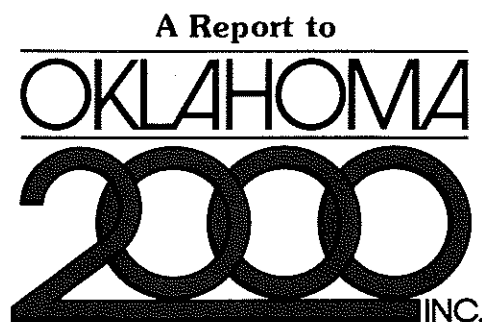

**STATE POLICY
& ECONOMIC
DEVELOPMENT
IN OKLAHOMA: 1991**



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STATE POLICY AND ECONOMIC DEVELOPMENT IN OKLAHOMA: 1991

**A REPORT TO
OKLAHOMA 2000, INC.
by**

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PREFACE

The policies of state governments are an important segment of the business environment and significantly affect the economic growth potential of those states. These policies are expressed through administrative procedures, legislative action, regulatory rulings and court decisions. As exemplified by the diversity of the issues covered in this issue, the impact of state policies is wide ranging. Local issues, such as the state's educational and tax policies, and even international developments, such as the changes in Eastern Europe, have significant long-term economic consequences for Oklahoma.

The authors addressing the topics in this issue are professors at three of Oklahoma's universities and a private consultant. Each is an expert in his respective field and knowledgeable about economic issues in Oklahoma. As in previous years, the research team, in conjunction with members of the Board of Directors of Oklahoma 2000, Inc., selected the topics for 1991.

The views expressed herein are those of the authors and should not be attributed to the officers or directors of Oklahoma 2000, Inc.

Economic development concerns remain important in Oklahoma as policy makers search for strategies of growth and diversification. It is encouraging that these issues retain significant presence; the legislation and policies show a clear trend toward diversification and interest in higher value added industries. These concerns remain important in this 1991 edition of the *State Policy & Economic Development in Oklahoma*. In this issue the authors consider both the background of the issues and their longer-term implications.

The Oklahoma Legislature passed major, controversial legislation concerning education in HB1017. A chapter on HB1017 puts it in perspective as authors review the provisions of the bill and some of its historical precedent. They point out that given the history of school consolidation, one should not be surprised that consolidation is a major reform issue in Oklahoma. Another chapter concerning education reform concerns the issue of choice available to parents. That is a continuing issue in the U.S., and the author suggests that it is becoming a significant issue in Oklahoma. This chapter discusses both the pros and cons of the issue. A related chapter concerns the lessons learned from the Oklahoma effort to land the Super Collider project. A key participant in the proposal effort reviews the difficulties that Oklahoma had to overcome in the competition as well as Oklahoma's strengths. Key among the infrastructure weaknesses pointed out by reviewers was the educational and scientific research base in Oklahoma.

Other state government activities that influence economic growth include the regulations and taxes

that directly affect business. Of course, these fundamental functions of government are critically important to the state's economic environment. The policy issues in such instances relate to the efficiency of government. That is, the efficiency with which the critical functions of government are performed is a critical element of the state's economic environment. Several chapters relate to those kinds of concerns, especially ones which are relevant to the long-term economic viability of Oklahoma. For example, one chapter observes the significance of the cotton industry in Oklahoma and the regulation of cotton gins by the state. Another chapter considers state policies concerning medical care for the uninsured. This is an increasingly significant national issue, and the author suggests that by its nature it will be increasingly important in Oklahoma, as well. He advises the Legislature to resist mandating employer-provided health insurance plans. In another chapter, the changes in Oklahoma's tax base over the past decade, and their implications on economic development, are considered. And in a related topic, the many state programs for providing business financial assistance are detailed. The author points out the range and diversity of these many programs in Oklahoma.

When one views the topics in this issue in their entirety the long reach of state government's policies is apparent. That helps put the role of state government into perspective. Appropriate state policies are a prerequisite for diversification and development.

STATE GOVERNMENT PROVISION OF BUSINESS FINANCE IN OKLAHOMA

This report's main purpose is to introduce the major programs used by state government in Oklahoma to provide debt and equity capital to private business in order to promote economic development. A dozen separate activities are described. These include the Oklahoma Industrial Finance Authority, the Oklahoma Development Finance Authority, the Oklahoma Capital Investment Board, two linked deposit programs for agriculture and small business, oil overcharge funds, small cities the Community Development Block Grant program, the Community Services Block Grant program, a proposed Seed Capital Revolving Fund, the Oklahoma Ordnance Works Authority, tax credit-stimulated venture capital companies, and the Oklahoma Housing Finance Agency.

Before discussing the specifics of the individual programs, the reader is reminded of some of the fundamental economics of business investment and economic growth. An overview of the mechanics of business finance programs is provided. Since state government policy is the result of state politics, note is taken of some of the reasons why state government provision of business finance has become so important since the early 1980s. The report concludes with a brief assessment.

THE BASIC ECONOMICS OF BUSINESS INVESTMENT

In the system of national economic accounts, the term "gross private domestic investment" includes the following components of current production:

- Producers durables (machinery and equipment used by business).
- Non residential construction (buildings and facilities used by business).
- Residential construction (housing facilities rented or owned by occupants).
- Change in business inventories.

This real investment represents additions to the nation's future ability to produce and sell goods and services (including housing services). The rate at which an economy is able to expand over time is directly related to the degree to which current production is allocated to real investment as opposed to output which is currently consumed. The relatively slow growth of the U. S. economy in comparison with several other major industrial nations is due largely to the fact that others place greater emphasis on investment.

There is no statistical measure of gross private domestic investment at the state level. Nevertheless, it is clear that the economic development of Oklahoma is critically dependent on the level of private investment within the state's borders.

In a free enterprise economic system, most investment is financed from private sources. Businesses pay for investment projects and inventory accumulation with individual savings and retained earnings, the sale of stocks and bonds, loans from financial institutions, and even borrowing from family and friends. Residential construction is financed largely through individual savings, and through loans from financial institutions.

If funds are not available at all, then investment will not take place. Nor will investment take place if interest rates charged by lenders are too high in comparison with the economic returns expected as planned projects generate new revenues from the production of additional goods and services. More precisely, since there is always a range of possible investment projects with varying risks and potentials for returns, lower interest rates will usually stimulate a larger volume of investment.

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If funds for investment in a state or region are not available at all and/or are available only at too high a cost, then a case can be made that government should intervene so that desired private investment spending may occur. Governments do this by providing funds for loans (or even equity), by providing lower-than-market interest rates, and by guaranteeing loans made by private institutions. State government in Oklahoma stimulates private investment through a variety of finance programs which are discussed below.

Before proceeding, it is important to distinguish the term "investment" or "real investment" as used herein from its more commonplace usages. People often speak of "investing" when they buy previously issued stocks and bonds. A business person may also use the term to apply to the purchase of another operating business concern. Note that in *neither* of these cases is any *new* productive capacity created. As important as the trading of stocks and bonds and the purchase and sale of business firms may be in the world of business, such activities, *in and of themselves*, do not generate economic development because no real investment is involved. Thus, as a general rule, *when government provides business finance, it should be sure that real investment will take place and there is a true link to economic development*. Appropriate government financing can also involve credit enhancement necessary to sustain and expand the operation of already existing physical capital facilities. Otherwise, government provision of business finance simply benefits particular individuals much as is the case with transfer programs such as unemployment insurance benefits and public assistance.

Within the various types of real investment, there are differing impacts on state economic development. Economists and planners emphasize the importance of *basic* (export) activities bringing in a flow of financial resources from outside the state. Important largely basic sectors in Oklahoma include manufacturing, oil and gas production, farming and ranching, and federal government installations. Expansion in these sectors has a *multiplier effect* on non-basic (local-service) sectors such as retail trade, financial services, utilities, communication, and state-local government.

The distinction between basic and nonbasic activities is not always easily made in the real world. For example, tourism services are a basic activity when they bring in people from outside Oklahoma. A tourist attraction drawing primarily Oklahomans

may be good for the development of a particular community, but will have no net growth impact on the state as a whole. The same can be said of such sectors as retailing and automotive services. Moreover, a typically non-basic activity such as medical services can have a multiplier effect when its expansion leads Oklahomans to buy from Oklahoma providers rather than from out-of-state providers. This latter situation is one of *import substitution*.

The basic economics of investment suggests the following propositions about state financing of business development aimed at promoting state economic development.

- Projects should always involve real investment or the activation of idle capital equipment.
- Projects not meeting the above criteria will not have a positive impact on economic growth; recipients of such financial aid gain at the expense of general taxpayers.
- Supported projects should involve basic sectors of the state's economy or should have strong import substitution characteristics.
- Funding of non-basic real investment will have little or no overall impact on the level of economic activity within the state even though there may be favorable impacts on particular communities.

One further caveat should be considered when government gets involved in business finance. *The government program should make a difference. It should cause real investment to occur which would otherwise not have taken place*. Often this is expressed in the form of the idea of public provision of "gap" financing. Public funds or guarantees are needed to provide just enough more to privately provided funds so that a proposed project can become a profitable reality. For high-risk projects, this gap may approach 100 percent of the project cost. This also means that public resources do not become a complete substitute for private risk.

THE MECHANICS OF STATE PROVISION OF BUSINESS FINANCE

Whenever state and local governments or their agencies issue debt, make or guarantee loans, or even acquire an equity position in a private enterprise, legal controls are extensive. No attempt is

TABLE 1
Site Selection's Report of State Financial Assistance for Industry, 1989

	States with Program, United States	Oklahoma	Arkansas	Colorado	Kansas	Missouri	New Mexico	Texas
State sponsored industrial development authority	38	*	*	*		*	*	*
Authority or agency revenue bond financing	44	*	*		*	*	*	*
Authority or agency general obligation bond financing	15	"						
Loans for building construction	40	*	*	*		*	*	*
Loans for equipment, machinery	39	*	*	*		*	*	*
Loan guarantees for building construction	25	"		*		*		*
Financial aid for existing plant expansion	43	*	*	*		*	*	*
Matching funds for city and/or county industrial financing programs	21			*				*
Incentive for establishing industrial plants in areas of high unemployment	33	*	*	*	*	*		*

Source: *Site Selection*, Oct., 1989, p. 1220.

*Although not reported in the source, these programs are available in Oklahoma.

without such a program believes that it will have difficulty being competitive in the furious race for business attraction and development.

The discussion now turns to a review of twelve activities of business finance used by Oklahoma state government.

The Oklahoma Industrial Finance Authority

The OIFA is the original program used by the state of Oklahoma to stimulate economic development through the provision of business finance. Its basic procedures involve issuing general obligation bonds and using the proceeds to establish a fund from which loans are made to local industrial parks. As loans are repaid, additional borrowers can access the fund. The agency was established in 1960, when the Oklahoma electorate voted author-

ity to issue up to \$10 million in bonds. Its bond issuing authority was raised to \$20 million in 1968 and to \$90 million in 1986.

Prior to 1986, OIFA loans could cover only up to 25 percent of the cost of a project; constitutional changes adopted in 1986 permitted OIFA to assume a more significant role in individual project funding. The agency can now loan up to two-thirds of a project cost when the loan is secured by a first mortgage, and up to one-third when secured by a second mortgage. In order to spread the loanable funds among a large number of projects, law provides OIFA first mortgage loans cannot exceed \$2 million per project and second mortgage loans cannot exceed \$1 million.⁶ In fact, the OIFA has set its loan maxima even lower—at \$1.25 million and \$750 thousand, respectively. There is also the expectation that one new job is created in Oklahoma for every \$30 thousand of OIFA money.

- Risk capital which had flowed readily into the state during the oil boom virtually dried up.
- The Oklahoma business community's reputation in business finance was badly tarnished as a result of dramatic national coverage of the Penn Square bank failure.
- Financial institutions' loan portfolios were subject to increasingly stiff quality requirements by federal and state regulators.
- In all too many cases, the collapse of financial institutions put borrowers in the position of having to deal with new management; long-standing personal financial relationships based on experience and trust vanished into thin air.

For many, the above listing provided reason enough for Oklahoma state government to become more involved in the provision of business finance. However, a potentially strong argument against such expanded involvement involves a conservative, laissez faire position concerning the proper role of government in business finance. This position asserts that during the 1980s Oklahoma in fact became a relatively poor place in which to invest when compared with many other parts of the nation. Business people and politicians railing against the state's "capital short" condition were failing to recognize a basic fact of economic life. Individuals and firms with funds to commit to real investment projects could earn greater risk-adjusted rates of return elsewhere. The conservative argument further reminds the observer that there are no legal or institutional barriers to the free flow of financial capital within the entire United States. No one was blocking funds from entering Oklahoma nor preventing Oklahoma funds from seeking opportunity outside the state. Moreover, so the argument goes, the overall level of real investment in the United States is determined by macroeconomic conditions totally beyond the influence of any state government.

This laissez faire argument scarcely surfaced in Oklahoma in the discussions of state business finance after the energy bust though it was a philosophical basis underlying the 1987 report of Financial Industry Task Force prepared in connection with the state's five-year economic development action plan.³ Beyond the political imperative of economic conditions to *do something*, Oklahoma participated fully in a major trend of increased

involvement in business finance by state government occurring throughout the nation. In a 1990 book on economic development finance, Hill and Shelley point to the role of "policy entrepreneurs" and interjurisdictional competition as crucial to the development of new state government frameworks for providing business finance. They describe how the concept of a regional capital gap was developed in New England during the 1970s when that region was in dire economic straits.

The growth of public sector financial institutions is a political response by state government to the decline of traditional manufacturing and to the restructuring of large parts of America's industrial landscape. These institutions are now perceived by politicians as being part of a technology- and entrepreneurial-based business climate, as opposed to a business climate that encourages routinized manufacturing. Governors and development officials use the existence of these institutions as proof that they are acting to influence the direction of development in their states. The continued existence of public sector financial intermediaries is now dictated by interjurisdictional economic competition and the demands of elective office. The creation of these institutions, however, can be attributed in large part to the work of four policy entrepreneurs: Howell, Katzman, Litvak, and Daniels. They provided a policy product that passed the market test.⁴

The Daniels referred to in the above quotation is Belden Daniels, the principal consultant to the Oklahoma Legislature during 1986 and 1987 as the Oklahoma Economic Development Act of 1987 was crafted and passed.⁵

There certainly can be no doubt concerning the degree of interjurisdictional competition in the adoption of new state programs for business finance. Table 1 is derived from *Site Selection*, a trade magazine for industrial and economic development specialists and shows the incidence of various types of state business finance programs in place in 1989. It is a fact of life that most states, including Oklahoma and its neighbors, are involved in the provision of assistance of one form or another. In this environment, the laissez faire argument against such policies becomes virtually moot. A state

made here to cover the nature of these controls. Rather, the basic outlines of state actions are reviewed with the warning that the real world is much more complex.

The typical technique by which assistance is provided involves the government unit issuing bonds to the public and using the proceeds of the bonds to make business loans. The bonds issued may be general obligation (GO) bonds backed by the full faith and credit of the government, i.e. by its taxing power. Or the debt may involve revenue bonds to be repaid only from the revenues from a particular project.

Since these industrial bonds first began to be used during the late 1930s, they were typically tax exempt.¹ Because they were issued by units of state and local government, bondholders' interest receipts were exempt from federal taxation as well as taxation in the state in which they were issued. This meant that wealthy taxpayers could afford to accept a lower rate of return than on taxable bonds so that governments could then provide financial capital to private business at favorable rates. This was a substantial tax loophole which has now been largely abolished by federal legislation—particularly by the Tax Reform Act of 1986. (In Oklahoma, this "double tax exempt" status is currently not uniformly available to all state and local government agencies issuing bonds.) Even without the tax exemption, investors look favorably on the low risk offered by general obligation bonds issued by reliable units of government.

Loans may be made directly to business, or to an intermediary. Some Oklahoma state government loans are made only to local industrial development agencies, which in turn provide funds to business.

In some instances, the loan is made by a private financial institution or through private bonds, with the loan guaranteed by a government unit with the authority to issue bonds in the future to cover the private loan in case of default.

As a lender, the government unit usually has claims of some sort on the assets of the entity receiving the funds. The terms of collateralization can be quite complicated and are beyond the scope of this report.

