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ECONOMIC FORECASTS AND ANALYSIS FOR STATE FISCAL MANAGEMENT

by

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ECONOMIC FORECASTS AND ANALYSIS FOR STATE FISCAL MANAGEMENT[1/]

Wilbur R. Maki

Fiscal management in state government depends on timely and accurate information about present trends and likely future economic activity in the state and nation. In meeting this dependency, the practice of economic forecasting and analysis is put to its severest test. As in forecasting quarter-to-quarter change in the GNP and the general price level, much room remains for improvement in both the forecasts and the analyses.

In focusing on economic forecasts and analyses and how they fit into the scheme of things in state government, critical policy issues in the management of human and natural resources are addressed briefly in this paper. Information gaps in dealing with these issues are then examined. Finally, the organization of economic forecast and analysis functions in state government is discussed. Thus, the purpose of this paper is to relate the role of economic forecasts and analysis to fiscal management in state government and to assess the implications of changes in both functions for the organization of state and regional research.

1/ Prepared for presentation at the 18th Annual Meeting of the Mid-continent Regional Science Association, Denver, Colorado, June 19-21, 1986.

Critical Policy Issues

State government today is struggling with a wide range and variety of policy issues stemming from massive and pervasive changes in the competitive position of U. S. industries in world markets. These issues are summarized under four sets of concerns, as follows.

1. How to reduce the adverse effects of economic displacement on the households and communities that have directly experienced the shock and pain of sudden and unanticipated change.
2. How to create more jobs in lagging areas of the state.
3. How to increase the productivity of state resource use.
4. How to achieve a fair and equitable distribution of the benefits and costs of state economic growth and development.

Much industry displacement has occurred already because of the high exchange value of the U.S. dollar and high production costs relative to world-scale competition. U.S. farmers, who prospered in the 1970's in the wake of rapidly expanding world markets for U. S. farm products, expanded their farm operations by acquiring additional cropland acreage. But as bank credit was curtailed to control inflation, interest rates rose sharply, which resulted in a doubly burdensome farm debt for those farmers who had purchased additional cropland at inflated prices. Thus, a new burden was imposed suddenly on a once-promising commercial farming economy.

The mining economy also faces the locally uncontrollable pressures of world-scale price competition among standardized products. High production costs, coupled with a high-valued dollar, accelerated the pace of import penetration into the U.S. iron-and-steel-making economy. Northeast Minnesota

taconite, when delivered at more than $50 per ton to Gary, Indiana is no match for Brazilian iron ore of the same quality delivered for less than $40 per ton to the same port. Economic displacement is now commonplace among the mining-dependent households and communities of Northeast Minnesota as a result of the sudden, unanticipated change in mining employment prospects.

Manufacturing, like agriculture and mining, has faced the consequences of world-scale competition in both its export and domestic markets. Durable goods manufacturing, particularly, depends on interest-sensitive customers who quickly reduce capital goods orders with the expectation of rising interest rates or a depressed consumer market. Minnesota has an above-average share of such manufacturing. While 70 percent of manufacturing employment is located in the seven-county Minneapolis-St. Paul Metropolitan Area, the manufacturing employment in rural areas and the manufacturing jobs in the Minneapolis-St. Paul Metropolitan Area held by a commuting rural work force still account for roughly half of the basic employment of rural residents. Manufacturing, unlike farming, adjusts to reduced market prospects by lay-offs and plant closures.

Displacement in farming, mining, and manufacturing in the 1980's had lead to a widening gap between the seven-county Metropolitan Council Region and the rest of the state. Much of the severely affected commodity-producing industries that are characterized by price competition among standardized products is located in rural areas. In contrast the highly differentiated information-producing activities that compete on the basis of price plus service are in the principal metropolitan areas. The declining pace of economic activity among the commodity-producing industry now threatens the solvency of both public and private institutions in a growing number of rural Minnesota counties.

State government has addressed the concerns of those suffering from economic displacement in rural Minnesota by attempting to recruit new industry and, thus, create jobs to replace the ones lost to structural change. In such efforts, job creation is a principal measure of economic growth.

Economic development is more than job creation; it means, also, more output per worker. In the short run, economic development may result in fewer jobs because of improvements in labor productivity. In the long-run, however, improved labor and other resource productivity can lead to improvements in competitive position and capacity to resist loss of market share.

Key target industries of economic development are those in the economic base, that is, industries that export their goods and services to purchasers residing outside the state. Total industry growth is limited by its economic base and the nature and extent of its internal linkages. By improving the productivity of a region's economic base, jobs are created in support industries as well as in the region's basic industries.

Much of the Minnesota's historical economic base, namely, its commodity-producing industries, is located in the declining nonmetropolitan areas. State government and its educational institutions, including those in the core metropolitan area, thus perform an important role in addressing problems of low resource productivity associated with the dominantly small business enterprises of rural areas.

Finally, productivity improvements occur disproportionately among substate regions. Because of low wage costs and high capital costs in rural areas, investment per worker and, hence, productivity per worker is correspondingly lower in rural than metropolitan areas. State governments intervene in these areas, therefore, to affect a redistribution of the benefits of economic productivity by the exercise of their taxing, spending, and regulating powers,

particularly in the support of regional infrastructure and the delivery of essential public services. Education is among the state-supported services that is now being perceived as most critical in affecting the competitive position of industry in the new economic order.

