income redistribution remains the "bottom line" of fundamentally successful state and regional economic development efforts. Economic development is neither economic efficiency alone nor economic growth, although its occurrence is validated by waste reduction and output expansion. Increasing already-efficient levels of production a notch or two or doing more with less are ends-in-view of economic development efforts.

Central to economic development is education and the learning processes. Health care and the healing processes are important, too. In Minnesota, virtually every county in the state, when compared with the U.S., can be characterized by above-average spending (manifested in above-average employment) levels in these two services-producing areas. Neither education nor health care per se contribute to economic development. Much depends on their product mix, that is, the actual services they deliver to their respective clientele.

A first step in addressing the productivity issue is to understand clearly what drives the costs incurred in providing health care and education--personnel, buildings, equipment. Each cost component requires careful delineation. For example, support services have increased rapidly in persons employed and budgeted expenditures. Yet, the benefits of office automation in improving white-collar productivity are virtually untouched in many offices of health care and education providers.

Sooner or later, internal support--administrative, staff--will be sought in concerted efforts to reduce costs and, eventually, to reformulate priorities in final service delivery. Again, changing market demands and clientele needs must be addressed. Whether or not such steps are taken depends, of course, on the urgency of the endeavor.

In the health care fields, new forms of competition assert a cost-reducing rationale that attracts its own support among surviving organizations. Education, however, has lacked an over-riding need to assert a similar discipline. Such a need is likely to re-appear with newly-gained supporters as budgetary pressures, particularly at the state level, enforce a new pattern of accountability among educational institutions in addressing their most urgent productivity issues.

Besides the health care and healing services, state government itself (in Minnesota through its STEP--Strive Toward Excellence in Performance-- program) offers a potential model for other services-producing industries, including education. For a state with an acknowledged edge in the productivity of its work force and leadership in health care, education, and government, coupled with an abundance of private work productivity programs to emulate, as is the case in Minnesota, the issue of continuing productivity improvements in its important services-producing industries in one that is unlikely to be left unattended even in the remainder of this decade.

5. INFORMATION ACCESS

State and local governments intervene, finally, in economic growth by facilitating access to information. One paradigm for redirecting state economic growth is represented by a state database, a data processing and interpreting activity, and data users with each being an integral part of a user-interactive information system. Unlike the provider-centered university research paradigm of independent, small-scale, research activity, the client-centered paradigm starts with the information needs of its users. Information access is facilitated, by organized, objective, and cost-effective approaches to economic and policy analysis.

Database Development

Both regional economic and market analysis and state policies and program implementation require time series and cross-sectional data, including county-level statistics. The U.S. Department of Commerce Regional Economic Information System (REIS) industry employment, labor earnings, and personal income statistics typically serve as control totals in the preparation of more detailed and disaggregated series based on industry wage and salary employment and payroll reported in County Business Patterns. Similar series are available from the Department of Employment Security for use in deriving industry employment and earnings estimates at the two-digit industry dissification level.

Access to essential economic and market data is being facilitated by the widespread use of microcomputers. In Minnesota, DATANET--a computerized data information access service maintained by the State Planning Agency--is available to any individual or organization--public or private--willing to pay the initial access and computer use charges.

Maintenance of a regional economic database for analysis, forecasting, and impact assessment is keyed to the perceived decision information needs in

state government and, also, outside state government. Much of state economic and policy analysis relates to internal information needs, particularly in the administrative and legislative processes that culminate in tax and appropriation bills passed by the legislature and approved by the Governor. These processes are essentially negotiational in nature. Relevant economic and policy analysis has a specific role in providing forecasts of revenues, assessments of the revenue impacts of proposed tax law changes, and data bases for state budget allocations.

In addition to statistical data series, database development includes the preparation, assembly, and use of related computer software. Data, models, and computer software are documented and validated as part of a regional information system.

Economic Policy Analysis

Both database development and economic and policy analysis are dispersed among state and metropolitan area agencies in Minnesota as they are in most states. These activities may address issues like redirecting state and regional economic growth as well as state revenue and occupational forecasting.

A two-part framework is proposed for addressing critical policy issues in redirecting state economic growth, including the requirements for, and implications of, various forms of government intervention. Performance criteria for measuring state economic growth are linked, finally, to production, investment and consumption activities and their contribution to state economic growth and development, with and without government intevention.