There are other methods of finance such as interest subsidies, the purchase of equity (outright ownership), and loans from governmentally operated trust funds (principally retirement programs). Sources of public funding can come from appropriations by governing bodies, though this is not a

widely used practice and is not yet a feature in the Oklahoma scene.

There is a further aspect of state programs of business finance which is almost always present, i.e. the provision of information and technical assistance to businesses seeking financial capital. State lending and related agencies often provide information services such as the development of business plans, training in business finance, and providing contact with additional outside sources of capital. These services can make a critical difference for small or start-up enterprises without sufficient initial sophistication to obtain financial capital.

This report focuses on business finance assistance at the state government level. Under provisions of state law, local jurisdictions can also provide business finance. A 1962 amendment to the Oklahoma Constitution provides that local industrial bonds may be issued directly by counties or cities (Art. 10, Sec. 35). Local trust authorities may issue revenue bonds under terms of the 1951 Oklahoma Public Trust Act and the 1961 Local Industrial Development Act.² It is not unusual for the various state government business finance programs described below to be blended with funds from a local program.

RECENT EMPHASIS ON STATE GOVERNMENT PROVISION OF BUSINESS FINANCE

State government policies to promote economic development involve a wide range of measures related to tax law and administration, functional expenditure levels such as education and highways, and regulation of business. The Oklahoma Economic Development Act of 1987 treated an extensive range of economic development policies and placed heavy emphasis on business finance. The collapsing energy economy of Oklahoma and a weakened agricultural sector helped create a political environment supportive of a comprehensive overhaul of the state's economic development effort. It is not surprising that this overhaul emphasized business finance. After the negative energy shocks of 1982 and 1986, many Oklahoma businesses found it difficult if not impossible to acquire funds to finance real investment projects. Several factors were at work.

- The deteriorating general condition of the state's economy increased risk for many new proposed projects.

Six of the Authority's seven-member Board of Directors are appointed in staggered six-year terms by the Governor, one each from the state's six congressional districts. Members must generally have extensive professional experience in business finance. These appointments require the advice and consent of the Oklahoma Senate. The seventh member is automatically the Director of the Oklahoma Department of Commerce who is also a gubernatorial appointee. During the 1989 fiscal year, the agency had a total of 8.1 full-time equivalent employees, and administrative expenditures of about \$500 thousand. Staff is organized into lending, finance, and administrative divisions.

Of the \$90 million in general obligation bonds authorized by the constitution, about \$70 million was committed as of the summer of 1990. Although the early bonds issued by the OIFA were tax exempt, most of those issued in recent years have been taxable. The typical loan made to local agencies is for a fifteen year period with a variable interest rate set at 300 basis points (3 percentage points) above the agency's cost of money, subject to a 14 percent maximum and 8 percent minimum.

The predominance of OIFA loans have helped finance manufacturing facilities or industrial parks to hold manufacturing facilities. At mid-term 1989, there were 79 different plants in 52 communities throughout the state operating with funds from active OIFA loans.⁷ In 1989, the agency began to operate with a broader conception of the sorts of enterprise which could be funded. A loan of \$1.56 million was approved to the Eufaula Industrial Authority for improvements to be implemented by the Fountainhead Resort Hotel, Inc. The resort is in a location and is of a scale and quality which draws a large volume of out-of-state tourists; such tourist spending has essentially the same impact on the state's economy as would be associated with a manufacturing plant selling its output out-of-state. In the future, loans could be made which are linked to health care and business services—two areas with significant economic development potential in Oklahoma.

It looks as though the additional lending authority created by the 1986 constitutional amendment will be used up some time in 1990 or 1991. Unless more bonding authority is granted, after that, OIFA's loans will be limited to funds made available by repayment of old loans. Given the rapid rate at which the \$70 million in new authority has been sopped up, there is little doubt of the agency's meeting a market test of business finance need.

The Oklahoma Development Finance Authority

The largest of the state agencies providing development finance is the Oklahoma Development Finance Authority (ODFA). The agency was created in 1974 and was known as the Oklahoma Development Authority (ODA) until its modification by the Oklahoma Economic Development Act of 1987. The agency was created as a state beneficiary public trust to provide a mechanism to make capital available to qualified borrowers in both the public and private sectors. From its first projects in 1978 through June 30, 1990, ODFA generated \$1.8 billion in financing for private enterprise, schools, hospitals, and other governmental entities.⁸

The ODFA does not receive any state funding nor does it have a pool of funds from which it makes loans. It provides financing by selling bonds or notes to commercial banks or investment bankers who resell them in the public finance markets. These funds are then loaned by the ODFA to qualified borrowers. Payments made by the borrowers provide the revenue to retire the notes and bonds. ODFA operating expenses and reserve requirements are covered by receipts from loan application and administration fees.

Day-to-day management of the Authority is the responsibility of the president who serves at the pleasure of the Board of Directors. The seven-member Board is composed of the Director of the Oklahoma Department of Commerce, one member appointed by the Governor and confirmed by the Senate to a two year term, and the remaining five members serving six year staggered terms, also appointed by the Governor with Senate approval. As a result of the Economic Development Act of 1987, ODFA and other bond issuing agencies in state government must also have new debt issues approved by legislative and executive branch Bond Oversight Commissions.

Two significant legislative actions have had a profound impact on the ODFA in recent years: the Federal Tax Reform Act of 1986 and the Oklahoma Economic Development Act of 1987. Prior to the Tax Reform Act, the activity of the ODFA involved the issuance of tax-exempt industrial development bonds (IDBs) to fund loans that would enhance Oklahoma's economic growth. The trust indenture which created the agency provided a means to not only provide assistance to private sector enterprises, but also cities, counties, schools, and state government itself.

During the first half of the 1980s the use of the ODFA to finance public sector activities experienced extraordinary growth. During the five-year period, 1982-1986, the agency issued \$1.5 billion of debt. This growth was brought about by the unique financial market conditions of this period which allowed the borrowers such as ODFA to reinvest loan proceeds and earn a yield which was significantly higher than the amount being paid on the note. This arbitrage allowed the public entity to borrow money interest free. Such practices throughout the nation helped lead to their control through the Tax Reform Act of 1986.

Many governmental entities in Oklahoma chose to use ODFA as a vehicle to take advantage of this opportunity during the early 1980s. As a consequence, public sector financing represented most of the ODFA loan activity during this period. The Authority issued over \$513 million in obligations in 1983 and 1984 to provide capital for such programs as "advance funding" for school districts and county governments. The programs allowed these agencies to significantly reduce their interest expense and avoid delays in starting construction projects that were partially funded by approved (but not allocated) federal funds. In response to the Tax Reform Act of 1986 and changing national economic conditions and financial markets, this activity had all but ended by 1987.

The Oklahoma Economic Development Act of 1987 transformed the agency into what might be called a "super trust" and changed its name from ODA to ODFA. The legislation explicitly expanded the role of the Authority to provide financing to:

- complement the state's private financial institutions
- promote . . . the expansion of existing and the establishment of new agricultural . . . and industrial enterprises
- promote . . . export trade of state products
- assure . . . sources of energy
- provide health care facilities
- provide capital improvement facilities
- provide . . . an infrastructure program
- provide education facilities
- provide additional facilities, enterprises and projects
- [and] provide for short-term advance funding and the purchase of the obligations of political subdivisions.⁹

As mentioned above, the Tax Reform Act of 1986 and the changes in the world financial markets in the late 1980s eliminated much of the funding that had been available for tax-exempt financing. The Oklahoma Legislature recognized that it would have to provide a mechanism to allow the ODFA to attract the necessary capital at cost effective rates of interest which were not always tax exempt. To accomplish this goal, the Oklahoma Economic Development Act of 1987 provided for the establishment of the Credit Enhancement Reserve Fund.

The Credit Enhancement Reserve Fund, which is administered by the ODFA, reduces the borrower's interest cost by securing Authority bonds with the capacity to issue state general obligation bonds to cover any interest and principal payment insured by the fund. In essence, the bondholders are guaranteed that their money will be repaid by substituting the borrower's credit with the guarantor's credit, thereby reducing the risk on the bonds. This technique gives many borrowers access to credit markets that would otherwise not be available to them. As a result of the passage of State Question 610 in 1988, ODFA was authorized to issue up to \$100 million of Credit Enhancement Reserve Fund General Obligation Bonds to secure issues of the Authority. The Fund will operate as an uncapitalized insurer, issuing bonds only in the event that a borrower defaults on a loan.

The 1990 session of the Oklahoma Legislature added an additional layer to the administrative system of checks controlling the issuance of debt under the Credit Enhancement Reserve Fund program (SB460). A three-member Program Development and Credit Review Committee must approve of any program development or commitment prior to any action by ODFA. This committee consists of one member appointed by ODFA, the State Bond Advisor and a third member appointed jointly by ODFA and the State Bond Advisor. Thus the ultimate control of the financing which can be made under the Credit Enhancement Reserve Fund program was essentially removed from control by ODFA. ODFA programs in place and planned which are eligible for credit enhancement insurance include, but are not limited to:

- ODFA's Pooled Business Financing Program to meet the fixed asset financing needs of qualified borrowers requesting \$200,000 - \$5,000,000. (Under SB 460, the new limit is \$2,500,000 and all future loans must not exceed \$1,000,000 in order to

reduce the average loan size to meet new Legislative standards.)

- ODFA's Public Infrastructure Financing Program for small unrated communities identified by the Oklahoma Department of Commerce as priority projects. (expected, spring 1991)
- The Small Business Credit Enhancement Program will benefit firms with under 20 employees, having sales of less than \$1.5 million, with a maximum guaranteed loan amount of \$250,000. (expected, spring 1991)

Although the constitutional authority to obligate the general revenue of the state to back the Credit Enhancement Reserve Fund was achieved in September of 1988, implementation of the program was slowed in 1990 by a "series of legal and procedural hurdles" including a moratorium on loans imposed by the Bond Oversight Commissions.¹⁰ The moratorium was lifted following passage of SB460 and bond issues were approved for nearly \$31.5 million for 15 industrial expansions. However, some provisions of SB460 and Attorney General's Opinion No. 90-31 brought new legal-procedural hurdles against further use of the Credit Enhancement Reserve Fund.

In addition to the debt financing and credit enhancement programs, the ODFA provides free technical assistance and information to potential borrowers and other groups who may not be aware of the services available from the Authority. The ODFA staff will provide potential borrowers with an analysis of their financial needs and offer suggestions on how these needs can be met. The ODFA staff may also be able to suggest other sources of financing that may be more appropriate for a potential borrower than ODFA's program. The Authority is also actively involved in the education of economic development groups, financial institutions, schools, and other interested groups on the various programs offered by the ODFA.

Oklahoma Capital Investment Board

The Oklahoma Capital Investment Board (OCIB) was established by the Oklahoma Economic Development Act of 1987 as a separate administrative unit within the Oklahoma Development Finance Authority. The statutory mission of OCIB is "to mobilize new private sector equity capital for investment in such a manner that will result in a significant potential to create jobs and to diversify and stabilize" the state's economy.¹¹

The logic behind OCIB is that a significant source of long run economic growth comes from the creation of new enterprises within the state, and because these entrepreneurial activities are innately high risk ventures, they frequently have difficulty attracting the capital necessary to give birth to a potentially successful business. It has been recognized that growth from within may offer greater opportunity than the traditional economic development strategy which attempts to attract corporate headquarters from other areas.¹² Historically, corporate headquarters remain where the company is founded; therefore, if Oklahoma can create an environment conducive to new business formation, it will help build the foundation necessary for long-term economic prosperity based on a diversity of business activity. In addition, the corporate headquarters are particularly attractive because they generate high-paying, relatively non-cyclical, environmentally benign jobs.

To achieve this goal the OCIB has the authority to guarantee a maximum of \$10 million in loans per fiscal year, up to an aggregate of \$50 million. These guarantees can be in the form of put options (rights to purchase) or other such methods as selected by the board, in an amount not to exceed 50 percent of the principal amount of invested capital of an investor group or groups or investment portfolio or portfolios. And guarantees, in whatever form, may be made for any period of time, but no term shall expire prior to July 1, 1990, nor after July 1, 2015.

Should it become necessary for the OCIB to honor a guarantee, it will raise the necessary cash by selling credits against Oklahoma's income tax. The guarantee is for the principal amount only and the sale of tax credit will only be for the amount of the guarantee. To provide for an orderly funding process in the case of a default, and to be able to demonstrate to investors that the guarantee is funded, a consortium of businesses with a total tax liability of \$20 million will be established. This consortium would provide the potential for twice the required tax credits in any one year, and therefore should provide ample reserves. According to the OCIB FY 1991 Business Plan:

In May, 1990, the Board committed to extend a limited guarantee to an investment fund managed by the firm of Reimer & Koger Associates, Inc. of Shawnee Mission, Kansas. A \$20 to \$40 million fund will be raised for the purpose of investing growth capital in promising Oklahoma business. Reimer & Koger

Associates, Inc. was founded in 1973 and currently manages assets of \$902 million for 60 clients. The firm has approximately \$600 million in public equity and fixed income accounts, and approximately \$300 million in direct placements, primarily as mezzanine stage investments in the State of Kansas.

The firm plans to establish an Oklahoma office and employ a local fund manager, yet to be named. Funds will be raised from the institutional market, with fund raising projected to take six to twelve months. The Board is also reviewing a guarantee application from the OKC Innovation Center, of Oklahoma City. The Innovation Center is researching the feasibility of establishing a \$10 million early stage venture capital fund, with offices in Tulsa and Oklahoma City. In part, the Fund would support the work of rural Oklahoma's growing network of small business incubators by providing a new source of investment capital for young entrepreneurial companies.¹³

According to Reimer & Koger, the fund will specialize in what is referred to as "mezzanine" finance for firms in need of capital but without extensive fixed assets which could be used as collateral.¹⁴

Although the OCIB is located administratively under ODFA, its board of directors is quite separate. A five-member board is appointed by Oklahoma Futures. Oklahoma Futures is the state's central economic development policy and oversight board created by the Oklahoma Economic Development Act of 1987 to advise the Department of Commerce and related economic development units. Board members are supposed to "possess experience in the management of investments similar in nature and in value to the portfolios of the Authority [the ODFA]."¹⁵

Linked Deposit Programs

In 1987, Oklahoma state government implemented its Agricultural Linked Deposit Program and a year later the same principle of state aid to business finance was extended in the form of a Small Business Linked Deposit Program. Both programs make it possible for qualified applicants

to borrow money from banks at below market rates. This is accomplished by the State Treasurer placing certificates of deposit with approved banking institutions at below market rates in exchange for the banks making loans at correspondingly reduced rates. In general, these CDs may be placed at lending institutions at 3 percentage points below the current rate on two-year U.S. Treasury notes. The lender may then add up to 5.5 percentage points to the reduced CD rate as the maximum charged to the borrower.¹⁶ A November, 1990 report of a Special Commission to Review the State Treasury notes a conflict between these below market CDs and the basic responsibility of the Treasurer to manage state funds with good business practices. The Commission concluded that the linked deposit programs should be removed from the jurisdiction of the Treasurer.

The CDs placed by the Treasurer with lending institutions must have a maximum maturity of two years with the option of an additional two-year renewal. For enterprise zones, these maxima are raised to three years. The two linked deposit programs may not absorb more than 15 percent of the Treasurer's investment funds.

As of October 1990, \$231.7 million in linked deposit loans had been funded, of which 143.7 million or 62 percent was through the agriculture program, with the small business program accounting for 38 percent of the total or \$88.0 million.

Two options qualify borrowers for the reduced rate loans through the Ag-Link Program. The At-Risk Farmer or Rancher Option is available to those with at least 60 percent of their gross income from farming or ranching and a debt-to-asset ratio greater than 40 percent. The qualified applicant is required to prepare a management plan with the assistance of Oklahoma Cooperative Extension Service Intensive Financial Management and Planning Support program, or the Farm Business Management Program of the State Department of Vocational-Technical Education.

Prospective applicants can choose a qualified lender who is willing to participate in the program. The lending institution is responsible for making final application for the linked-deposit loan with the State Treasurer. The Treasurer forwards the application to the Oklahoma State Board of Agriculture which is responsible for approving or rejecting the application.