Economic Information Sources

Lack of capabilities for monitoring state and regional growth and change and dealing with critical policy issues in a long-term policy perspective characterizes most state governments today. The periodic economic forecasts prepared as part of the fiscal management function in state government serve as a beginning in tracking the business cycle and separating cyclical from structural change in industry employment and earnings. Comparable information is generally lacking, however, for individual substate regions. Information is lacking, also, for assessing present and likely future economic performance of industries in a state or region and for identifying likely beneficiaries, if any, of a state growth strategy.

The recent flurry of legistative activity to assist farmers facing the loss of their farms has been accompanied by a frantic search for information about the financial condition of farmers. Related information is being sought from the rural banking community. However, comparable information about other segments of the rural economy that account for as much of the current rural fiscal crisis as farming, particularly the manufacturing businesses facing stiff competition from foreign imports, is lacking. Indeed, the loss of jobs is greater in manufacturing and manufacturing dependent business than in farm-related business generally. This has been a largely neglected but nonetheless important factor in the current rural decline in Minnesota.

A state growth strategy that deals with the increasing diversity of

structurally-changing rural and metropolitan economies would address the role of both farming and manufacturing, as well as other industry in the state's economic base. But state growth strategy could focus also on budgetary process. The state's chief fiscal officer, who typically serves as the designated representative of the Governor in negotiating conformance of individual agency budgets with administration guidelines, would occupy a pivotal position in the targeting of a state's discretionary expenditures. However, this scenario would impose an added burden on the economic forecast and analysis functions in the preparation and assessment of state revenue forecasts. These functions must then include a geographic and functional differentiation that clearly delineates the changing patterns of economic activity between rural and metropolitan areas.

A regionally-differentiated state forecast and analysis system would address the principal concerns of any viable and effective forecast and analysis function, namely, the measuring of regional differences in economic activity, the acounting for these differences in terms of their underlying determinants, and the assessing of the state and regional consequences of changes in both the underlying determinants and the regional differences themselves. Although much recent discussion among state economic analysts, in Minnesota, for example, has focused on the topic of rural-urban disparities, this group still lacks an accurate assessment of the costs and benefits of reducing these disparities and the incidences of the related costs and benefits on individual businesses, households, and communities in the various regions of the state.

In Minnesota, neither the 1987 Economic Report to the Governor prepared by the six-member Economic Resources Group nor the quarterly state economic and revenue forecasts have addressed questions that are frequently asked by

legislative committees and other deliberative bodies and decisions entities in state government. Specifically, these questions deal with, the economic significance of the widening employment and income differentials between the core metropolitan region and Greater Minnesota, the likely course of global, national and regional forces affecting the economic well being of the residents of the contrasting economic regions, and the winners and losers of alternative strategies for coping with the underlying determinants of regional disparities and their consequences.

Other critical information sources in budget preparation are the administrative and legislative research and analysis sections of individual state agencies and the state legislature. In most states, also, a Governor's Council of Economic Advisors exists to serve as an independent panel of business and academic economists for reviewing the state economic and revenue forecasts and assumptions. In short, the state economic forecast and analysis functions provide a wide range of technical and administrative capabilities for producing essential information dealing with the several critical state policy issues. Yet, information gaps persist. In this paper several measures--both technical and organizational--are proposed to close these gaps.

ECONOMIC FORECASTS

State quarterly economic and revenue forecasts are prepared for administrative and legislative budgetary purposes. The relation of forecasting to the budgetary process is illustrated in the budgetary cycle, which, in Minnesota, starts with the July forecast for individual state agencies. The reconciliation of individual agency budgets is accomplished with the October forecast. The January forecast serves in the preliminary legislative budget preparations while the April forecast is used in the

preparation of the final legislative budget.

Between quarterly forecasts, staff members participate in various legislative hearings and internal review and reporting activities, including the preparation of interest rate forecasts and other factual materials for use of administrative and legislative committees. Prior to each quarterly forecast, the Governor's Council of Economic Advisors meets once to review the key assumptions for the upcoming forecast and again a week or so later to review the preliminary forecast. Thus, a single state agency prepares the quarterly forecast, but with advisory group participation.

Forecast Model

The quarterly economic and revenue forecasts are developed from a state economic model that links the Minnesota economy to the U.S. economy and to the rest of the world. This model is used to forecast state economic activity for the next quarter and subsequent quarters in the forecast period. Its most important contribution is in achieving consistency between forecast and decision (Hallett, p. 141).