Policy Framework. Each participant in the economic development process is theoretically, if not practically, constrained by a particular set of economic development programs and their related costs. For the local public agency, enhancing downtown business location, if not job creation, is the purported end-in-view of its participation in industry recruitment. Its

inducements are various tax breaks supported, in large part, by state and federal legislation and revenue sources. The local benefits of successful industry recruitment are thus disassociated from their full public costs. Indeed, the jobs lost in the private sector because of the tax expenditure may exceed the jobs gained by the new local industry. The high-priced, professional talent involved in the recruitment efforts may result in fewer jobs than would have occurred if the tax break had been a tax rebate. Clearly some local businesses and perhaps even the local public agency are the "winners" of the industry recruitment, while the likely "losers" are the taxpayers generally.

While job creation is an objective of economic development efforts, it is, at best, a partial, and often misleading, measure. It fails to include, for example, measures of overall industry performance, like change in market share, resource productivity, and return on investment.

Changes in the aggregate market shares of regional industries are repre=-sented by changes in the proportion of U.S. industry output originating in the region. Year-to-year change in these indicators denotes sensitivity to the business cycle. Persistent, cumulative change denotes long-term shifts in industry location.

Changes in labor and capital productivity and related technologies may account for long-term shifts in a state's share of total industry output employment and income. In increasingly competitive product and factor markets, the efficient low-cost producer gains sales superiority by maintaining an aggressive price strategy. Such a strategy, which is gaining acceptance in an expanding range of industries, depends heavily on well-developed urban infrastructure and the important external benefits it provides resident businesses and households. Being low-cost providers of essential urban services in the case of state and local governments is

consistent with the goals of business enterprise seeking greater market share by being a low-price leader.

State and local tax expenditures directly affect individual business profits and, if sustained, return on investment. As noted in recent studies, tax expenditures are unanticipated windfall profits for most business and, hence, they are essentially ignored as investment inducements. For assessing long-term development benefits and costs of public infrastructure expenditures, the development efforts must relate to change in the primary input payments of affected business enterprises.

State and local governments affect investment decisions directly in the exercise of their traditional spending power in behalf of industrial development efforts. In industrial recruitment, a short-term pay-off in business growth is sought. Plant modernization also affects business productivity and, hence, its competitive position in regional and national markets. Improvements in technology transfer which lead to cost-reducing, output-increasing management innovations, stem from long-term public and private investment in education and research. Measurement of the increases in the value added of business enterprise attributed to economic development efforts is thus based squarely on interindustry relationships that link state and local government expenditures to corresponding increases in business income payments.

Analytical Framework. The overall analytical framework for the measurement of the economic effects of government intervention is presented here in the context of an existing computer model of a state or regional economy (Maki et al., 1980). This model has been used already in several state and substate studies covering all or selected regions in Oregon and Alaska as well as Minnesota (Olson et al., 1984).

Implementation of an operational state or regional model starts with a

delineation of the economy and its individual industries and sectors, including government functions, and continues with a differentiation between metropolitan and nonmetropolitan areas and, subsequently, within nonmetropolitan areas in the state. The function of individual modules in the overall state economic model for the purposes of this study are represented as follows:

1. Market, investment, and final demand modules are used in deriving U.S. industry outputs and regional industry market shares, including exports to rest of nation; industry-specific output-increasing and pollution abatement capital stock and investment requirements; and individual final demand requirements, including personal consumption expenditures and government purchases as well as gross private capital formation and exports to rest of nation.

2. Population, labor force and employment modules are used in deriving the components of population change by age and gender, including births, deaths, and migration; total labor force (person count) by age, gender, and occupation; and total employment (job count) by gender, occupation and industry.

3. Production and value added modules are used in representing the structure of production technology; achieving internal consistency among interrelated modules, including market, investment, employment, and income; and deriving industry-specific distribution of value added, including employee compensation, indirect taxes, depreciation allowance, direct tax liability, dividend liability, and retained earnings.

4. Household, government, financial, and natural resource modules are used in deriving total household income by income class, household size, occupation, and educational attainment; total federal, state and local government revenues and expenditures, by government function and type of expenditure; interinstitutional transactions, including investment financing of business and government sectors; and various environmental inputs and outputs.