The proceeds of an Ag-Link loan may only be used for operating a business or refinancing loans made to operate a business. The maximum loan

amount allowed through the program is \$350,000 per farm or ranch operation.

The second qualification option available for Ag-Link loans is through the Alternative Products Program. The objective of this program is to stimulate the development or expansion of agricultural products which will broaden Oklahoma's agricultural economic base. A list of the products which are eligible for this program is prepared annually by the Director of the Cooperative Extension Service and submitted to the State Department of Agriculture. The State Board of Agriculture may allow new products to be added to the list of eligible alternative products following hearings with the agricultural community to determine if the products qualify as alternative agricultural products.

The application process and requirements for the Alternative Products Program are the same as the Ag-Link Program except that the upper limit for loans is \$1 million.

While the Ag-Link Programs focus on stimulating economic growth in the agricultural sector, the Small Business Linked Deposit Program targets the development of small business regardless of the type of industry or geographic location. Eligible businesses include, "any small business organized for profit, including any business related to tourism, doing business in and from the State of Oklahoma, which employs not more than two hundred (200) employees or has gross annual receipts of not more than Four Million Dollars (\$4,000,000)."¹⁷ Industrial parks approved by the Oklahoma Department of Commerce and public trusts are also eligible.

Although the application process and guidelines for the Bus-Link Program are essentially the same as the Ag-Link Program, the approval of the application is the responsibility of the Oklahoma Linked Deposit Review Board. This six member board consists of the State Auditor and Inspector or his designee, the Lieutenant Governor or his designee representing small business, the State Insurance Commissioner or his designee, the State Treasurer or his designee, a representative from an Oklahoma banking institution appointed by the Bank Commissioner, and a representative appointed by the Governor.

The maximum loan amounts advanced by the Small Business-Link Program are \$1 million for a qualified business, or \$6 million for an eligible industrial park or public trust engaged in industrial development. In 1990, a further limit was placed on the small business linked deposit program

in the form of a requirement that the deposit-based loan to a business must not exceed \$30 thousand per job created or saved. In addition, the money must not be used exclusively for refinancing old debt.

The objective of the Linked-Deposit Programs is to make capital available to defined segments of the agricultural and business sectors at below market rates of interest. It was reasoned that these enterprises would experience increased earnings and therefore become lower risk borrowers, and, if so, find it easier to acquire additional capital. The benefit of this program would be an increase in employment, income and state tax revenue.

As of January 1990, the State Treasurer estimated that the Small Business Linked Deposit Program had been responsible for creating or saving 3,000 full-time equivalent jobs which would produce \$230 million in products and services and generate \$50 million in personal income increasing corporate and sales tax collections by \$5.6 and \$2.8 million respectively.¹⁸

There is no estimate of the income and employment impact of the Ag-Link programs. However, since 97 percent of the applicants are in the at-risk category, it is reasonable to assume that the primary impact is in jobs and income saved rather than created. With improved cash flow resulting from lower interest expense, much of the economic benefit from the Ag-Link Program would accrue to the rural communities where the farmers and ranchers trade.¹⁹ As of October 1990, over 1,000 farmers and ranchers had received loans through the Ag-Link Program. In late 1990, the Treasurer's office was working on the development of a model to estimate the economic impact of the Ag-Link Program.

In evaluating the impact of the linked deposit programs, several distinctions must be made. First, in terms of the Ag-Link programs one should be careful to note that the at-risk program provides an interest rate subsidy to farmers and ranchers who are financially distressed. If this condition arises due to poor management or changing technological and demographic trends then it is questionable if this program will generate any long-run economic gain. At best, it may slow the natural long-run adjustment of this industry and thereby reduce the sociological shock of losing the family business, and keep land in production that would otherwise lay dormant as the ownership moves through the necessary legal proceedings. If the program results

in an orderly transfer of ownership to a profitable operation, then some net gain may occur in the form of a cost reduction associated with not having to reclaim idled land.

Second, it is frequently argued that the recent financial difficulties plaguing the agricultural sector are in part the result of changing financial markets that have reduced the availability of credit. If this scenario is correct, then programs such as Ag-Link, providing credit to these areas, could possibly be justified. However, recent research by Morris and Drabenstott of the Kansas City Federal Reserve Bank, indicates that the lack of rural credit is the result of changing demographic patterns and a slowdown in economic conditions and that rural lending fell in response to the contracting economic conditions rather than bankers' unwillingness to make loans. Based on this finding, they find "little support for new government credit programs to supplement the supply of credit in rural markets."²⁰

It is possible to view the Alternative Product, Ag-Link and Small Business Link Programs somewhat differently. As Deborah M. Markley has pointed out in another paper on rural capital, "more innovative linked deposit programs can also be used to reward financial institutions which make higher risk loans and which focus some component of their lending activities on underserved groups, e.g., first entrepreneurs."²¹ The Alternative Product and Small Business program would seem to fall into this category by giving financial institutions an incentive to make loans to support entrepreneurial activities which can add to the strength and diversity of Oklahoma's economy.

Oil Overcharge Funds and Energy Related Business Finance

The Governor has designated the Oklahoma Department of Commerce as manager of a portion of oil overcharge funds which can be used to finance business real investment. This investment needs to be related in specified ways to conservation of energy. The pool of state funds derives from several nationwide lawsuits brought by the federal government on behalf of consumers injured by failure of oil producers to abide by federal oil price controls in operation between 1975 and 1981.

Since direct reimbursement of consumers was not practical, the settlement of the lawsuits required restitution to state governments. Oklahoma has received \$54 million. The money has been allo-

cated to a wide variety of groups in order to provide restitution to Oklahomans who were affected by the overcharging. Programs have been designed and implemented to benefit low income persons, Native Americans, public transportation users, common schools and higher education institutions, state and local governments, energy conservation research and development programs, small businesses, and the general public. A portion of these programs has been set aside for business finance.

Grants and loans have been made to firms engaged in research and development of products and processes which may lead to energy saving. For example, a loan of \$697 thousand was made to a company developing a rotary internal combustion engine, and a \$93 thousand grant was made to a firm developing technology for extracting more oil from existing wells.²²

Small businesses (as defined by the federal government's Small Business Administration) may receive interest subsidies of 6 percent on loans used to finance a wide range of energy related real investment such as building improvements; heating, ventilation, and air conditioning; hot water systems; lighting systems; process equipment; renewable energy systems; and miscellaneous electrical systems. The loans are made primarily by banks and savings & loans subject to maximum terms of 10 years and \$30 thousand. Funded projects must have a payback period of ten years or less in the form of savings on energy costs.

Program guidelines require that oil overcharge funds be used only to buy down interest points on energy conservation loans. But any measures to reduce the cost of this specific type of financial capital are likely to be of general benefit to the state's small business sector. Projects saving energy costs can strengthen the financial base of participating firms.

The interest subsidy program is administered by the Community Bankers Association of Oklahoma, with final approval of subsidies resting with the Oklahoma Department of Commerce.²³ When a loan is approved, the state pays the interest subsidy directly to the lending institution. The allocation to the interest subsidy program is \$1.5 million.

State-Administered Federal Programs

State government in Oklahoma also provides business finance through its management of two federally funded programs. Prior to the "Reagan

Revolution", the federal government directly administered its small cities Community Development Block Grant Program and the Community Services Administration. In 1981, state government took over the administration of these two programs.

The small cities Community Development Block Grant (CDBG) program provides funds to communities outside metropolitan areas for a wide range of activities which benefit low and moderate income people, prevent slums or urban blight, or which help a community deal with a threat to its health and welfare. The Community Services Block Grant (CSBG) involves federal money provided to the state to implement anti-poverty efforts. Both programs are administered by the Oklahoma Department of Commerce's Division of Community Affairs and Development, and both have business finance components.²⁴

For the 1990 fiscal year, 40 percent of the state's \$13.5 million CDBG allocation was devoted to what is referred to as the "economic development set aside" or Economic Development Financing Program (EDF). The EDF funds may be used for grants to communities to construct infrastructure needed for relevant business enterprise. However, most of the Oklahoma funds have been used to aid in the establishment or expansion of relatively small businesses.

The EDF program has been in operation since 1982, but received greater emphasis after 1986. In many ways, it operates as a standard type of program. Although there are instances in which the state takes an equity position in a funded enterprise (e.g. with convertible debentures), most of the business financing is in the form of loans. As federal monies come in and loans are repaid, new projects can be funded. The entire portfolio stood at about \$20 million in mid-1990, with about \$18 million of loans and investments, and a fund balance of \$2 million.

Business loans under the EDF program are relatively short term (3-5 years) and are mainly to provide funds for working capital. The maximum loan size is \$500 thousand. Interest rates charged are flexible depending on the nature of collateralization. Because this is a state administered federal program, there are a number of government requirements attached to all financing agreements. For example, at least 51 percent of new jobs created must go to low or moderate income people. (These are individuals whose incomes are 80 per-

cent or 50 percent, respectively, less than the regional median income.) The funds may provide no more than one-third the cost of the project, and it is expected that at least one permanent job will be created for every \$10,000 of EDF funding.

During the 1989 fiscal year, EDF loans and grants totaling \$8.4 million were made for 27 projects. The bulk of the installations receiving funds were involved in manufacturing.

The average size loan or grant under the EDF program in fiscal 1989 was a little over \$300 thousand; the average of the 42 loans made in 1989-90 under the CSBG Self Employment and Entrepreneurial Development System (SEEDS) program was about \$4,500. This is a program aimed at the smallest of the small of businesses.

Antipoverty services under CDBG are delivered directly by local community action agencies (CAAs). In fiscal 1990, \$4 million of federal money flowed through the Oklahoma Department of Commerce to the CAAs. Only five of the state's 21 community action agencies participate in the modestly funded SEEDS program.

Consistent with the antipoverty thrust of the CSBG, loans are made to individuals with the intention of promoting self-employment and entrepreneurship. The types of business receiving loans are varied but generally tend to be in retailing and services with one or two employees. Considerable technical assistance and business advice must be provided to the loan recipients.

The Potential for a Seed Capital Program

New technology often serves as the basis for the creation of new firms or the expansion and reorientation of old firms. The acquisition of finance to fund real capital linked to new enterprise and new technology is a special problem because of the high risk of failure connected with such activity. There are also cases in which a going concern is relatively poorly managed, and financial capital used for a leveraged buyout together with new management can create a dynamic, expanding enterprise out of one that was formerly moribund.

The term "venture capital" or "venture investment" is used to describe sources of finance for such risky but potentially very high return projects. *Pratt's Guide to Venture Capital Sources* defines venture capital quite broadly and specifies "seed capital" as a component of early-stage venture investment.

Today venture investment activity covers a spectrum of interest that encompasses virtually all phases of business growth. . . . *Seed Financing* is a relatively small amount of capital provided to an inventor or entrepreneur to prove a concept and to qualify for startup capital. This may involve product development and market research as well as building a management team and developing a business plan, if the initial steps are successful.²⁵

A private venture capitalist generally takes an equity position in a firm, is involved in the firm's management (i.e. is not a passive investor) and makes a long-term commitment with expectation of significant returns. The Oklahoma Economic Development Act of 1987 provided the statutory basis for establishing a Seed Capital Revolving Fund to be administered by the Oklahoma Center for the Advancement of Science and Technology (OCAST). Seed capital is statutorily defined somewhat more broadly than in *Pratt's Guide*, and refers to "financing that is provided for the development, refinement and commercialization of a product, process or innovation, whether for the startup of a new firm or the expansion or the restructuring of a small firm."²⁶ The Fund could be used for several development finance purposes including loans, convertible debentures, and equity. Since emphasis was placed on "investment in firms which will use innovation from applied research in profitable commercial applications," OCAST was an appropriate agency home for the program. OCAST is involved in a wide ranging program of support for research with potential commercial applications.

Oklahoma's constitution was written during an era of strong negative feelings toward business corporations and contained prohibitions against the state government providing funds to private business. In 1988, an amendment was approved by the people establishing constitutional authority for the Seed Capital Revolving Fund.

If this program is to ever get underway, it will probably be necessary for the Oklahoma Legislature to provide appropriated funds. In 1990, such funds had still not become available. However, plans were underway at OCAST to use the Fund to stimulate private limited partnerships which would also acquire private funds to place in new and expanding high risk enterprises. As a limited partner itself, state government would not participate

in the management of these newly established venture capital funds. Such an arrangement might allay the fears of favoritism inherent in any state business finance program funded by legislative appropriations.

State Trusts with Industrial Parks

An industrial park is a parcel of land specifically dedicated and managed to serve as the site for industrial plants and related service activities. Most industrial parks in Oklahoma are operated by local entities such as local industrial trusts which also help provide financing for businesses sited in the parks. In addition, Oklahoma state government provides business finance through several of its own trusts with industrial parks. These trusts are, in effect, state agencies because they are established legal entities with state government as the trust beneficiary. In many ways, however, the trusts are subject to few of the ordinary statutory procedural controls imposed on other state agencies. By far the most significant of these state trusts is the Oklahoma Ordnance Works Authority (OOWA).

During World War II, the U.S. military operated a munitions manufacturing facility just south of Pryor in Mayes County. When the plant shut down, the property was acquired from the federal General Services Administration by a state trust formed for that specific purpose, i.e. the OOWA. The U.S. General Services Administration sold the facility at an appraised value to the trust, with financing being obtained from banks and the federal Economic Development Administration. From the beginning, the intention was to promote economic development through the establishment of a self-financing industrial park. The OOWA chose to do the park's business as the Mid-America Industrial Park (MAIP). In mid-1990, there were thirty-five industrial, transportation, and utility enterprises located within the park's 9,000 acre premises. Several had been provided substantial financial assistance from the OOWA.

The OOWA's five member board includes three members appointed for life, and two appointed by the Governor. The agency employs a small staff of professional industrial development specialists who work to attract enterprise to the facility and who assist in obtaining financing from other sources including other state financing agencies. In addition, the OOWA is positioned to provide direct financing through several procedures. Over the years, the Authority's revenues from sale and lease

of property, utility revenues, and interest earned, has resulted in a substantial fund. On April 30, 1990, for example, the OOWA held nearly \$19 million of U.S. government securities and certificates of deposit.²⁷ Loans can be made from this fund directly to industrial tenants. These are largely short-term and amounted to \$1.8 million, also in April 1990. The Authority also constructs facilities, purchases equipment, and leases buildings and equipment to industries. The Authority is planning to use a portion of this fund balance to finance future improvements to the industrial park's basic infrastructure, i.e. roads, utilities, etc.

By far the biggest source of OOWA business financing involves long term debt in the form of revenue bonds secured only by the specific facilities funded by the issues. This debt amounted to \$53.5 million in April 1990. This debt is judged by the OOWA's auditor as "nonrecourse debt" not involving a general obligation of the Authority in case of default.

Although not strictly comparable to OOWA, other state trusts with actual or potential operations with some similarity include the Midwestern Oklahoma Development Authority, the Mid-South Industrial Authority, the Southeastern Oklahoma Industries Authority, the RedArk Development Authority, and port authorities at Oklahoma City, Tulsa-Rogers County, and Muskogee.

Tax Credits to Establish Venture Capital Companies

In 1986, the Oklahoma Legislature established a procedure by which Oklahoma-based venture capital funds would be particularly attractive to Oklahoma investors. State taxpayers were granted a tax credit against their state individual income tax liability. The credit amounts to 20 percent of the cash which the taxpayer places in the venture capital company.²⁸

In order to qualify, a venture capital company must be capitalized at not less than \$5 million and eventually place at least 55 percent of its funds in Oklahoma businesses. In order for a firm receiving debt or equity capital to qualify as an Oklahoma business, it must have at least 50 percent of its assets or employees in Oklahoma.

One venture capital fund has been established under this program. Merrill Lynch Venture Partners LP is a \$10.3 million fund which is now focusing on investing this capital in Oklahoma.

Oklahoma Housing Finance Agency

When one considers the variables which influence the economic performance of a region, the quality of that area's infrastructure always plays a pivotal role in its ability to attract new enterprise as well as to be a place in which locally born businesses will want to remain as they grow and expand. In addition to streets, waste water treatment, police, fire and cultural facilities, the quality and availability of local housing structures play an important role in the attractiveness of a community to potential residents as well as current residents. In this regard, a well thought out housing plan and program can be an important economic development tool as well as addressing the housing needs of moderate and low income residents. Moreover, housing credit indirectly generates sources of business finance to many firms in construction and real estate.