The Minnesota quarterly model, illustrated in Figure 1, is based on U.S. data series provided by Data Resources Incorporated (DRI), as follows:

1. Minnesota employment in export-producing industry is linked to U.S. production in the same industry and Minnesota average manufacturing wage rate relative to U.S. average manufacturing wage rate;

2. Minnesota employment in domestic, or residentriary, industry is linked to Minnesota disposable income;

3. Minnesota average manufacturing wage rate is linked to U.S. average manufacturing wage rate and prices;

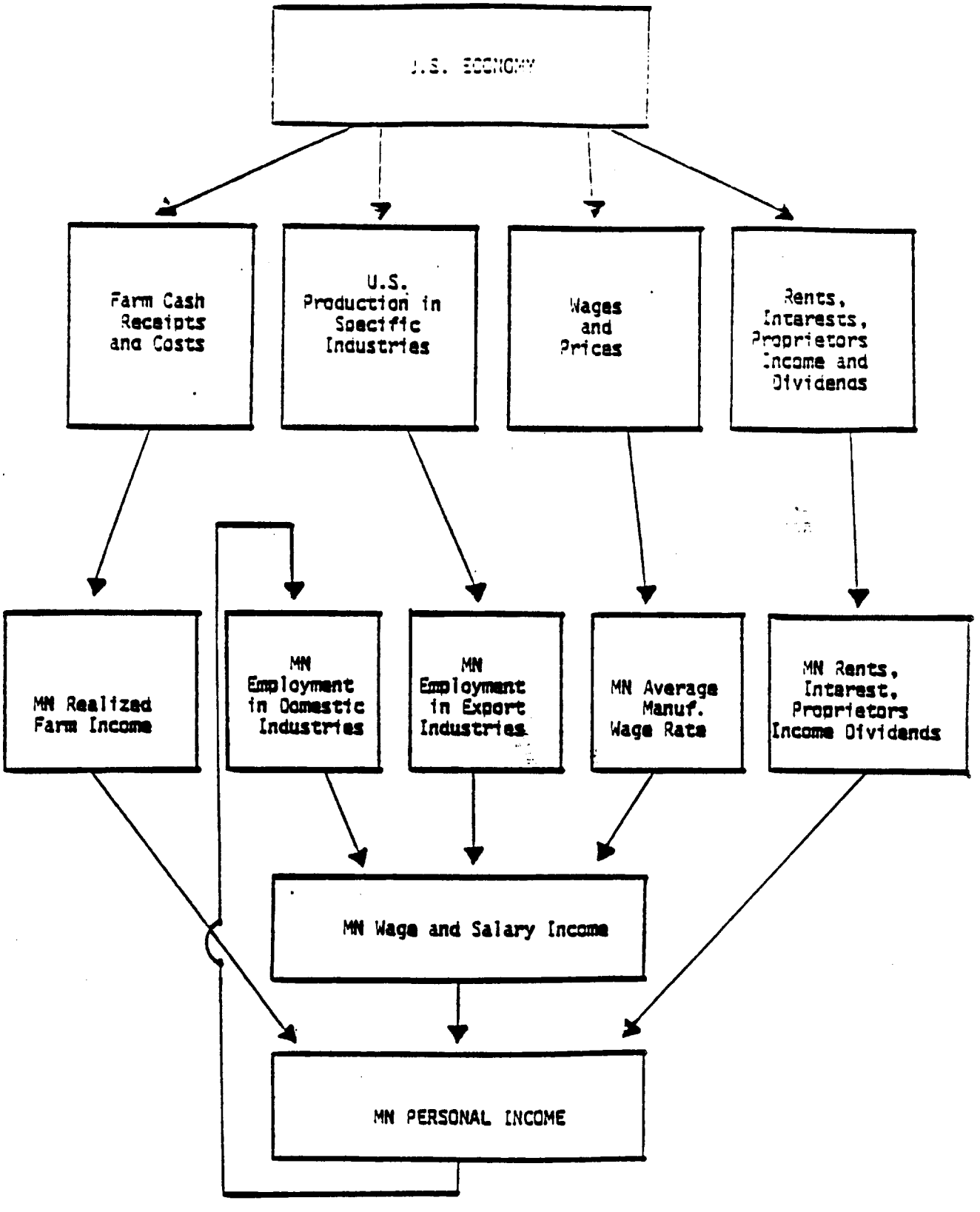
4. Minnesota wage and salary income is linked to Minnesota employment and Minnesota average manufacturing wage rate;

5. Minnesota property-type income is linked to U.S. property type income;

6. Minnesota realized farm income is linked to U.S. farm cash receipts and costs;

Figure 1

FLOW DIAGRAM OF MINNESOTA ECONOMIC MODEL



7. Minnesota personal income is linked to Minnesota realized farm income, Minnesota wage and salary income, and Minnesota property-type income.

Thus, the Minnesota economic model is "driven" by U.S. industry employment, U.S. average manufacturing wage rate, U.S. farm cash receipts and costs, and U.S. property-type income. The uniqueness of the Minnesota economy is represented by the relationship of its residentiary industry to its total disposable income. Inter-industry transactions are not represented in the economic model and hence, the multiplier effects of short term fluctuations in export-producing industry employment are not fully represented.

Minnesota revenue forecasts are derived from the Minnesota economic model using a series of linkage equations that relate changes in each revenue source to corresponding changes in the U.S. and the Minnesota economies. Minnesota individual and corporate income tax flows, for example, are affected by U.S. corporate profits, the Consumer Price Index, the current itemized deductions allowed by U.S. Internal Revenue Service, and Minnesota income and employment levels, as shown in Figure 2. Minnesota general sales and motor vehicle excise tax are affected by a subset of industry-specific employment levels, which are represented in the Minnesota tax model by the tax flow chart variables listed in Figure 3. These four tax sources account for about 90 percent of Minnesota state tax revenues.