The controlling paradigm of the spending and revenue generating processes in the government module is represented by the simple algebraic form,

$$SP = C + GR + DR,$$

where SP is viewed as the negotiated change in a given agency's spending in constant dollars, C is the negotiated year-to-year increase or decrease in the agency's spending, GR is the negotiated incremental increase or decrease in agency spending directly associated with a forecast change in general

revenue and DP is another negotiated incremental increase or decrease in agency spending directly associatd with a forecast change in dedicated revenues. How much each agency spends in real dollar terms depends, therefore, on (1) more or less constant increase or decrease from the previous year's spending and (2) an additional increase or decrease from the previous year's spending based directly on forecast changes in general and dedicated revenues. All forecast changes are reconverted, finally, to current dollars on a straight percentage basis.

The negotional process is addressed directly in the many quick, but adequate, economic/policy analyses requested by the state budget negotiators in establishing spending levels. In addition, from one legislative session to the next, database development and economic/policy analyses fulfill an important supportive role insofar as they add to general understanding of linkages between (1) the target variables or quantifiable ends-in-view of public policy and (2) the important state policy decision variables, including tax expenditures.

The individual model components are presented in mathematical form and documented by Olson and others (1984). Further model extensions and applications are presented in various departmental staff papers (Maki et al., 1980). Most recent model extensions focus specifically on industry and area targeting of economic development efforts (Maki, 1984).

The differentation of metropolitan and nonmetropolitan substate regions is achieved by use of a two-region interindustry transactions model in deriving, and then updating, product shipment data for each substate region. To portray the regional diversity of the Minnesota economy, for example, the large metropolitan core region is differentiated from a declining natural resource-based metropolitan region, a contiguous transitional agricultural region, and a residual, dominately agricultural, region. Each substate region

is characterized by its unique interindustry clusters and external, as well as internal, trade linkages.

Information Exchange

Various public institutions are establishing new and expanding roles in providing information for choosing among economic development and business location options. The Minnesota Library Association, for example, has undertaken a nationally-funded project "seeking methods to work as partners in the economic vitality of the state" by building a coalition among information providers, government planning and development agencies, business and industry, and related associations. Local libraries are viewed as information exchanges in an expanding network of such exchanges.

The information exchange function of a state economic resource center that directly relates database development to economic/policy analysis also facilitates access to the vast arrays of statistical resources. It would complement, rather than compete with, existing research and statistical organizations and services. This is, indeed, the unique contribution of a state economic resource center which can relate competently to its technical assignments and also provide access to expertise and counsel on statistical series, analytical techniques, and related resources for state and regional economic analysis. The focus is on application of the technical competencies in tracking economic performance and assessing its differential impacts on people and places.

A state economic resource center would address those continually re-appearing issues of state and substate economic growth and change, illustrated by some current perspectives on the efficacy of job creation, income redistribution, and productivity improvement efforts. It would differ from other research centers in its focus on (1) place communities and state-delineated systems of place communities and (2) state governments and

their relationships with the place communities. The rapid ascendency of state governments in affecting local environments for living and working adds futher support for the particular policy and analytical focus on state and substate place economies.

6. SUMMARY

The expanding role of state and local governments in affecting private investment decisions is represented in its efforts to stimulate private investment with tax rebates and other incentives. These efforts are encompassed within one or more economic development strategies, starting with industry recruitment and continuing, over increasingly longer time horizons, to plant modernization and, finally, technology transfer. State and local governments generally focus on industry recruitment. For the most part, the short-term strategy addresses as its primary task job creation in distressed areas.

Job creation is addressed directly by government incentives to stimulate private investment. It is addressed indirectly with infrastructure development. Much emphasis is placed on small business development.

Income redistribution is an increasingly important function of state government. In some development efforts, it is closely linked with job creation, particularly in the case of distressed areas.

Productivity improvement is the bottom line of state economic development efforts. Government education, and health care are the critical areas for achieving future gains in worker productivity, particularly in Minnesota with its above-average employment in these sectors.

In a technical sense, regional economic developments efforts are viewed in the context of two-part framework -- a policy decision matrix and an existing regional model. The decision matrix summarizes the policy choices and directions of an economic development process.

The regional model is based on a detailed interindustry transactions table for the region and the nation. It includes, also, as interrelated elements of the larger model system, an industry investment model, a demographic model, and a market model. The differentiation of metropolitan and non-metropolitan substate regions is achieved, also, by use of the two-region interindustry transactions model in deriving, and then updating, the two-region tables for each substate region.

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