Created in 1975 as a trust with the state as beneficiary, the Oklahoma Housing Finance Agency (OHFA) has developed nine single family mortgage loan programs with an original face value in excess of \$1 billion. The OHFA has also generated \$240 million of bond indebtedness for low to moderate income multi-family housing projects. These projects provide 5,700 housing units in 21 communities throughout the state. Currently, approximately \$900 million of the combined debt from the two programs is still outstanding.²⁹

In addition to the single and multi-family housing bond programs, the Agency also administers the state's Section 8 Program for the U.S. Department of Housing and Urban Development, which services approximately 7,400 Oklahoma families, and generates \$20 million in federal assistance for Oklahoma.

While the Bond and Section 8 programs represent the majority of the activity of OHFA, the Agency's trust Indenture specifies an amazingly broad range of authority. In addition to directing the Agency to plan, develop, implement, and review programs to provide an adequate housing supply, other duties of the Agency include, but are not limited to:

- to institute, furnish, provide and supply services and facilities for the conservation and implementation of the public welfare and protection and promotion of the public health.
- promoting the development of industrial, manufacturing, cultural and educational

activities and providing industrial and cultural facilities which will benefit the the state.

- to conduct planning and coordination studies for any and all phases of Oklahoma's economic life, problems, and activities. . .
- to attract agricultural, commercial, industrial, mining, oil and gas, housing and recreational firms and businesses to the State by utilizing its funds, credit, and the talents of its staff and others in any and every progressive manner for such purpose.
- generally gather, compile, and make available economic analyses and statistical information relating to business, trade, commerce, industry, transportation, communication, natural resources, population and housing, and other like subjects in this State.
- examine the technological process by which mining, quarrying, and other extracting processes may be improved, and by which materials now uneconomical to exploit may be extracted and used commercially for the public welfare of the State.³⁰

As can be seen from this partial listing, the purposes of the OHFA direct the agency to engage in a myriad of activities for the benefit of Oklahoma residents. It would appear the Agency could broaden its impact by initiating the development of other programs. For example, Maryland's housing agency administers five single-family programs including a reverse equity program for senior citizens; nine multi-family programs that address specific targets such as the elderly, rehabilitation and energy conservation; and seven special loan programs to improve single and multi-family and small rental properties occupied by low and moderate income individuals and families, and to promote community development.

While it is within the indenture of the OHFA to develop similar programs, the primary limiting factor in so doing is the lack of financial resources. With a reserve of only \$1.5 million to cover outstanding debt of \$900 million, the Agency has a coverage of only .02 percent. According to Standard and Poor's, a coverage of 4 percent is necessary to be rated as a top tier agency. Recent research by the OHFA has found that it has less financial reserves than any other comparably sized housing agency in the United States. The agency's

poor financial condition was emphasized in mid-November, 1990, when Standard and Poor's downgraded one of the OHFA bond issues from a rating of "BBB-" to "BB+."³¹ This issue is probably a candidate for the pejorative label "junk bond". One of the key reasons for the downgrading of the bond issue related to the downgrading an insurance company which is insuring the underlying mortgages.

Before the Agency can offer the variety of programs which will make it comparable with other states, it must increase its reserves to the industry standard. A major step toward accomplishing this goal is the planned refunding of several of the Agency's outstanding bonds. This refunding will not only make housing more affordable for the borrower by lowering the interest rate, but also provide the reserves necessary to once again receive a top rating by Standard & Poor's. It should also be noted that the recent downgrading of OHFA bonds is the result of the severe downturn in the real estate market over the past five year. However, if adequate reserves had been maintained, it might have been possible to avoid this deterioration in the rating.

Another issue which may have created some stress with respect to the Agency's operations stems from a controversy over whether state government can require it to comply with Oklahoma's travel reimbursement law, purchasing requirements, and laws regarding deposit of agency operating funds in the State Treasury. The Attorney General may have resolved this issue by ruling that state government's budget laws do not have to be applicable to state beneficiary public trusts.³²

ASSESSMENT OF STATE BUSINESS FINANCE PROGRAMS

Each of the twelve activities discussed above could easily be the subject for an extensive analysis. And the list of programs covered is not exhaustive; in late 1990, the Commissioners of the Land Office were considering a new program of farm loans. The funding mechanisms, eligibility criteria, tax exemption arrangements, trust indentures, and categories of business finance are extremely complex. The broad overview of programs contained in this report has scarcely scratched the surface of these details. Nevertheless, a few observations may be made concerning Oklahoma state government's business finance programs. Several propositions are set forth.

(1) *State government has many business finance programs, most of which are administered independently from the others.* Everyone understands the desirability of having a variety of types of business finance assistance available to promote economic development. The need for many different independent sources within state government is less clear. Certainly there are requirements for equity, debt, and near-equity funds; short- and long-term debt; highly collateralized debt and debt for firms with little collateral; for varying degrees of technical assistance in developing business plans and systems of financial management; and for financing everything from invention to product development to product and process improvement. There may be strength in diversity, but it is easy to see how a business person in need of state assistance might miss an opportunity by trying the wrong agency. To some extent this possibility is reduced by the existence of the Capital Resources Division in the Oklahoma Department of Commerce. Nevertheless, overlapping and ill-defined functions among the various state government agencies providing business finance can be confusing to both business managers in need of capital, and to state officials charged with general oversight and policy-making responsibilities. A 1990 legislative effort to consolidate the loan underwriting services of the Oklahoma Industrial Finance Authority, the Oklahoma Capital Investment Board, and the Oklahoma Department of Commerce under one agency (SB 459) died in committee.

(2) *There is no central point at which information is gathered, analyzed, and aggregated concerning the outputs of the various state business finance programs.* If state government were to decide that it needed some sort of well-defined strategy with respect to business finance for economic development, it would at present not even have the bare minimum of information needed to assess the overall impact of its current programs. Of particular significance is the failure of state government to identify the total true costs to the state including revenues foregone of its various business finance activities.

(3) *Where a state agency or trust is issuing new debt, substantial central control has evolved since 1987.* The establishment of the office of State Bond Advisor and the legislative and executive Bond Oversight Commissions has positively affected the quality of the debt issued by the state in connection with its business finance programs.³³ However, with this control has come increased administra-

tive complexity when new issues are related to specific firm financing. There is concern that this complexity is so cumbersome as to reduce program effectiveness. And there is uncertainty concerning the constitutionality of the Legislative Bond Oversight Commission which could create problems for effective oversight in the future.³⁴

(4) *There is great variability in performance with respect to state finance agencies' maintaining good credit.* Analysis of the above activities included one agency whose debt was recently downgraded to virtual junk bond status, while another agency had accumulated a reserve balance of \$19 million. There is a question as to how closely-linked to the overall quality of state government credit is the non-general obligation credit of a single agency.

(5) *Political control of or influence over state government business finance programs is usually limited to program design and strategy.* Although it is impossible (and undesirable) to take politics out of any government function, there are obvious reasons why elected officials should not be involved in making decisions about finance provided to specific business firms. Most programs avoid this, though the linked deposit loans have been used extensively by the State Treasurer to promote the political interests of that office.

(6) *Where state beneficial trusts are involved, there exists an uneasy tension with respect to the degree to which these organizations should be subject to controls applicable to ordinary state agencies.* Trust indentures which prove attractive to bondholders often include safeguards to the bondholders with respect to controls over the trust by state government proper. At the same time, the bonds are normally not general obligations of state government. To what extent should this mean that the trusts may operate in a *totally independent* fashion with respect to statewide public interest?³⁵

(7) *As a general rule, Oklahoma state government has not used its own massive trust funds as a tool for business finance.* With its various retirement funds and enterprise activities such as the State Insurance Fund, Oklahoma state government has a tremendous store of investible funds. Because of concern over risk, there has been an understandable reluctance to use any of these funds for economic development finance. Argument will continue as to whether this extreme reluctance is justified.

(8) *Most important of all, there are many instances in which the availability of a state business finance program appeared to be the determining factor concerning whether or not an Oklahoma business*

started up, expanded, or survived. Moreover, many of these business clearly meet the criterion of generating economic development through "exports" out of the state or through import substitution. For the most part, finance is not provided in the trade and services sector.

Business finance programs will continue to be on state government's policy agenda in Oklahoma. No doubt issues will relate to evaluation of overall strategy, accountability, accessibility, and cost. At the very minimum, Oklahoma will continue to examine the degree to which its own state business finance activities are competitive with those of other state governments.

NOTES

¹For a revealing discussion of the early history of state-local government business finance programs see James C. Cobb, *The Selling of the South* (Baton Rouge: Louisiana State University Press, 1982).

²M. Thomas Arnold, "Public Trusts in Oklahoma," *Tulsa Law Journal*, 19 (1983): 192-224.

³Oklahoma Futures, "Report and Recommendations to Oklahoma Futures of the Financial Industry Task Force for the Oklahoma Five Year Economic Development Action Plan", (Dec. 31, 1987).

⁴Edward W. Hill and Nell Ann Shelley, "An Overview of Economic Development Finance," in Richard D. Bingham, et al., *Financing Economic Development* (Newbury Park, CA: Sage Publications, 1990): 26f

⁵Tim Chavez, "State Awaiting Payoff from Consultant's Work," *The Sunday Oklahoman*, (Aug. 6, 1989): C1f.

⁶Oklahoma Industrial Finance Authority, *Four Year Policy and Business Plan*, (1990): 5.

⁷Oklahoma Industrial Finance Authority, *Annual Report*, (June 30, 1989).

⁸Oklahoma Development Finance Authority, *Fiscal Year 1990 Annual Report*.

⁹74 O. S. Supp. 1989 (5062.2).

¹⁰Tim Hartley, "ODFA Approves Industrial Loans", *The Journal Record*, (Sept. 14, 1990): 1.

¹¹74 O. S. Supp. 1989 (5061.3).

¹²*State Policy Reports*, 8 (Oct. 1990): 2-6.

¹³Oklahoma Capital Investment Board, *FY 1991 Business Plan*.

¹⁴Lou Anne Wolfe, "Fund for State Firms Should Be Ready in January," *The Journal Record*.

¹⁵74 O. S. Supp. 1989 (5061.6).

¹⁶Ross O. Love and Lisa Hatcher Byles, "Report on the Oklahoma Agricultural Linked Deposit Program," *Current Farm Economics*, 63 (Sept., 1990): 28.

¹⁷62 O. S. Supp. 1989 (88.2).

¹⁸Ellis Edwards (State Treasurer), "The Economic Impact of Business Link Deposit Program," (Jan. 1990).

¹⁹Love and Byles, *op. cit.*: 38.

²⁰Charles Morris and Mark Drabenstatt, "Financing Rural Businesses: What Role for Public Policy?" *Economic Review*, Federal Reserve Bank of Kansas City (Sept/Oct 1989): 40.

²¹Deborah Morente Markley, "Availability of Capital in Rural America: Problems and Policies," Amherst, MA, University of Massachusetts (presented at Oklahoma Department of Commerce conference on rural development, Oklahoma State University, No. 2, 1989).

²²Oklahoma Office of the Governor, "Oklahoma's Stripper Well Program," (June 30, 1990).

²³Community Bankers Association of Oklahoma, "Energy Loan Interest Subsidy Program Borrower Handbook," no date.

²⁴Oklahoma Department of Commerce, Division of Community Affairs and Development, "State Plan for Administration of Small Cities Community Development Block Grant, Fiscal Year 1990," and "Community Services Block Grant Proposed State Plan for Fiscal Year 1991."

²⁵Jane K. Morris and Susan Isenstein, eds., *Pratt's Guide to Venture Capital Sources* (Needham MA: Venture Economics, Inc., 1989): 2.

²⁶74 O. S. Supp. 1989 (5060.4)

²⁷Oklahoma Ordnance Works Authority, "Financial Statements and Supplemental Schedules for the years ended April 30, 1990 and 1989."

²⁸68 O. S. Supp. 1989 (2357.7)

²⁹Oklahoma Housing Finance Agency, "Report to Trustees", (July, 1990).

³⁰Oklahoma Housing Finance Authority, "Second Amended Trust Indenture."

³¹Randy Ellis, "Finance Agency Debt Rating Hits New Low," *Daily Oklahoman*, (Nov. 11, 1990):1.

³²Oklahoma Attorney General Opinion. No. 90-23, Oct. 19, 1990.

³³See State Bond Advisor, *Calendar Year 1989 Report of the State Bond Advisor* (1990) and office of State Finance, *State of Oklahoma Bond Debt*, (Oct. 29, 1990).

³⁴Lou Ann Wolfe, "Attorney General Calls Panel Unconstitutional," *The Journal Record*, (Sept. 9, 1990):1.

³⁵For an early review of abuses possible with staute public trusts, see Boston W. Smith, *Report to Governor David L. Boren on the Thirty (30) Public Trusts with the State of Oklahoma as Their Beneficiary*, (Dec. 22, 1978):43-53.

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HB 1017: THE EDUCATION REFORM ACT OF 1990

Although education reform is not a new issue to Oklahoma, during 1990 it became a very controversial topic with the introduction of HB1017, the Education Reform Act. A very lengthy, complicated bill, its many reform measures, even months after passage, are not understood by the general public. A costly bill, it has critics who oppose it because of the associated taxes. Some other critics, who favor education reform, assert that this bill contains too little reform for its costs. Some supporters argue that it is a good bill, albeit not perfect, and an important step in education reform.

In this chapter we do not try to assess all the pros and cons of HB1017; we leave that to the reader. Instead we attempt to place the legislation in its economic development context. In addressing that topic we attempt to clarify the precedent for education reform in Oklahoma and to explain HB1017's contents and costs.

EDUCATION AND DEVELOPMENT

Education and training are the primary means by which the human capital of Oklahoma and the U.S. are preserved and increased. As the key to greater productivity, they also are essential to sustained economic growth. That is at least one of the current impetuses for education reform in Oklahoma and elsewhere.

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Educating and training the labor force are necessary to meet the requirements of growing industries and the standards of international competition. There is a clear need for the educational system to help prepare the labor force with the needed skills to cope with changing technology and an expanding knowledge-based society. For example, the U.S. Department of Labor shows an estimated growth of professional specialty occupations of 24 percent over the 1988-2000 period. It estimates the growth in the occupations of technicians and related support services of 31.6 percent in that period. By comparison, it estimates the change in operators, fabricators and laborers at only 1.3 percent for the same period; and it expects agricultural, forestry and fishing employment to decline by four percent over this period. (See Table 1). The conclusion is inescapable. Oklahoma must develop the skills associated with growing occupations to get its share of the jobs in the newly expanding, technology-based industries.

At the national level, it is recognized that educational and training needs in the near term will be shaped by changing demographics. Over this decade 80% of the new entrants into the work force in

TABLE 1
 Employment Change
 by Major Occupation Groups

Occupation	Percent
Executive Administration and Managerial Professional Speciality	22.0
Technician and Related Support	24.0
Marketing and Sales	31.6
Administrative Support Including Clerical Services	19.6
Agricultural, Forestry, and Fishing	11.8
Precision Production, Craft and Repair	-4.0
Operators, Fabricators and Laborers	9.9
Total all Occupation	1.3
	15.3

Source: U.S. Department of Labor.

the U.S. will be made up of immigrants, minorities, and women. In Oklahoma, as well as the U.S., the demographic changes will be a further challenge to the educators and trainers coping with the jobs-skills mismatch. The changing demographics do not alter the issues associated with educational reform, but they surely complicate the problem.

The educational reform issues that often receive public and political attention are the costs and effectiveness of education programs generally. However, when one considers the objectives of economic development, especially in the evolving international economy, the content and skills development embodied in reform measures become critical as well.