Forecast Performance

While the Minnesota econometric model is fitted to historical data series, its actual use in forecasting Minnesota economic variables, rather than their statistical attributes, provides the critical tests of model accuracy and usefulness. Since 1980, the percentage error has ranged from -13 percent in 1980 to 8 percent in 1984. The Minnesota forecasts typically

overestimated revenues in recession and underestimated revenues in recovery.

The Minnesota model database has been revised with each new forecast. But even with the data revisions, the model results may sharply deviate from the most recent observations on employment and income. "Add factoring" procedures are used in these instances to adjust for apparant forecast errors. These data adjustments address the inherent weaknesses of any econometric model, namely, historical bias and less-than-complete representation of reality.

One approach to improving the forecast performance of the model is to include additional relationships and equations. For example, an average wage rate can be specified for each industry and this rate in turn can be related to personal income and other target variables through a series of explanatory variables, such as an anticipated change in industry employment. The agriculture sector in the model can be expanded and new trading relationships with rest of nation and rest of world can be included. An input-output table representing Minnesota inter-industry transactions also can be incorporated into the model. However, these changes would reduce the forecast error only marginally inasmuch as most of the error is attributed to other sources than incomplete model specification. Again, the current quarterly forecast can be compared with the actual data a quarter later. Feedback from this comparison would provide a new basis for parameter recalculation or add factoring in the next quarter.

Another approach for dealing with the inherent shortcomings of the forecast model is to shift to a concensus forecast (Public Policy Institute, 1985, p. 3). Such an approach would involve legislative, as well as executive, participation in the forecast process. Investment in parallel forecast assessment capabilities in both the legislative and the executive

branches of government, or in one or more of the state's academic institutions, would, of course, require additional resources for operation and maintenance of such a process.

Given the high degree of uncertainty in the U.S. economy, individual state economic and revenue forecasts can be expected to carry an equal, if not a larger, burden of uncertainty than the U.S. forecasts. In addition, the uniqueness of a state's economy itself contributes to additional forecast variance. The compounding of the two sources of error adds to the uncertainty of forecasts. Of course, a forecast range may be reported rather than a single value, but the budgetary process eventually calls for a single-value forecast. The state constitution requires a balanced budget at the end of each fiscal period.

The uncertainty of economic and revenue forecast is acknowledged in state government by the establishment of a fiscal reserve to backstop revenue overestimates. In Minnesota, a $400 million "rainy day" fund was established in 1985. As events have later demonstrated, this fund was roughly half of what would have been needed if it is to be large enough to cover the actual revenue shortfall. Because a large part of the forecast error is attributed to sources other than the actual forecast, the fund serves the purpose of assuring creditors of the state's fiscal solvency in the face of any budget shortfall.

Effects of uncontrollable factors, like changes in U.S. economic policy, severely limit the potential for improving state forecast performance. Instead, the risks and uncertainty associated with less-than-perfect forecasts call for fiscal management procedures and a tax system that reduces the adverse consequences of sudden changes in U.S. market conditions and economic policies.