BEFORE HB 1017

Two of the major topics examined in the 1989 Task Force 2000 report (*Oklahoma's Public Education: A Blueprint for Excellence*) were "Consolidation/Reorganization" (pp. 20-22) and "Teacher Training" (p. 38). The Task Force's treatment of

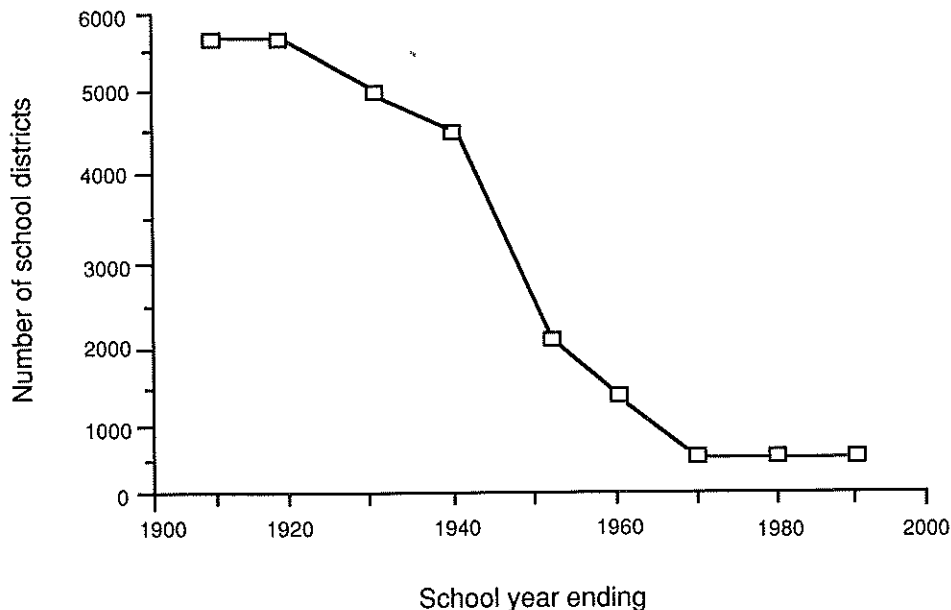
these two topics reflects the degree of success achieved by past efforts at school reform in Oklahoma. While rejecting forced consolidation of school districts, the report emphasizes the fact that there are too many districts and suggests a number of incentives for voluntary consolidation. Less than a page of the report is devoted to teacher training, and substantive recommendations are limited to recruiting more minorities and recruitment of high quality teacher candidates.

Up to about 1970, Oklahoma's education system could be generally characterized as conducive to school consolidation (Figure 1). The total number of school districts in the state dropped from 5,725 in 1910 to 664 in 1970; during the next 20 years, the number only fell by 60. Referring to a burst of consolidation occurring during the two preceding years, the 1920 *Biennial Report of the State Superintendent of Public Instruction* notes the stimuli for this aspect of school reform.

Several agencies have contributed to the success of the consolidation movement in this state. Encouragement in

FIGURE 1

Number of School Districts
Oklahoma by Decade
1910-1990



Source: Oklahoma State Department of Education, Biennial and Annual Reports, Office of State Aid.

the form of state aid for use in securing a suitable building has been a potent factor. The farm journals having a wide circulation in the state have consistently and persistently advocated this type of school for rural communities. The local county papers have co-operated in the movement by publishing surveys of schools made in certain counties by the state rural school supervisors, with suggestions for bettering the conditions. The determination on the part of the people in rural communities to provide more and better school facilities for their children is the principal cause of the splendid showing that has been made in the number of consolidated districts ... (p. 30)

There are several reasons why Oklahoma ceased to exhibit extensive consolidation of districts after 1970. The most obvious is that the number of districts was moving downward toward some minimum or threshold level associated with transportation technology and the geographic spread of the state's population. However, when comparisons are made with the number of districts in other states, it appears that Oklahoma's consolidation movement stopped short of such a threshold. With only 1.2 percent of the U.S. population, Oklahoma had 4.3 percent of the nation's school districts in 1987. Only five states (Texas, California, Illinois, Nebraska, and New York) had more school districts than Oklahoma. Texas, with 5.54 times as many students as Oklahoma, had only 1.75 times as many districts.

Another reason for the declining emphasis on consolidation after 1970 probably relates to political pressures from smaller communities seeing the school district as a critical component of their economic base. There was also no doubt increasing political pressure against further consolidation of large central city districts with suburban districts; busing is not a popular reform measure in most suburban communities.

If the data in Figure 1 suggest an obvious reason why Task Force 2000 was concerned about school consolidation, the passage of HB 1706 explains why there was so little emphasis on teacher training. This legislation, also referred to as the Teacher Education Reform Act of 1980, involved major improvements in teacher training. At the time of the passage of HB 1706, the state's economy was

booming as a result of favorable energy prices, and state government's coffers were relatively full. The opportunity appeared to raise Oklahoma teachers' salaries up to the regional average, and reforms regarding teacher certification were viewed as a justification for such increases.¹

HB 1706 attacked a number of dimensions of teacher quality. It provided for the establishment of programs of in-service training and staff development for existing teachers. The quality of teacher training programs was upgraded through screening of applicants, improved qualifications of college and university professors of education, curriculum examinations of teachers, and special assistance to and monitoring of beginning teachers during their first year on the job. HB 1706, together with a 1982 measure raising high school graduation requirements and emphasizing basic subject matter areas meant that the state was involved in the contemporary movement for education reform well before it began to catch on nationally.²

1990 EDUCATION REFORM

The final version of HB1017 contains 102 pages divided into 131 sections. Its sheer length precludes a detailed description of the bill. The following discussion contains a description of the bill's principal features and some of the arguments related to them, the costs of these features, and the means chosen to finance them.

Principal Features

Table 2 contains a list of twenty of the principal features of HB 1017, roughly in order of appearance in the bill.

HB 1017 prescribes a number of new regulations, programs, and initiatives aimed at enhancing educational quality, provides the means to finance them, and specifies sanctions to be imposed against districts failing to comply or cooperate. The bill begins with the last of these, giving the State Board of Education the authority to deny or to withdraw accreditation to local school districts that fail to achieve the curricular, class size, and salary standards established by this bill.

The bill creates the Oklahoma Curriculum Committee. This committee is charged with making recommendations to the State Board of Education by November 1, 1990, concerning the learning objectives of a state-determined core curriculum, and means of achieving them.

TABLE 2
Twenty Principal Features of HB 1017

Authority to Deny or Withdraw Accreditation
Establishment of Statewide Core Curriculum
Incentives and Authority for Consolidation and Annexation
Mandatory Half-Day Kindergarten
Optional Early Childhood Education
Optional Extended Year Programs
Technology and Innovation Program
School Deregulation Committee
Alternative Teaching Certificate Program
Abolishment of Office of County Superintendent
Reduction in Class Size
Increased Parental Involvement
Five-Year Teacher Salary Schedule
Increased Effort to Recruit Minority Educators
Teacher Incentive Pay
Procedures to Ensure Due Process for School Employees
Special Education Assistance Fund
Creation of Common School Fund
State Tax Increases to Finance Program Changes
New State Aid Formula

Oklahoma has long been criticized for having an excessive number of relatively small school districts. HB 1017 attempts to promote voluntary consolidation of school districts by prescribing financial assistance for consolidating districts. The State Board of Education is also granted authority to initiate consolidation and/or annexation if necessary to accomplish accreditation standards.

Oklahoma, like many states, experiences a school dropout rate that is unacceptable to many people. Some experts contend that the problem begins at an early age, especially among youngsters who are economically disadvantaged. Evaluations of the federal Head Start program confirm this judgment; the Head Start experience closes much of the initial gap between enrollees and their more economically advantaged peers.³ This enables Head Starters to do a better job of keeping up with the educational accomplishments of their classmates, eventually paying dividends in the form of reduced likelihood of dropping out. Head Start funds are not sufficient to cover all who could benefit from, but not afford, early childhood education. HB 1017 provides funds for such children in districts choosing to establish early childhood programs. HB 1017 also requires each district to provide a half-day of kindergarten to capitalize on childrens'

readiness for formal schooling and socialization at age 5.

It is well-known that American school children have a much shorter school year than their counterparts in other countries with which we compete in the economic arena. In most of the United States, including Oklahoma, the school year is 180 days. Japanese schools run 240 days per year, and European countries typically have a school year of 220 days. Critics of U.S. education charge that this is a major reason why American children fare so poorly on standard tests relative to Japanese and European children. One provision of HB 1017 represents a step in the direction of closing the school-year gap, by providing for state aid to schools that compete successfully for pilot program funds for extending the school year.

HB 1017 encourages local schools to use part of their state aid for adopting new management and instructional technologies and new innovative practices.

The bill establishes a School Deregulation Committee to identify appropriate areas for, or subjects of, future deregulation, culminating in a report of findings and recommendations to the Governor, Legislature, and State Board of Education before May 30, 1991. This report may be an important guide to the shape of future issues in educational reform.

There is a nationwide shortage of math, science, and bilingual education teachers. Oklahoma schools compete, in effect, in a national market for teachers. Thus, the national shortage is also an Oklahoma problem.

Economists are quick to argue that any "shortage" can be cured by raising prices (in this case, wages) enough. But, this cure would take time, and the required wage increase would be larger the more numerous and onerous the requirements for teacher certification. Still, more college graduates may be willing to make the investment in time and resources required to achieve certification if they were more certain that they would like teaching. HB 1017 addresses this problem by prescribing an alternative teaching certificate program which allows persons with a baccalaureate degree to teach certain math, science and foreign language classes while working toward a standard certificate.

HB 1017 abolishes the office of County Superintendent of Schools, a move long urged by critics of Oklahoma education.

HB 1017 provides for phased-in reductions in average class size in grades K - 12, except when the

size limitation would create a class that is too small (10 - 16 students), or when a teacher's assistant is employed to serve those classes that are larger than the limit. Critics of this provision cite evidence of an unlikely relationship between smaller class size and improved student performance.⁴ Proponents can cite evidence that students from smaller classes ultimately achieve higher earnings.⁵ Teachers often view class size as an important element in overall workload, or as an important part of the working environment, contending that smaller classes make teaching a more attractive option.

HB 1017 contains three provisions aimed at increasing the degree to which parents become involved in the educational process. One provision permits the use of any school building for parental involvement purposes. A second provision encourages public schools to seek agreements with parents to guarantee their child's attendance, satisfactory behavior, and completion of homework in exchange for free remediation in the event of failure to achieve standards of competency. A third provision provides for development of a program of parent education regarding the nature of child educational development. Existing studies indicate that parental acceptance of responsibility for their children's education does make a positive difference in student performance. Some observers believe that this is one of the characteristics of Japanese education that explains its superior record of performance.

Oklahoma teachers have long argued that they are underpaid relative to their counterparts in other states, and that this makes it difficult to attract top-notch students to a teaching career and to retain experienced teachers. HB 1017 addresses this problem by requiring school districts to adopt minimum salary schedules for the next five years. These schedules provide for annual raises averaging around \$1800 per year.

In Oklahoma, as in most states, minority students are a larger percentage of the student population than minority teachers are of the teacher corps. HB 1017 directs the State Board of Education and the Oklahoma State Regents for Higher Education to work together in recruiting, retaining, and placing minority teachers in Oklahoma's public schools.

HB 1017 instructs the State Board of Education to develop at least five model incentive pay plans. Beginning with the 1991-92 school year, a local school district may adopt an incentive pay plan, and must adopt such a plan if petitioned to do so by

20 percent or more of the district's classroom teachers. The incentives at issue are limited to annual awards; they cannot become an element in a teacher's continuing contract. HB 1017 also provides for partial reimbursement of the fees paid by teachers and administrators for staff development courses.

Nearly 20 sections of HB 1017 relate to the establishment of employment standards for school employees (teachers, administrators, and support personnel) and procedures to be followed to ensure due process in cases where employees are candidates for termination of employment. Some proponents of school reform urged the Oklahoma Legislature to abolish teacher tenure. HB 1017 does not take such a drastic step, but it does attempt to clarify the condition under which dismissal is possible for all personnel, including tenured teachers, and to safeguard the rights of all employees to patient and careful consideration of any proposed dismissal.

State agencies outside of education place children in custodial or non-custodial foster care homes, group homes, residential hospitals, shelters and independent living facilities throughout the state. Most of these children attend public schools where they are placed. HB 1017 provides reimbursement to the local district for these students out of money in the newly-created Oklahoma Special Education Assistance Fund.

HB 1017 also created the Common School Fund authorized in the Oklahoma Constitution, but never established by the legislature. The money in this fund was to come from ad valorem revenues raised from commercial/industrial real property and public service corporations, and gross production taxes, motor vehicle fees, and rural electric cooperative taxes dedicated to schools. Fund revenues were to be apportioned to all state schools through the State Aid Formula. HB 1017 required, however, that the procedures relating to this fund would go into effect only in the event of passage of an amendment to the Oklahoma Constitution. The proposed amendment failed to win voter approval this past summer.

The Common School Fund would have been a vehicle for redistributing existing revenues. Such redistribution would have helped to equalize expenditures per student across local districts.

The revenues necessary to fund the various programs prescribed by HB 1017 were provided for partly in the bill. The remainder are expected to come from revenues generated by future growth in the state's economy.

Four revenue measures were adopted. The individual income tax brackets were widened and a 7 percent marginal rate was added for people using Method I to determine their taxes. The corporate income tax rate was raised from 5 percent to 6 percent. The tax rate on state and national banks and credit unions was also increased from 5 to 6 percent. The state sales tax rate was raised from 4 to 4.5 percent. The estimated effects of these measure on revenues is reviewed below.

Finally, HB 1017 creates a new school finance, or State Aid, formula. This new formula is designed to assist schools in funding the programs described above. It also provides new funds for local programs aimed at the economically disadvantaged. These funds are in addition to those provided for early childhood education programs.

Projected Revenues

Table 3 shows the new revenues that are projected to be available over the next 5 years to finance the costs of implementing HB 1017. There are two primary revenue sources: (1) the tax changes prescribed by HB 1017 (described above), and (2) expected revenue (dedicated and general fund) generated through economic growth by the application of the pre-HB 1017 tax laws. The growth revenues in Table 3 represent the portion dedicated or normally appropriated to common education. The HB 1017 portion grows also because of projected economic growth.

The principal state taxes are projected to bring in \$3,837.9 million in 1991. Thus, HB 1017 will be

responsible for a tax increase of 5.4 percent (=205.9/3,837.9) relative to this tax base.

Estimated Costs

Table 4 provides estimates of the costs of implementing HB 1017 over the next 5 years. Included are separate costs of the principal features discussed above, plus a few additional minor cost features and administrative support costs that are difficult to allocate to specific features of HB 1017. The cost of teachers' assistants can be attributed primarily to the cost of lowering class size; as noted above, schools can avoid class size reductions if they hire teachers' assistants.

From a cost perspective the big ticket item is the scheduled increase in teachers' salaries. In fact, the salary issue has been a rallying point for both opponents and proponents of HB 1017. Hopefully, this review of the bill's features makes it clear that there is much more to this legislation than salaries, and that any future decisions on HB 1017 require a careful assessment of the benefits and costs of a large number of specific programs and initiatives. Such an assessment is beyond the purview of this review, however.

In judging the necessity of the scheduled salary increases, the essential question that must be answered is: Are they necessary to recruit and retain the kind of people who will equip Oklahoma's children with the knowledge and skills to compete successfully in a future marked by rapid technological change and expanding global contact? In our view, a full answer to this question can be

TABLE 3
Projected Revenues to Finance Provisions of HB 1017
(millions)

Type of Revenue	FY90	FY91	FY92	FY93	FY94	FY95
Personal Income Tax		\$ 89.9	\$111.0	\$120.5	\$130.8	\$143.0
Corporate Income Tax		14.6	17.0	17.7	18.4	18.9
Sales Tax	\$8.3	96.4	102.0	107.1	112.4	118.1
Use Tax		5.0	5.3	5.6	5.9	6.2
Total HB 1017 Taxes	\$8.3	\$205.9	\$235.3	\$250.9	\$267.5	\$286.2
Dedicated Revenue Growth		5.1	13.7	22.8	32.4	42.9
General Fund Revenue Growth		41.9	94.8	149.7	207.3	267.8
Total Revenue	8.3	252.9	343.8	423.4	507.2	596.9

Source: Oklahoma Senate Staff memo of May 2, 1990.