Figure 2

INDIVIDUAL AND CORPORATE INCOME TAX FLOW CHART

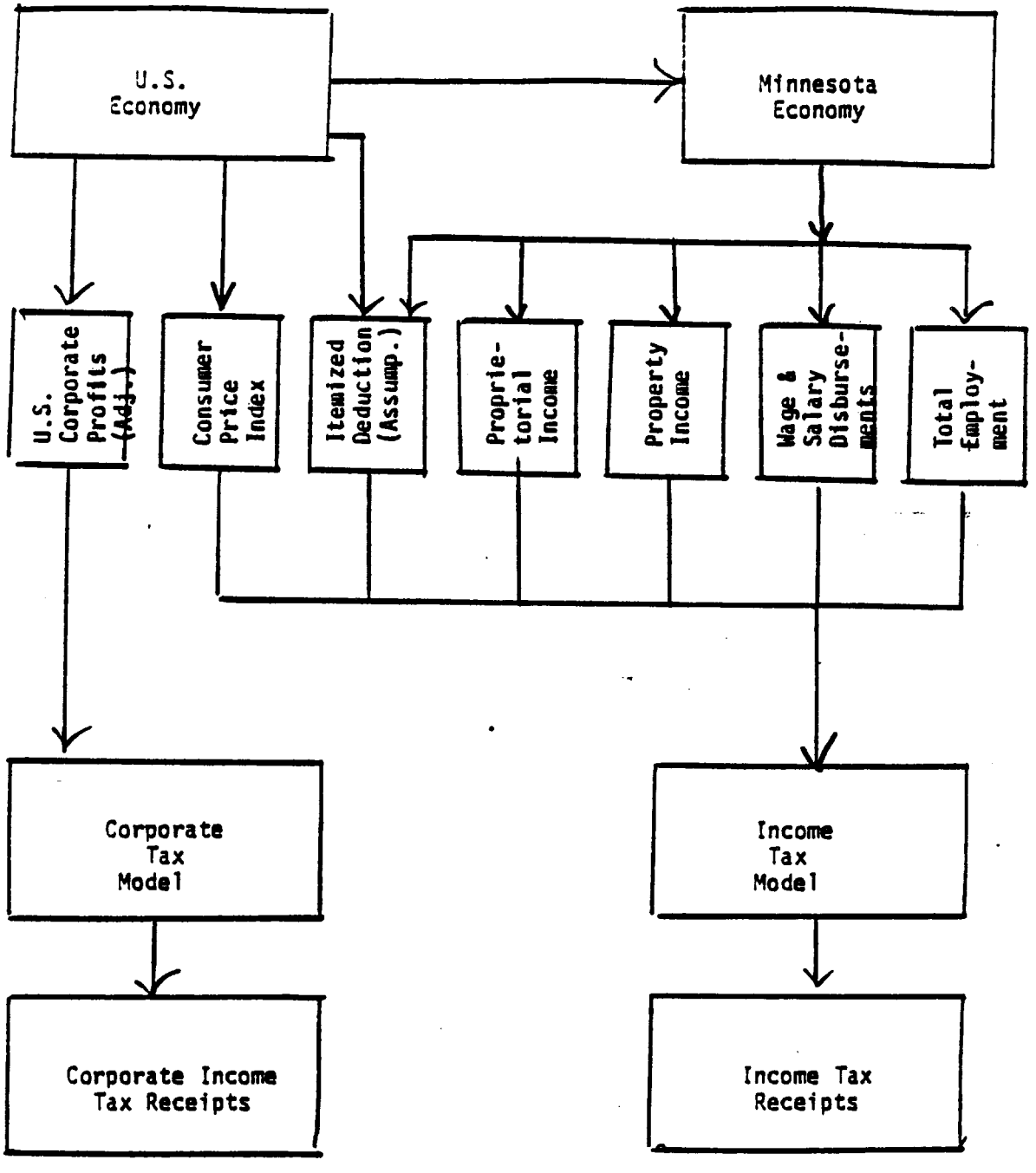
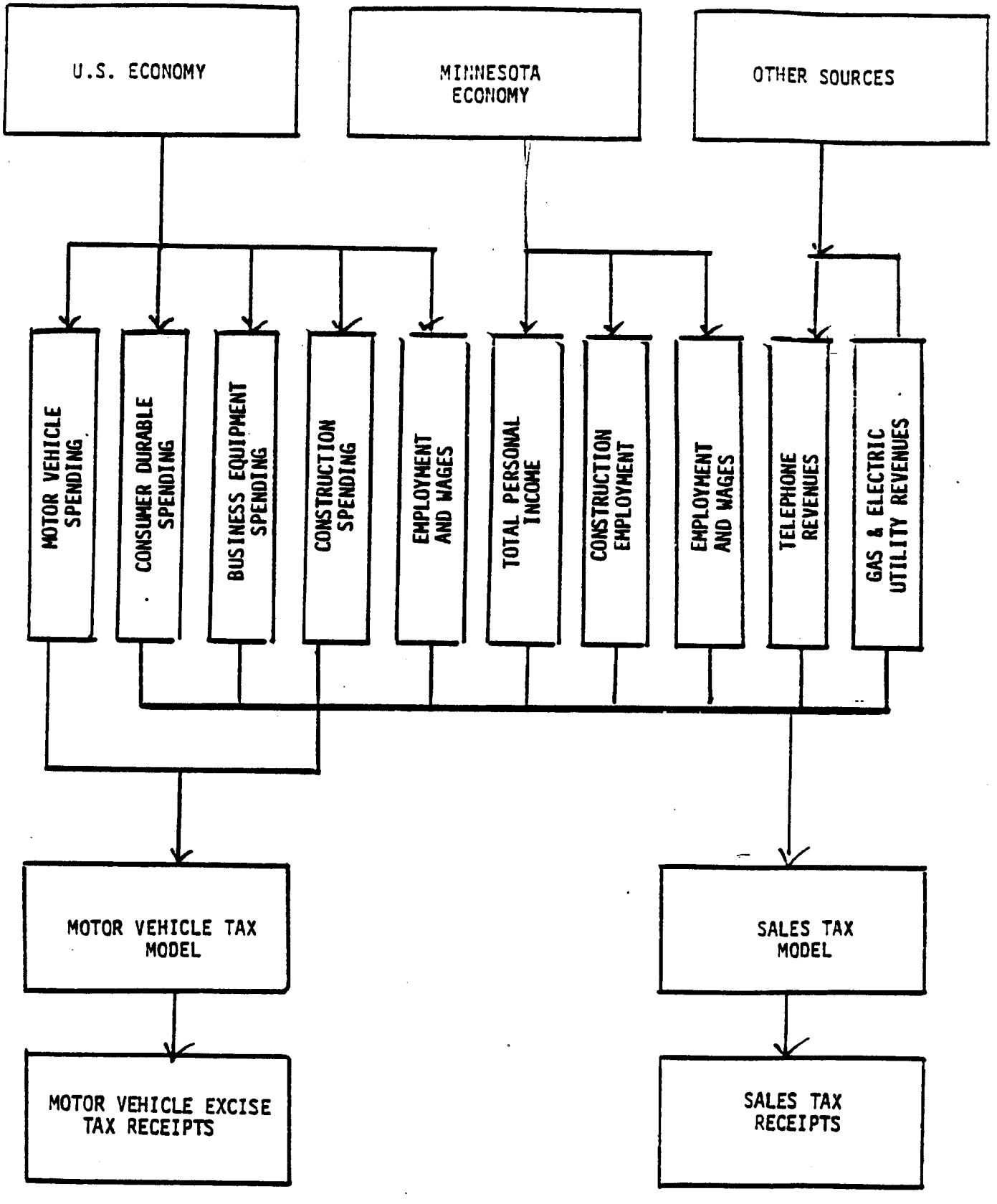