TABLE 4
Estimated Costs of HB 1017, by Purpose and Year
(millions)

Purpose	FY91	FY92	FY93	FY94	FY95
Teacher Salary Increase	\$68.1	\$138.9	\$212.6	\$287.7	\$299.2
Econ. Disadv. Students	50.0	50.0	50.0	50.0	50.0
Special Education	38.0	38.0	38.0	38.0	38.0
Support Salaries	15.5	31.5	48.0	65.0	67.7
Extended School Year	15.0	15.0	15.0	15.0	15.0
Mandatory Kindergarten		11.5	11.5	11.5	11.5
Teachers' Assistants	10.0	14.6	21.4	21.4	26.2
Technology Innovation	10.0	10.0	10.0	10.0	10.0
Lowering Class Size	6.0	10.2	15.6	30.6	30.6
Early Childhood Education	4.2	8.4	12.6	12.6	12.6
Professional Staff and Dev.	3.5	8.5	13.5	18.5	23.5
Teacher Incentive Pay	3.0	3.0	3.0	3.0	3.0
Expanded Testing	0.8	1.3	1.3	1.3	1.3
Curriculum Development	0.5				
Minority Needs Assessment	0.3	0.3	0.3	0.3	0.4
Educating Public re. Testing	n	n			
Comm. on Deregulation	n				
Parent Education and Involvement		1.0	1.5	2.0	2.5
Supplemental Tests		0.4	1.2	2.0	2.0
Health/Living				1.7	
New Accreditation					3.0
Total Costs	224.9	342.6	455.5	570.7	596.5

Source: *Tulsa World*, April 17, 1990, p. 1.

n: less than \$0.1 million.

provided only after a detailed analysis of the labor market for teachers relative to future labor force requirements.

In reality, the issue will be decided on the basis of partial evidence, some of which we now consider.

The two objections raised most often to increases in teachers' salaries are that: (1) higher salaries will not assure better student performance, and (2) teachers' salaries have actually been rising faster than key benchmarks, such as the price level. Are these "the facts?" If so, do they constitute a strong argument against increases in teachers' salaries?

These objections do have a factual basis. First, Eric Hanushek examined 60 studies of the relationship between student performance and teachers salaries, and found only 9 cases in which there was a positive and statistically significant relationship between teachers' salaries and student test scores.⁶ Second, teachers' salaries have risen (although just barely) relative to the price level. In Oklahoma, teachers' salaries increased by 79.8 percent from 1979 to 1989, while the consumer price index jumped by 76.9 percent.

Hanushek's findings are troubling. They may, however, be either spurious or irrelevant. Regarding spuriousness, it may be that salary differentials across states or school districts have not been large enough to affect the quality of students attracted to teaching or the quality of teachers remaining in the profession. If so, one would not expect to find a significant effect of salaries on student performance. Regarding relevance, the important relationship may not be that between salaries and student performance, but rather that between salaries and students' success in the labor market. The latter relationship is yet to be fully explored, but there is evidence that higher teacher salaries are associated with higher lifetime earnings for students.⁷

The relationships between teachers' salaries and the price level also need to be put into perspective. During the 1970's teachers' salaries failed, by a wide margin, to keep pace with inflation. Thus, some argue that the increases of the 80's should be viewed merely as compensation for previous reductions in real wages. Even at that, it is clear that the 80's provided little margin for catching up.

Many economists would argue that we should expect teachers' salaries to be rising relative to wages, if not prices. There are two principal reasons why. First, females have much better job market alternatives now than they had in the past. Given, this, it takes a relatively higher wage to entice them to enter the teaching profession. Second, there is a growing gap between the wages of workers with a college degree and those without one. Thus, since schools must pay a wage sufficient to compete with the wages earned in other occupations by college graduates, they are faced with paying wages that must rise faster than the average wage.

Finally, it is informative to consider how Oklahoma teachers fared relative to teachers in other states prior to HB 1017, and how they might fare because of HB 1017. Table 5 provides some helpful comparative data.

TABLE 5
Teachers' Salaries
in Elementary-Secondary Schools
Oklahoma and Selected States
Fiscal Year 1989

State	Salary Per Full-Time Teacher	Oklahoma as Percent	Salary Gap (millions)
Oklahoma	\$22,000		
U.S. Average	29,567	74.4	\$260.3
Neighbors	25,854	85.1	132.6
Economic Peers	29,453	74.7	256.4
Top Ten	34,029	64.7	413.8

In this table, the average teachers' salary in Oklahoma is compared with the average salary paid elsewhere in the United States. The comparative salaries are: (1) the national average, (2) the average in the "neighboring" states of Texas, New Mexico, Colorado, Kansas, Missouri, Arkansas, Louisiana, Iowa, and Nebraska, (3) the average in the economic peer states (those most similar to Oklahoma in terms of resources per student) of California, Kansas, Louisiana, Maryland, Missouri, Nebraska, New Hampshire, New York, North Dakota, and Texas, and (4) the average in the top ten states (ranked in terms of expenditures per student) of Alaska, Connecticut, Delaware, District of Columbia, Massachusetts, New Jersey, New York, Pennsylvania, Rhode Island, and Wyoming.

Column (3) provides a comparison of these average salaries: it shows how large the Oklahoma average salary is of the average in the benchmark "states." Column (4) shows how much more Oklahoma schools would have had to spend on teachers' salaries in 1989 to close the gap in average salaries.

Assuming no change in the salary gaps between FY89 and FY91, the latter being the first year for the application of HB 1017 revenues, the salary increase provided in HB 1017 would have been sufficient to close only about one-half of the smallest gap: the one between Oklahoma and neighboring states. This result is encouraging, but this gap may not be the relevant indicator of what Oklahoma must do if the market for teachers transcends the boundaries of the region covered by the neighboring states.

How Oklahoma teachers will fare in the future relative to their counterparts elsewhere cannot be determined from existing data. HB 1017 provides significant salary increases, but they are no guarantee against faster growth in teachers' salaries in other states for reasons totally outside the control of Oklahoma decision makers.

CONCLUSIONS

The passage of HB1017, the education reform bill, is only one of many in a long history of education reform measures in Oklahoma. Despite the public attention and the attendant controversy, one should view it as one of many steps over a long period toward education reform. In general, even the issues of education reform have remained the same, i.e., the efficiency and effectiveness. Education reform in Oklahoma, as it is elsewhere in the U.S., is an issue stimulated, in part, by economic development concerns and the education and training needs of today. To meet that requirement, Oklahoma must provide new members of the workforce with the necessary skills. But the demographic configuration of the workforce is changing. Educators and trainers must have the tools to place new entrants in the workforce. HB1017 has several provisions that address the problems associated with demographic changes, for example, such provisions as early childhood education, mandatory kindergarten, parental involvement, and recruitment of minority teachers.

HB1017 is silent on issues that can address the workforce skill requirements for expanding industries. However, that silence does not need to be a

weakness of HB1017. Developing these skills can be central to the implementation of the approved programs.

NOTES

¹Jean Luckowski, "Oklahoma House Bill 1706: A Case Study of Educational Reform," *Journal of Thought*, College of Education, University of Oklahoma, (1983): 40f.

²John M. Folks, *Investing in Oklahoma's Future*, Oklahoma City: Oklahoma State Department of Education, circa 1984, p. iii.

³All evaluations of Head Start do not come to this conclusion. For a good review of the evidence see: Nathan

Glazer, "Education and Training Programs and Poverty," in Sheldon H. Danziger and Daniel H. Weinberg, eds., *Fighting Poverty: What Works and What Doesn't*. (Cambridge, MA: Harvard University Press, 1986): 152-179.

⁴Eric Hanushek provides a thorough review of this evidence in: "The Economics of Schooling: Production and Efficiency in Public Schools," *Journal of Economic Literature*, Vol. 24 (September, 1986): 1141-1177.

⁵For the latest evidence of this kind see: David Card and Alan Krueger, "Does School Quality Matter? Returns to Education and the Characteristics of Public Schools," National Bureau of Economic Research Working Paper No. 3358, 1990.

⁶See footnote 4.

⁷See footnote 5.

OKLAHOMA'S CORPORATE INTERNATIONAL TRADE OPPORTUNITIES IN EASTERN EUROPE

Market economies exist and thrive because of their ability to respond and adapt to changing social, political and economic environments in which resource allocation takes place. In the 1980s, events in Eastern Europe and many other developing countries have dramatically affirmed growing worldwide confidence in the relative advantages of the market system. Many studies have documented the benefits of timely and flexible relocation, readjustment and restructuring in both public and private sectors of national and regional economies to accommodate changing international competitive conditions.

In accommodating to such global change, each year more and more firms become involved in some strategy of international trade in commodities, goods, services or overseas production and investment. Countries, through their governments, define the environment for international trade but individual firms in the advanced market economies must pursue the profit opportunities involved in the ever-changing motion toward new economic equilibria in the global economy.

The business-oriented international trade theory being sought by the large and small U.S. exporters is a new framework for corporate international trade development.¹ The search is for strategies to pursue business opportunities as the entire market process adjusts and adapts to the changing global economic environment—and especially to such extraordinary events as European integration, the reunification of Germany and the opening of Eastern Europe to democratic choices and freer commercial exchange.

The purpose of this paper is two-fold. First, the record of response of the Oklahoma economy to international trade forces is briefly reviewed to provide perspective on the current economy and the type and extent of restructuring induced by international trade forces. Little evidence is available on the extent that individual firms perceive and respond to developing international trade opportunities; however, export trade flows based on three-digit industrial data can be reviewed.

Second, the paper summarizes the potential trade opportunities with the Eastern European countries² over the next five years as market processes are installed and state trading regimes accompanying the communist resource management processes become transformed to private ownership.

The Oklahoma economy has marginally adapted to changes in international trade forces but not to the extent of the adaptations caused by national economic forces and specific resource industry trends. Production and international trade remain highly concentrated in a few major industries. The Eastern European countries no doubt will spawn substantial opportunities for a few aggressive firms best able to adapt their production to serving this need, but it would appear to be a mistake to expect widespread economic development opportunities from this source in the near future.

THE RESPONSE OF THE OKLAHOMA ECONOMY TO INTERNATIONAL INTERDEPENDENCE

Few would disagree with the observation that considerable adjustments in the U.S. economy were made in the 1980s in response to growing international interdependencies; rising concerns for environmental protection; demographic, investment and taste trends which increased demands for services, high technology products and convenience goods; and, substantial increases in real expenditures on national defense and related research and development activity.

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Oklahoma and other regions participated in these changes to varying degrees depending on their economic structures and particular forms of comparative advantage. Regions prospered or suffered depending on their various resource, national and international dependencies and the luck (or wisdom) of cumulative decisions affecting the exact forms of specialization and diversification activity in the past. International trade is but one of these many forces affecting the Oklahoma economy.

Relative to other states in its region, the Oklahoma economy is not heavily dependent on international trade. During 1986, the last year for which the most reliable data exists relating exports to the location of production, total direct exports of Oklahoma firms reached \$1.1 billion. An additional equal value of shipments can be indirectly related to export sales nationwide so approximately 10 percent of Oklahoma's manufacturing production can be tied to foreign markets.³

This level of export sales in 1986 translates to 9,500 jobs related to direct exports, 9,800 jobs in supporting manufacturing and 26,700 jobs in non-manufacturing support activities. In total, three percent of the Oklahoma civilian labor force is employed in export-related activity compared with 4.1 percent for the U.S. as a whole.

Competitive advantage and performance in exporting is highly concentrated in both the U.S. and Oklahoma economies, although in somewhat different sectors, as shown below. The pattern of export specialization, however, is certainly not static over time. Major adjustments occur in response to changing values of the exchange rate and other direct impacts of foreign demand for our goods and services.

The core of the argument for international trade-induced restructuring because of exchange-rate changes was summarized in a recent New England

Federal Reserve publication:

Exchange rate movements promote structural change by altering the relative prices of traded and nontraded goods as well as the relative prices of foreign and domestic tradeables. A dollar appreciation⁴ causes the dollar price of U.S. imports to fall relative to the price of competitive products made in this country, while the foreign currency price of U.S. exports rises relative to the price of their foreign counterparts. Production of traded goods thus shifts from the U.S. to other countries.⁵

The analysis also indicates that a rise in the dollar will lead to the following: (1) to shifts within the manufacturing sector that are likely to be toward high-tech goods and away from those with high requirements for low-skilled labor, (2) to more service-oriented, hence less tradeable, manufacturing sectors, and (3) to a decline in the role of production workers in U.S. manufacturing processes and a relative addition of more service-oriented workers within each manufacturing industry.

To summarize the most recent exchange rate history, the period from 1973 to 1979 includes the introduction of flexible rates and a history of variability of the real effective exchange rate⁶ within a relatively narrow band as the dollar fell by about 10 percent over the period. From 1979 to early in 1985 the value of dollar rose more than 50 percent before falling almost as much from 1985 to 1987. Thus, the periods of alternating exchange rate trends overlap the energy growth period of 1973-1982 and compound the sets of influences on the Oklahoma economy in the confusing period of 1980-1982 with worldwide recession, still expanding oil activity and a rising value of the dollar.

The pattern of restructuring in the national economy during the 1979-1985 period with its substantial increase in the value of the dollar was highlighted by the following:⁷

- (a) The share of employment in the tradeable manufacturing industries declined by about 1.1 percentage points with offsetting relative expansion in the nontraded industries—those with less than 10 percent of the value of production shipments either imported or exported.
- (b) The shift away from employment in the import-sensitive industries accelerated

TABLE 1
Top Five Export Sectors
(% share of total exports)

(%) United States	(%) Oklahoma
22.6 Transportation equip.	50.7 Nonelectric machinery
20.4 Nonelectric machinery	9.7 Food & kindred products
13.2 Chemicals & products	6.9 Transportation equipment
11.4 Electronic equipment	5.3 Electronic equipment
7.0 Food and kindred products	5.1 Petroleum and coal products
74.6 Total	77.7 Total

Source: Lage, "Oklahoma Exports, 1986."

with increasing imports and foreign sourcing, while employment changes in the export-oriented industries either moved to actual decline or much slower growth than observed during 1973-1979, when the value of the dollar was falling and exports were growing more rapidly than domestic production.

- (c) And, although the nontraded, domestic service industries received some additional stimulus, they did not grow as fast as the more service-oriented of the export industries.

The pattern of restructuring in Oklahoma, as indicated by the U.S. Department of Commerce employment series of full and part-time employment, tends to follow its own path because of an historically low correlation with the national economy, the extreme dominance of local energy activity and relatively large export sectors which are closely tied to the processing, capital equipment and service needs of the worldwide oil and gas extraction industry.

Oklahoma's manufacturing employment as a share of total employment continued to grow to the mid-1970s before foreign competition and productivity gains severely reduced such employment in the 1980s. As seen in Table 2, the industries designated as internationally-traded continued to gain in terms of relative employment share—from 60.7 percent in 1979 to 62.4 percent in 1985. The counterpart declining shares in the nontraded sectors occurred mostly in food products and fabricated metal products.

The plight of Oklahoma's import-vulnerable industries was apparent as the value of the dollar rose. All such sectors lost substantial employment except for paper and paper products and miscellaneous consumer manufactured goods. These industries, however, employ relatively few workers in the state compared with the dominant apparel and primary metal product industries.

Somewhat surprisingly, the strongest manufacturing performance during 1979-1985 came from the export-oriented sectors which should have faced severe foreign competition and higher foreign currency prices for their products. Even then, however, a "strong performance" means "no loss" rather than a "substantial gain" in employment.

The one sector that substantially increased both its level and share of manufacturing employment was motor vehicles and parts. The rubber and plastic products industry maintained some growth

during the period while electronic and electrical equipment lost substantial employment—probably to foreign production and parts sourcing as purchases abroad became cheaper.

The decline of the exchange value of the dollar from 1985 to 1987 has not yet caused widespread improvement in Oklahoma's tradeable sectors, although many of the declines seem to have been checked. Actual employment in traded, import-vulnerable, export-oriented and nontraded classifications are all lower in 1988 than in 1985. The export-oriented sectors of nonelectrical machinery and electric and electronic equipment manufacturing show large employment losses despite dollar depreciation that should have improved export incentives. Apparently the energy-dominated machinery industry and the relatively concentrated electronic industry in the state are reacting to rather specific demand and supply factors rather than the overall real exchange value of the dollar.