Figure 3

GENERAL SALES AND MOTOR VEHICLE EXCISE TAX FLOW CHART



ECONOMIC ANALYSIS

The economic/policy analysis function, of which economic and revenue forecasting is a part, is scattered widely among individual departments, agencies, and offices of state government. A recent survey of economic/policy analysts in Minnesota state government offices in St. Paul lists more than 100 repondents scattered in over 20 agencies, including both executive and legislative offices. Much of the effort of this group relates to the assessment of the current legislative agenda and its impact on individuals and organizations in the state, including the state treasury.

The economic forecast function in state government is part of the overall staffing of economic/policy analysis in a variety of individual agencies. In Minnesota, organizational efforts to identify and effectively utilize these capabilities include the preparation of a directory of economic/policy analysts and the organization of an economic resources work group. The directory is one of several projects under the state's productivity improvement program while the economic resources work group, which initiated the directory project, is an informal organization of the economic research managers in the six state agencies with the largest economic and statistical research budgets. This group was formed about the same time as the state's productivity improvement program was launched.

Each one of the six economic research managers in the economic resources work group maintains an analytical capability that relates largely to the mission of a department or agency illustrated by a listing of agency functions as follows:

1. The Policy Analysis Division in the Department of Energy and Economic Development has responsibility for the economic impact assessments of project proposals of other departmental divisions.

2. The Economic Analyses Section in the Department of Finance maintains the Minnesota Econometric Model.

3. The Department of Revenue supports its own Income Tax Model and Economic Impact Model.

4. The Department of Jobs and Training publishes a quarterly Labor Market Review, with monthly supplements and maintains the statistical system for managing the cooperative federal-state unemployment insurance program.

5. The State Planning Agency maintains DATANET, a fee-based subscription service which provides public access to an expanding number of statistical data sources.

6. The Metropolitan Council also maintains a small research staff to assess the economic and fiscal impacts of its own infrastructure development and service delivery programs.

In a mission-oriented organization of economic/policy analysts in state government much of the controversy associated with the critical policy issues listed earlier may not spill over to the research agenda of a single research office in state government. Economic information gaps persist because of largely agency-imposed limitations on data access and application. Some of the unattended or poorly attended issues in economic/policy analysis would include:

1. Developing long-term policy perspective for state government (e.g., seperating cyclical from structural change and show the interaction of the two on state and local government revenues and expenditures under alternative state policy scenarios);

2. Implementing strategic planning in state government administration and finance (e.g., focusing on the critical functions of each state and local agency; projecting emerging spatial-economic patterns; devising, appropriate conceptual frameworks for assessing the role of the metropolitan agglomerations and technological innovation complexes in statewide economic development; and demonstrating implications of spatial economic structural changes for state and substate regions);

3. Monitoring state, substate and multi-state regional economies, identifying the critical linkages among these economies, and assessing the economic performance of key industries and sectors and their economic implications; and,

4. Facilitating technology transfer in the public sector that effectively deals with the challenge of doing more with less (e.g., reporting on the productivity of resources used in educational institutions);

5. Timely reporting on a broad range of statistical indicators and trends.

(e.g., regional labor market conditions).

Efforts initiated by the economic resource group to provide an organizational environment for professional interchange among state economic/policy analysts include an all-day inter-agency sponsored workshop with participation of academic and state government personnel. Still being sought are organizational commitments to address the information gaps cited earlier, like the development of substate regional labor market information systems tht can facilitate the flow of accurate and timely information between prospective employers and employees of business enterprises and educational planning activities in both rural and metropolitan areas. The increasing interdependence of rural and metropolitan economies is only vaguely achnowledged in much of state government, perhaps least of all in the state's principal education and research institution.

FISCAL PLANNING

Overall state fiscal planning, unlike state economic/policy analysis resides in one agency in Minnesota--the Department of Finance. The budgetary process itself involves all state agencies, but the lead is given to a single agency in most states, as it is in Minnesota. The pivotal position of the chief budget officer in the state in overall fiscal planning helps focus the role of economic/policy analysis and forecasts in the state budgetary process.

State Budgetary Process

The budgetary process in state government depends on accurate and timely forecasts of general economic conditions as well as state revenues. Both short-term and intermediate-term quarterly and long-term annual forecasts are required for fiscal planning purposes. In addition, the setting of individual agency spending priorities depends on economic/policy studies that show the

benefits and costs of individual spending options. The portrayal of various alternative futures thus provides a framework for assessing proposed project pay-offs to the various constituencies of state government agencies and to state government itself in its revenue growth.

The critical levels of state budget preparation are identified in (1) the individual agency, (2) the Governor's office, (3) the legislature, and (4) the public. At each level of decision making various concerns about the efficiency of proposed budget allocations are squared with other concerns about the fairness of these allocations. The differential regional impacts of economic dislocation in farming and mining, for example, are cited in support of special legislative appropriations for distressed areas. These legislative measures address concerns about substate regional disparities, particularly the widening gap in job formation and income growth between the Minneapolis-St. Paul Metropolitan Area and the state's rural regions.

Individual state agencies start their biennial budgetary process shortly after the end of the last legislative session. Their efforts culminate in the negotiation of individual agency spending plans in the summer and fall months preceding the new biennium. Current spending plans are seperated from capital spending plans, with the initial focus being the negotiation of current spending based on both general and dedicated fund allocations. User fees may be introduced as an additional means of supporting current spending. The targeting of proposed capital spending may occur, also, based on economic/policy analyses of their income-generating effects.

The Governor's office, represented by the state's chief fiscal officer, asserts leadership in negotiating adjustments in the individual agency budgets which are based on at least three sets of fiscal consideration, namely, an evaluation of:

1. the forecast change in general and dedicated revenues;
2. the negotiated change in the agency share of the forecast change in general and dedicated revenues; and
3. the more-or-less constant year-by-year expansion or contraction of total spending.

Changes in any of these shares would denote a change in the relative strength of the agency's claim to state revenues.

The budgetary process in the state legislature achieves added complexity by the options it exercises in changing the total revenue package for the funding of proposed spending. The agency budgets are presumably optimized with reference to a prescribed tax base and tax rates. The legislature may exercise its option to change the tax base and/or the tax rate for a particular tax source. Thus, optimization of the legislative budget depends on the levels of general and dedicated revenues.

Since the early 1980's, state spending as a percent of gross state product (GSP) declined. In Minnesota, the biennial budget will have dropped from eight percent of GSP to nearly seven percent in the two biennial periods from 1983 to 1987. Growth in agency spending levels, on the average, is expected to decline further as a share of GSP and, also, total personal income.

Finally, a public oversight budget is offered as a means of demonstrating the "opportunity cost" of alternative state budget scenarios. Various levels of state revenues and state spending can be compared with the use of the same dollars in the private sector. Similarly, the alternative public uses of state revenues can be compared, including a reallocation of state revenues between rural areas and the core metropolitian area. Increased funding in one functional or geographical area would occur at the expense of reduced funding in another functional area. These comparisons would provide a form of

"trade-off" analysis--an assessment of the opportunity costs of increasing individual agency spending levels or of the benefits and costs using state revenues originating from the core Metropolitian area in financing education and other public services in rural areas that contribute much of the expected growth in the metropolitan area labor force.

Strategic Fiscal Planning

The state budgetary processes fit readily into a state planning framework. In state government, strategic fiscal planning conforms with its practice in muncipal government and the private sector (Wetzler and Petersen, p. 9). Major steps in the planning process are: examining the environment; assessing the current situation; setting goals and recognizing constraints; and identifying the alternatives.

In examining the environment, fiscal planning leans heavily on economic forecasts and analysis as a basis for understanding the impact of uncontrollable external events (Brehenz and Roberts, 1980). This is comparable to a market study in the private sector. Both the U.S. economic forecasts and related assumptions and the Minnesota are included in this step.

Assessing the current situation involves an objective weighing of government's existing internal financial condition and its ability to meet the demands placed upon it. This step sets the stage for setting goals and identifying the internal variables over which government has some control. For policy-related research the separation of explanatory variables into those that are controllable and those that are not is essential. For example, a state agency may use a travel cost model in a benefit-cost analysis of its system of state parks and other recreation facilities. An extended version of such a model may include one or more controllable variables to demonstrate the effects of changes in state recreation policy on the willingness of state park

visitors to pay for additional facilities that would result in a corresponding increase in visitor participation in park-related activities (Tambunan, 1986).

Goal or direction setting comes after a full accounting of both external and internal factors affecting government operations. It concentrates on the allocation of fiscal resources, exemplified in the budgetary processes that achieve consistency between the forecast and the decision and that also take into account the implications of differentials, regional levels of state revenue transfers, and expenditures for the state and its substate regions. Ranges of values as well as trade-offs among outcomes would be prepared as acknowledgement of the risks and uncertainities involved in achieving explicitly-stated goals.

The truly creative part of strategic fiscal planning comes in identifying the alternatives. This phase brings together the tactics to implement the goals that have been articulated and the evaluation of performance once the goals are implemented. This is also the first step in fiscal analysis.

Fiscal analysis is readily reduced to an assessment of the two basic requirements of government: the raising of revenues and the allocation of these revenues among alternative uses. In another paper, my colleagues, Schallau, Akhavipour, and Olson, and I discuss the building of a government module that addresses these two basic requirements in terms of its two components--the tax model and the budget model (Maki, Schallau, Akhavipour and Olson, 1986).