Finally, other indirect evidence also indicates that the Oklahoma economy is relatively insensitive to changes in the exchange rate. Research by Cox and Hill (1988) based on the Texas economy concludes that industries most likely to gain from recent dollar depreciations with respect to the Japanese and European currencies are transportation equipment, instruments, miscellaneous manufacturing (including jewelry, toys and sporting equipment), electronic equipment, nonelectrical machinery and chemicals. These industries combine substantial production sensitivity to exchange rate changes with substantial market shares in the countries with appreciating national currencies. Based on the industrial mix and export patterns, Oklahoma has a below average response to exchange rate changes, a rate between 90 and 100 percent of the national average.

The Oklahoma economy of 1990 is in many ways different from the economy of 1980. For example, service industries have grown, activity related to energy and other natural resources has been substantially down-sized, and manufacturing employment is smaller and more concentrated in the motor vehicle and aircraft industries. The system has demonstrated its ability to adapt and change, just as the Eastern European system must now develop the institutions, incentives and expertise to grow and adapt to newly felt market forces that have for so long been distorted and subverted by central planning processes and artificial pricing and subsidization. The Oklahoma firms that successfully perceive and meet the profit opportunities

in this period of constant change and uncertainty will be those that best understand the evolving economic and political systems of the emerging market economies.

EXPORT POTENTIAL FOR OKLAHOMA MANUFACTURING INDUSTRIES

Data concerning international exports by state showing the "state of origin" of commodity exports rather than the "state of production" used in the census surveys of prior years are shown in Table 3. The 1989 export data from Oklahoma demonstrates the heavy concentration of exports in just a few of the two-digit production sectors—especially nonelectrical machinery and transportation equipment.

Table 4 illustrates an alternative view of Oklahoma exports at a more disaggregated level using

unpublished three-digit SIC data developed for the Urban Institute in a study supported by the Southwestern Bell Foundation to determine which industries to target for export promotion assistance. The Urban Institute's estimates for each state are based on disaggregation procedures from a survey designed for a statistically valid national sample. Since substantially larger errors are likely for the state data one must use caution when using the data for regional analysis. Best estimates indicate, however, that these 20 industries account for approximately three-fourths of the \$1.2 billion estimated average annual exports over the 1984-86 time period. Concentration is again seen to be very high in two major non-electrical machinery categories (SIC Industries 356—General Industrial Machinery—and 353—Construction Machinery) including the important oil and gas field machinery industry, pumps and valves, and related supplies.

TABLE 2
Oklahoma Full and Part-Time Employment Change
1970-1988

Industry	Employment Share			Employment Growth Rate ^a		
	1970	1979	1988	1979-85	1985-88	1970-88
Manufacturing	12.5	12.9	10.7	-1.0	-1.6	1.2
Traded	54.3	60.7	62.1	-0.5	-1.8	1.9
Import Vulnerable	14.9	15.0	14.9	-2.5	1.3	1.1
Apparel Products	7.1	6.2	5.3	-4.0	-0.8	-0.5
Lumber Products	1.8	2.4	2.2	-4.8	3.2	2.3
Paper Products	1.0	1.4	2.3	4.2	5.0	6.1
Leather Products	0.3	0.4	0.3	-6.2	0.5	0.6
Primary Metal Products	3.1	2.9	2.9	-3.9	4.6	0.8
Miscellaneous Products	1.7	1.7	1.9	1.8	-3.2	2.0
Export Oriented	39.3	45.8	47.3	0.1	-2.6	2.2
Chemicals	1.3	1.8	1.9	-1.1	1.0	3.4
Rubber and Plastics	3.2	6.2	6.7	0.6	-2.1	5.4
Nonelectrical Machinery	14.0	19.3	19.1	0.3	-4.5	2.9
Electric Equipment	9.8	7.4	5.3	-4.6	-4.8	-2.2
Transportation Equipment	8.3	5.1	5.3	-1.1	0.1	-1.3
Motor Vehicle Equipment	2.1	4.7	7.2	5.4	-0.1	8.4
Instruments	0.7	1.3	1.6	1.1	2.5	6.1
Non-Traded	45.7	39.3	37.9	-1.7	-1.3	0.1
Food Products	11.9	8.9	8.5	-2.4	-0.6	-0.7
Textile Products	1.6	0.8	0.7	-5.0	1.2	-3.8
Furniture	1.5	1.3	1.3	-4.6	7.7	0.4
Printing/Publishing	6.3	6.0	7.4	2.1	-0.8	2.0
Petroleum Products	6.3	4.6	4.2	-1.8	-2.8	-1.1
Stone, Clay & Glass	6.4	5.8	6.3	0.3	-1.4	1.1
Fabricated Metal	11.7	11.9	9.5	-4.1	-2.7	0.0
Total Employment	100.0	100.0	100.0	1.7	-1.7	2.0
Farm	8.7	6.4	5.3	-0.9	-2.0	-0.7
Mining	4.1	5.3	4.8	4.8	-9.3	2.9
Construction	5.1	6.0	4.6	-1.2	-3.8	1.4
Service	17.0	18.6	23.1	3.7	2.6	3.8
Government	22.7	18.6	19.3	1.9	0.2	1.1
All Other	29.9	32.2	32.2	1.9	-1.1	2.5

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

TABLE 3
1989 Manufactured Exports
Originating in Oklahoma by S.I.C.

SIC	Industry	1989 Exports (millions)	OK/US (ratio)
20	Food and Kindred Products	\$57.2	.36
22	Textile Mill Products	1.1	.04
23	Apparel and Related Products	2.4	.10
24	Lumber and Wood Products, except Furniture	1.9	.03
25	Furniture and Fixtures	0.8	.08
26	Paper and Allied Products	23.1	.27
27	Printing and Publishing	6.4	.23
28	Chemicals and Allied Products	63.9	.17
29	Petroleum and Coal Products	21.5	.41
3X	Misc. Manufacturers NSPF	10.6	.10
30	Rubber and Plastics Products	63.3	1.32*
31	Leather and Products	0.6	.05
32	Stone/Clay/Glass and Concrete Products	21.4	.83*
33	Primary Metal Products	23.6	.21
34	Fabricated Metal Products	36.7	.39
35	Non-Electric Machinery	510.1	.85*
36	Electric and Electronic Machinery	59.4	.17
37	Transportation Equipment	384.4	.66*
38	Instruments, photo., watches	69.0	.36
39	Misc. Manufactured Commodities	5.1	.10
Total Manufactured Exports Originating		1,362.5	.45

Source: U.S. Department of Commerce, Bureau of the Census

*Sectors with export shares exceeding 0.5 and the overall state share of exports of 0.4% for all commodities.

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The future exporting potential of various industries was predicted in the targeting study using a combination of criteria. Industries were designated as "Promising" for export potential if the ratio of state exports to manufacturers' shipments relative to the comparable national ratio exceeded one *and* industry exports had a positive growth rate in the recent past. Five three-digit industries among Oklahoma's top 20 exporters are considered to have "promising" export potential—industrial machinery (356), fabricated metal products (349), plastic products (307), electronic equipment (369) and some basic steel products (331). Notably, as shown in the last column of Table 4, most of these industries have a substantial number of firms and/or relatively large levels of employment in Oklahoma.

Three additional industries were selected for a "watchlist" based on some mixed or high-but-declining indicators of competitive advantage. One industry was considered to be an emerging sector of export strength based on export growth nationally and growing activity within the state. Finally,

some industries had to be excluded from this analysis because of insufficient export data in the state, but these tended to be nontraded or import-competitive industries for the most part.

The leading markets for Oklahoma exports in 1989 are reported in Table 5. Canada is the largest single market for Oklahoma as well as for the U.S. The United Kingdom was Oklahoma's second largest single buyer with 8 percent of state exports. Notably, Western Europe accounted for about 30 percent of all the state's exports, well ahead of the total for all Asian countries of 21 percent. Major developing countries buying Oklahoma products include Mexico, China, Venezuela, Saudi Arabia, South Korea, Yugoslavia, Algeria and Egypt.⁸

Based on the targeting study, the authors acknowledged "...the dominance of European countries as importers of the commodities produced by Oklahoma's most promising industries. This contrasts with Oklahoma's recent export concentration on Canada. The data indicate that Oklahoma should consider targeting more export promotion to the European market, which includes the largest markets for Oklahoma's most promising export industries."⁹

TRADE OPPORTUNITIES IN EASTERN EUROPE¹⁰

Historical Trade Patterns

The flow of trade in 1989 between the U.S. and the main "Nonmarket Economies"—China, the Soviet Union and Eastern Europe—is shown in Table 6. Quite different circumstances exist and are reflected in the data for each of these three regions and, indeed, for the individual countries of Eastern Europe.

U.S. imports from China of \$11.9 billion, representing 85 percent of all U.S. imports from nonmarket economies, dominate all two-way trade flows. Textile imports of \$3.2 billion are the largest category, followed by nearly \$2 billion each in machinery and miscellaneous manufactured article imports. U.S. exports to China in 1989 of \$5.8 billion are led by machinery, transport vehicles and aircraft, agricultural products and chemical products.¹¹

Trade with the Soviet Union is dominated by \$3 billion of agricultural grain exports in 1989 (up from \$1.8 billion in 1988, and only \$0.8 billion in 1987). Foodstuffs, chemicals, rubber and plastic products, and machinery are other leading U.S.

TABLE 4
Top 20 Oklahoma 3-Digit SIC Export Industries^a

SIC	Industry	Average Annual Exports 1984-86 (millions)	Potential ^b	Number Firms-Employment (1987) ^c
356	General Industrial Machinery	\$280	P	87-5446
353	Construction Machinery	244	W	135-7213
372	Aircraft and Parts	49		24-7465
291	Petroleum Refining	47		19-2490
349	Miscellaneous Fabricated Metals	35	P	136-4492
351	Engines and Turbines	32		6-1873
207	Fats and Oils	32	U	9- (E) ^d
371	Motor Vehicles and Equipment	29		73-9222
201	Meat Products	29	U	61-3059
344	Fabricated Structural Metal Products	25	W	200-5998
362	Measuring and Controlling Development	24	E	28-1118
301	Tires and Inner Tubes	24		7-5498
307	Miscellaneous Plastic Products	22	P	94-3924
204	Grain Mill Products	21		45-1291
299	Miscellaneous Petroleum and Coal Products	18		11-384
369	Miscellaneous Electronic Equipment	11	P	25-751
322	Glass, Pressed and Blown	4		10-312
329	Miscellaneous Nonmetallic Minerals	3	W	22-605
202	Dairy Products	2		17-1123
331	Blast Furnace and Basic Steel	2	P	20-1203

Source: T.O. Singer and E.B. Lner. "Targeting Export Assistance Programs in the Southwest-Oklahoma." Report prepared by The Urban Institute for Southwestern Bell Foundation, May 2, 1990.

^aIncludes only industries with Relative Standard Error of the Oklahoma allocation of the national totals below 10 percent and not suppressed due to disclosure problems.

^bP=Promising Export Potential, W=Watchlist, U=Unsettled Trend, E=Emerging.

Other Promising Sectors include SIC 33, Primary Metal Industries, SIC 35, Industrial Machinery and Equipment, and SIC 391, Jewelry, Silver & Plated Ware.

^cThe first number is the number of establishments and the second is the 1987 reported employment. Source: *County Business Patterns, 1987*.

^dEmployment range 250-499.

exports to the Soviet Union while U.S. purchases from the Soviet Union are dominated by mineral and chemical products as well as jewelry items and precious stones. Total imports were only \$691,000 compared with \$4,262,000 of exports in 1989.

Trade with the six Eastern European Countries (Bulgaria, Czechoslovakia, East Germany, Hungary, Poland and Romania) was more nearly balanced with \$1 billion of U.S. exports and \$1.3 billion imported. Agricultural sales were the largest single category of U.S. exports with important manufacturing sales in machinery, vehicles, instruments, and mineral and chemical products. U.S. imports were dominated by mineral products, prepared foodstuffs, textiles, base metals and machinery and vehicles.

Overall, the pattern of trade follows rather closely the trade patterns with the advanced market economies and the rest of the world. U.S. comparative advantage is clearly revealed in agriculture, aircraft and selected high technology industries. Technologically specialized and market niche exports in any statistical category are possible, but

international trade flows tend to be quite concentrated in a relatively few areas.

Opportunities in the Eastern Bloc

The potential for American business in Eastern Europe in the next few years depends on both the home country goals, policies, and priorities as well as U.S. policies toward those countries. Table 7 presents a brief summary of the six Eastern European emerging market economies—Poland, Hungary, Czechoslovakia, East Germany, Romania and Bulgaria.

As a group, the Eastern European (EE) countries represent a market of about 113 million people with population sizes ranging from 9 million in Bulgaria to 38 million in Poland. Standards-of-living are low and variable by Western standards. Per capita Gross Domestic Product in 1988, for example, ranged from a low of \$6.4 thousand in Romania to \$10.1 thousand in Czechoslovakia and \$12.5 thousand in East Germany. (Corresponding per capita GNP for 1987 in advanced market economies range from about \$6,000 Spain and Ireland to

TABLE 5
Oklahoma Exports by Country of Destination
Top 20 Markets
1989

Destination Country	Export Total (millions)	Percent of Total
Canada	\$538.9	36.9
United Kingdom	115.4	7.9
Japan	112.8	7.7
West Germany	85.9	5.9
France	58.3	4.0
Mexico	55.0	3.8
China	49.3	3.4
Australia	46.1	3.1
Singapore	44.4	3.0
Netherlands	40.0	2.7
Belgium/Luxembourg	30.0	2.0
Italy	24.1	1.7
Algeria	23.0	1.6
Yugoslavia	17.0	1.2
Korea	16.9	1.1
Taiwan	12.8	0.9
South Africa	10.9	0.7
Oman	9.1	0.6
Saudi Arabia	8.6	0.6
Venezuela	8.3	0.5
Top 20 Countries	1,306.8	89.3

Source: U.S. Department of Commerce, Bureau of the Census
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\$18,500 in the U.S. and \$21,330 in Switzerland.)¹² Hungary has the highest per capita debt, but as a ratio to GDP the per capita hard currency debt in Poland and Bulgaria is nearing the level of Hungary. East Germany is the only country in this summary with a ratio of hard currency reserves to GNP significantly above one percent. Presumably, however, the reunification of Germany will alter substantially the situation of the old East German territory relative to other Eastern Bloc countries.

As a matter of changing priorities, we can expect the historical dominance of heavy industry and military equipment in these countries to give way to increased emphasis on consumer goods and medical services. Importation of information and capital goods affecting the processes for increasing efficiency, productivity and environmental protection appears to be a necessity.

The priority areas for imports identified by *Business America*, the export promotion publication of the U.S. Department of Commerce, include:

- Environmental protection equipment
- Telecommunications
- Tourism and services

- Aircraft and parts
- Banking, insurance, training and management consulting
- Nuclear safety
- Energy-saving equipment
- Medical equipment and technologies
- Production of consumer goods.

One must, of course, avoid treating each country according to an average perception. One report by Jan Vanous, a research director for a Washington-based consulting firm, PlanEcon, used fifteen factors "...including economic-reform prospects, inflation, education, work ethic, political stability, and democratic tradition"¹³ to rank and grade the EE countries for relative attractiveness for foreign investment. His grades were: "Czechoslovakia and East Germany, B; Hungary, B-minus; Poland, C-plus; Romania, C-minus; and Bulgaria, D-plus."¹⁴

While various systems and alternative goals for the analysis—exporting vs. foreign investment, for example—would probably lead to alternative rankings, there are several policy differences among the six that corporate business planners should consider. A summary of commercial relationships, primarily through association with U.S. and other world trade programs, according to the U.S. Department of Commerce, is shown in Table 8.

The only nonmarket economies that currently receive the extremely important most-favored-nation (MFN) status for payment of U.S. import duties are China, Hungary and Poland. This status may well mean paying a duty of 5 percent rather than a rate in the vicinity of 50 percent, or a similar ratio for other duties in effect in the early 1930s when the U.S. tariff was at its maximum. Romania had MFN status as recently as 1988 but renunciation of that status has not yet been reversed. Hungary's MFN status is on an indefinite basis rather than renewed year-by-year. Poland's status was suspended for a time due to political reasons, but it was reinstated by the President in February, 1987. The pending status reported for Czechoslovakia has apparently advanced so that mutual MFN status is, or soon will be, in effect.¹⁵

Generally speaking, economic relations between the U.S. and Poland and Hungary are most advanced, with substantive negotiations with Czechoslovakia well underway. An important law possibly pointing the way toward future relations with the majority of EE countries is the Support for East European Democracy (SEED) Act of 1989.