In summary, strategic fiscal planning looks to economic/policy analysts, not only for state economic and revenue forecasts, but, also, for the capabilities to build and creatively utilize a model of the budgetary process that makes its critical contribution by presenting scenarios of alternative state economic futures. These scenarios show the state and local economic

implications of varying levels of state government participation in regional growth and change. Such scenarios also can show the statewide and regional consequences of state-initiated efforts to reduce the ever-widening gap in job creation and income growth between rural and metropolitan areas. If a measure of risk and uncertainty were built into the forecasts and analysis, then state fiscal planning may respond with a corresponding flexibility of action, as happened in Minnesota in the establishment and subsequent use of a $400 million "rainy day" fund to cover an unanticipated revenue shortfall.

UNIVERSITY PARTICIPATION

Participation of the academic community in the building of a strategic planning capability in state government varies, or will vary, from state to state. Much depends on the commitment of the state's major academic institution to the support of multi-disciplinary, policy-oriented, state and regional research. For those states with strong support for such research, academic participation in the technology and methodology of state fiscal planning would present learning opportunities for both teachers and students. Where academic institutions preserve a singular dedication to traditional research along strict disciplinary lines, the prospects for constructive and synergistic interchange with researchers in state government would depend mostly on individual efforts that gain minimal, if any, recognition from either the academic institution or state government.

From the perspective of economic/policy analysis, academic participation would include the building of state and substate regional data base support, the monitoring of cyclical and structural changes in state and substate regional economies, the facilitating of access to state and local statistical resources, and the networking of state and substate regional applied research

centers. The applied research centers would perform a unique role in combining the commitment of local people to the solution of local problems with the specialized expertise of a state's major research institution.

Much of the data base support for strategic planning in state government would come from individual student and faculty research on regional input-output, growth, and allocation models. It would include related computer programs for compiling selected statistical series and estimating model parameters and variables. Kenneth Johnson's Master Thesis on the state budget process in Minnesota is an example of graduate student research directed towards the construction of a computer model for state economic/policy analysis (Johnson, 1985).

The monitoring of cyclical and structural changes in state and substate economies calls for continuity of effort as well as cooperation among regional applied research centers. It offers only limited opportunity for graduate student research activity. Of critical importance to this task is sustained access to sufficient resources for tracking key economic indicators and interpreting changes in these indicators for the various sectors and regions of the state's economy. Similar resources are needed for demonstrating the effects of alternative market and policy scenarios on state and substate economies. The use of small research grants to support a research assistant or two with minimal professional guidance would be less than adequate for these purposes.

Similarly, the information exchange tasks, while less inviting of academic participation than data base development or the monitoring of state and substate economies, are an integral part of the technology transfer function of regional applied research centers. Again, a continuity of financial support is a necessary, if not a sufficient, condition for the maintenance of

an expanding information exchange system based on informal, interdependent arrangements among researchers and analysts which can "evolve over time and can easily ignore bureaucratic and institutional boundaries in executing their mission." (Foresight Task Force, 1983, p. 25).

Finally, the organization and maintenance of networking arrangements between the regional applied research centers and state's principal research university establishes a framework for achieving economies of scale in the organization of research activities. If the regional applied research centers were staffed by the regional post-secondary institutions, the networking arrangement would serve also to facilitate internal staff development and reduce wasteful diversion of educational effort from individual students to local business enterprises.

SUMMARY AND CONCLUSIONS

The principal purpose of this paper is to relate the role of the economic forecast and analysis functions to fiscal management in state government and to assess the implications of change in both functions for the organization of state and regional research in state government and the academic community. With state governments assuming an increasingly important role in the financing and management of the essential infrastructure of state and regional economic growth, like education and health care as well as roads, highways, and wastewater treatment systems, the need for accurate and timely decision information is also increasing. Meanwhile, the growing fiscal responsibilities of state government add to the urgency of improving the state budgeting processes, starting with the individual agencies and the reconciling of their budgets with overall state spending goals and comitments.

A strategic vision is called for in the new fiscal planning--a vision that

can deal with the increasing risks and uncertainities of state fiscal management in the context of long-term changes that fundamentally affect the economic well-being of the state and its people. These changes are affecting the industry composition of the state's economic base and also its geographic distribution. In Minnesota, for example, industry prospers in the metropolitan core region extending from St. Cloud to Rochester while severe economic displacement is being experienced by a growing number of businesses in rural counties.

State government, in its efforts to ameliorate the painful adjustments to a changing economic order, is severely limited in its fiscal services. The burden of financing the traditional functions of state government in infrastructure development and services delivery is growing at the same time that state government is called upon to intervene financially in behalf of the state's troubled industries and communities.

State economic forecast and analysis functions relate to a pressing need for a new strategic vision and the fiscal decisions that emanate from it. State government and the academic community, including the regional post-secondary educational institutions, are partners in this continuing effort to increase the effectiveness of state government in improving the productivity of its human and capital resources and coping with the economic displacement that accompanies the transition now underway to a new economic order.

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