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Australia	46.1	3.1
Singapore	44.4	3.0
Netherlands	40.0	2.7
Belgium/Luxembourg	30.0	2.0
Italy	24.1	1.7
Algeria	23.0	1.6
Yugoslavia	17.0	1.2
Korea	16.9	1.1
Taiwan	12.8	0.9
South Africa	10.9	0.7
Oman	9.1	0.6
Saudi Arabia	8.6	0.6
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- Energy-saving equipment
- Medical equipment and technologies
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TABLE 6
U.S. Trade with Eastern Europe, China and the USSR
1989
(thousands)

	U.S. Exports			U.S. Imports		
	East Europe	China	USSR	East Europe	China	USSR
1. Live animals; animal products	\$ 9,723	\$ 10,152	\$ 14,069	\$ 28,038	\$ 374,676	\$ 3,434
2. Vegetable products	202,343	1,132,775	3,009,412	19,813	97,567	118
3. Animal or vegetable fats, oils, and waxes	1,008	271	26,694	1,128	2,072	0
4. Prepared foodstuffs, beverages, and tobacco	21,455	52,746	389,532	198,323	126,592	25,408
5. Mineral products	96,411	31,219	29,331	251,789	573,839	282,714
6. Products of the chemical or allied industries	70,140	926,433	286,234	94,531	270,012	106,804
7. Plastics and rubber, and articles thereof	11,176	227,354	55,249	36,777	257,992	626
8. Hides and skins; leather and articles thereof; travel goods, handbags and similar containers	78,660	14,552	2,712	17,922	690,193	14,046
9. Articles of wood, cork, or plaiting materials	8,527	181,451	90	5,592	136,323	3,863
10. Wood pulp; paper, paperboard, and articles thereof	15,329	206,000	22,786	4,891	58,241	2,191
11. Textiles and textile articles	49,340	417,868	10,049	163,610	3,241,399	12,736
12. Footwear, headgear, and artificial flowers	386	689	61	65,087	1,061,219	196
13. Articles of stone or ceramics; glass and glassware	5,795	16,593	2,651	50,326	148,987	4,885
14. Pearls; precious stones and metals; jewelry; coin	2,907	12,030	9,337	3,646	104,464	165,077
15. Base metals and articles of base metal	7,127	366,453	108,982	125,453	483,133	30,976
16. Machinery and mechanical appliances; electrical equipment; parts and accessories thereof	154,561	1,271,502	271,133	93,942	1,944,906	2,828
17. Vehicles, aircraft, and other transport equipment	165,383	601,353	26,632	86,561	47,458	11,648
18. Optical, photographic, measuring, and medical ap- paratus; clocks and watches; musical instruments	39,838	266,032	44,465	9,366	175,841	1,400
19. Arms and ammunition; parts and accessories thereo	231	1,727	0	1,377	21,196	47
20. Miscellaneous manufactured articles	3,039	8,887	1,425	40,169	1,938,339	832
21. Works of art, collectors pieces and antiques	2,512	664	657	3,427	15,274	16,335
22. Special classification provisions	64,867	28,727	4,832	10,262	87,450	4,726
TOTAL	\$1,010,758	\$5,775,478	\$4,262,336	\$1,312,029	\$11,859,172	\$690,891

TABLE 7
The Eastern European Economies
1988

	Bulgaria	Czechoslovakia	East Germany	Hungary	Poland	Romania
Population (Millions)	9.0	15.7	16.6	10.6	38.1	23.1
Gross National Product (\$ U.S. Billions)	67.6	158.2	207.2	91.8	276.3	151.3
Real Economic Growth Rates (Percent Of Increase)	1.8	1.4	1.8	1.1	2.1	2.1
Trade And Services Balance (\$ U.S. Billions)	-0.9	-0.3	0.6	-0.6	-0.6	1.6
Foreign Debt (\$ U.S. Billions)	6.4	5.6	18.5	16.8	39.1	1.9
Hard-Currency Reserves (\$ U.S. Billions: Gold Excluded)	1.1	1.7	8.0	1.5	2.1	1.3

Source: *Nation's Business* (April 1990): 47.

TABLE 8
U.S. - Eastern Europe Trade Relations

	GATT	IMF	MFN	Trade Agrmt.	Invest Agrmt.	TDP	GSP	OPIC	EXIM
Poland	Yes	Yes	Yes	N/A	Yes ^a	Yes ^a	Yes	Yes	Yes
Hungary	Yes	Yes	Yes	Yes	Pending ^b	Yes	Yes	Yes	Yes
Czechoslovakia	Yes	Pending ^c	Pending ^d	Yes	Pending ^e	Pending ^f	No	Planned ^f	Yes
East Germany	No	No	No	No	No	No	No	No	No
Bulgaria	Pending ^g	Pending ^h	No	No	No	No	No	No	No
Romania	Yes	Yes	No	Yes	No	No	No	No	No

Source: *Business America* (June 18, 1990): 14.

^aU.S. Polish Business and Economic Agreement was signed, is yet to be ratified by both countries.

^bInvestment Agreement with Hungary has been proposed.

^cCzechoslovakia applied to rejoin the IMF.

^dTrade Agreement with Czechoslovakia awaits approval in both countries.

^eInvestment Treaty currently under negotiation.

^fProgram awaits authorization to operate.

^gBulgaria is an observer to the GATT, has formally applied for GATT membership.

^hBulgaria has applied for IMF membership.

GATT - Country is a member of the General Agreement on Tariffs and Trade.

IMF - Country belongs to the International Monetary Fund.

MFN - Country receives Most-Favored-Nation treatment from the United States.

Trade/Investment Agreement - United States has signed an agreement with subject country.

TDP - Trade Development Program operates in subject country.

GSP - Country receives Generalized System of Preferences tariff treatment from the United States.

OPIC - Overseas Private Investment Corporation operates in subject country.

Ex-Im - Export-Import Bank operates in subject country.

This law authorized \$938 million for Poland and Hungary to further their development of "democratic institutions, political pluralism and free market economies." In addition, the services of the Overseas Private Investment Corporation and the U.S. Export-Import Bank were made available and designation of both countries as Generalized System of Preference beneficiaries is now feasible. Similar status can be expected for other countries over the next few years as a result of negotiations begun or anticipated.

Considerations such as these, and local analysis by U.S. commerce personnel close to the individual country markets, have resulted in the selection of business activities with the best prospects for success. These activities are summarized in Table 9.

Strategies for Conducting International Business in Eastern Europe

As the economies of Eastern Europe shift from a socialist system with much international trade negotiated by state trading firms, U.S. firms will have to orient toward end-users. They must become familiar with the expanding number of de-

centralized firms with hard currency and more skillful in marketing and adapting products to the needs and tastes of these new consumers.

Neither economic history nor theory has much to say concerning the path from a rigid centralized economy to an open, market-directed system. Many economists recommend a speedy transition, even if substantial dislocation and unemployment occur in the short-run. Domestic reforms must precede large scale foreign financial assistance and substantial inflows of foreign capital in order to stabilize the infrastructure, the legal system, a safety net of social security and perhaps the whole "way of thinking" about commercial and political activity in a democratic, interdependent system. Most experts expect at least five or so years will be required to make the preliminary investments and to turn the tide of the almost inevitable worsening of these countries' terms of trade. However, aid flows from the West may alleviate some of these payment problems.

More importantly, none of the currencies of the East European countries are convertible to the market-economy currencies, so getting paid may be a challenge. Firms must be ready to reinvest

profits and recoup their profits over a long period of time. However, some hard currency is being allocated to the purchase of higher priority imports in several of the Eastern countries.

TABLE 9
Best Prospects for Business Opportunities
in Eastern Europe

Czechoslovakia

1989: U.S. exports, \$54 million

U.S. imports, \$67 million

Electronics, process controls and monitoring equipment, computers, machine tools, and light industries.

Romania

1989: U.S. exports, \$156 million

U.S. imports, \$354 million

Food items, clothing, electronic goods, auto parts, construction materials, raw materials, energy-efficient capital equipment, industrial materials, replacement parts, and pharmaceuticals.

Poland

1989: U.S. exports, \$414 million

U.S. imports, \$387 million

Food process and packaging technologies, pharmaceuticals and medical products, construction materials, telecommunications and those products and technologies to improve industrial efficiency and productivity.

Hungary

1989: U.S. exports, \$122 million

U.S. imports, \$329 million

Industrial automation and process control equipment, telecommunications equipment, machine tools, and home electronics and appliances.

German Democratic Republic

1989: U.S. exports, \$94 million

U.S. imports, \$139 million

Medical equipment; chemicals; and computer, environmental, and energy-related equipment and technology.

Bulgaria

1989: U.S. exports, \$181 million

U.S. imports, \$59 million

Food processing equipment, environmental protection equipment, consumer goods, transportation equipment, machine tools, and electric power generation equipment.

Source: *Exporting News for the Oklahoma Business Community*, Oklahoma International Export Services, July 1990. Trade Data from *Business America*, June 18, 1990.

The U.S. government is, of course, interested in seeing that more U.S. businesses develop their potential for trade with Eastern Europe. Substantial efforts are being made to encourage American firms to find a niche in these markets and begin to compete. In addition to standard export promotion, other forms of international business suggestions are the following:

- Contract manufacturing in Eastern Europe as a way to service Western European markets
- Licensing technology for the highly skilled, inexpensive labor force
- Business associations in complementary businesses to provide Western marketing, management and financial techniques
- Joint ventures with existing firms as an Eastern European partner or perhaps a Western European partner to do business jointly
- Creation of a new company, especially in the increasing number of companies allowing full or majority ownership as commercial agreements are being finalized.

Two strategies in particular receive strong recommendations from many sources for dealing with the Eastern European markets—trade fairs and joint ventures. For example, the U.S. Department of Commerce the recommendation for participation in trade fairs for new-to-market firms in Eastern Europe, is as follows:

For centuries trade fairs has been the entree of foreign traders in the markets of Eastern Europe, and they fill the same role today. In fact, while trade fairs have traditionally been a prime mover of commerce in the region, they will assume even greater importance as a medium for bringing buyer and seller together as the dramatic economic reforms in Eastern Europe open markets and create new opportunities. As always, they provide a center for communication with the business community of Eastern Europe, and an admission ticket into these previously restricted markets.¹⁶

As the emphasis on state trading gives way to a proliferation of companies with new freedom to engage in international trade, one can expect an increase in the number of smaller, provincial trade fairs outside the major capitals. Participation in these trade fairs may be a key to U.S. entry into the \$35-40 billion market now serviced mainly from Western Europe.

For international business other than export sales, joint ventures are a preferred form of Western investment in Eastern Europe; especially, to date, in the USSR and Hungary.

Business International summarized the key laws for joint ventures (JVs) in the Eastern Europe countries as follows:¹⁷

USSR: Foreign share up to 99%; 30% tax on JV profits, with 100% tax holiday for two years after first declaration of profit; repatriated profits must be fully covered by JV's hard-currency earnings.

Hungary: 100% foreign ownership permitted; government guarantees full repatriation of hard currency; for JVs in high priority sectors, 100% tax holiday for first five years of operation and 60% reduction thereafter.

Poland: 100% foreign ownership; free repatriation of hard currency; 100% tax break on JV profits for first three years; later, reductions for JVs that export.

Czechoslovakia: New JV law expected soon. Foreign partner may own majority share; repatriated profits must be covered by JVs hard-currency

East Germany: New JV law imminent; will set 49% maximum Western ownership, but exceptions will be allowed on small ventures.

Bulgaria: Foreigner may own majority share; full hard-currency repatriation allowed; 20% tax on JV profits.

Romania: Only five JVs registered; foreign share limited to 49%; 30% tax on JV profits; new law forthcoming.

Yugoslavia: Foreign share allowed up to 100%; no restrictions on hard-currency repatriation; profit taxes vary between republics."

CONCLUSIONS AND RECOMMENDATIONS

Recent reports in the business press indicate that many of the largest American businesses stand ready to develop markets in Eastern Europe. One survey revealed that 35 percent of the largest 1,500 U.S. companies had plans for such business with the most likely destinations being East Germany (48 percent), the USSR (32 percent), Poland (31 percent), Hungary (27 percent), and Czechoslovakia (26 percent).¹⁸

The question, of course, is whether those markets can and will be developed by the smaller Oklahoma firms and to what extent state policy should promote that activity.

Some of Oklahoma's traditional exports such as beef, wheat and petroleum will probably not be of significant interest to the Eastern European buyers. As pointed out by U.S. State Department analyst John A. Cloud, red meat is still a luxury in

the Eastern Bloc. Only Poland has historically bought much wheat, and petroleum flows will be mainly determined by policies of the USSR, which has traditionally supplied most of the energy needs.¹⁹

The recent history of Oklahoma trade with the nonmarket economics, as shown in Table 10, reveals low and variable levels of exports heavily dependent on a few relatively large sales.²⁰ Based on the survey above, it would be unrealistic to expect major new Eastern European growth opportunities for more than a handful of Oklahoma firms in the near future.

TABLE 10
Oklahoma Exports to Eastern Europe, China
and the USSR
(thousands)

Destination Country	1989	1988	1987
China	\$49,275	\$27,983	\$27,921
Yugoslavia	16,958	15,213	6,290
U.S.S.R.	2,319	2,967	2,237
Bulgaria	255	0	3,745
East Germany	189	9	0
Hungary	157	119	63
Czechoslovakia	35	14	7
Poland	17	290	51

Source: U.S. Department of Commerce, Bureau of the Census
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Nevertheless, the overlap of Oklahoma's most promising sectors for export growth and the priority needs of Eastern Europe does indicate opportunities for the most aggressive and best prepared of state producers and exporters with high quality, technologically-advanced products. The recommendation to pursue such ventures must be seen as long-term market development and considerable commitment by the management of the progressive firms will be required to see efforts through to fruition.

Fortunately, Oklahoma's public sector trade development agencies are reasonably well positioned to support firms with information, language and market research needs. According to the latest Annual Work Plan for Oklahoma International Export Services, the export development arm of the Oklahoma Department of Commerce, several

professionals with linkages to the many federal assistance programs stand ready to consult with exporters new to foreign business or new to market area.²¹ With additional efforts to ensure assistance representing firms at the traditional trade fairs and locating guaranteed export financing, few Oklahoma firms should be prevented from being able to take advantage of feasible opportunities in their product lines.

NOTES

¹For claim to the title of the emerging field see T. Agmon (1990).

²See A.J. Kondonassis, Oklahoma 2000, Inc. 1990, for an earlier study of the impact of Western European integration on the Oklahoma economy.

³Gerald M. Lage, "Oklahoma Exports, 1986," available from the author upon request.

⁴Meaning an increase in the amount of foreign currency one U.S. dollar will buy.

⁵Jane Sneddon Litte, "The Dollar, Structural Change, and the New England Miracle," *New England Economic Review*, Federal Reserve Bank of Boston, (September, 1989): 48.

⁶The nominal exchange rate is the number of U.S. currency units per foreign exchange unit so an appreciation of the dollar is a decrease in this ratio. Real exchange rates adjust the nominal rate by ratios of the two national price levels and effective rates are averages of exchange rates for the country's major trading partners with weights determined by the relative importance of trade between the two countries.

⁷See footnote 5, pp. 49-50.

⁸T.O. Singer and E.B. Liner, "Targeting Export Assistance Programs in the Southwest-Oklahoma." Report prepared by The Urban Institute for Southwestern Bell Foundation, May 2, 1990, p. 27.

⁹*Ibid*, p. 38.

¹⁰Historically, international trade within Europe has been organized within and among a series of regional trading blocks whose recent membership is as follows:

The European Community (EC): Belgium, Denmark, France, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, United Kingdom, West Germany.

The European Free Trade Association (EFTA): Austria, Finland, Iceland, Norway, Sweden and Switzerland.

The European Communist Block Countries (COMECON): Soviet Union, Poland, Romania, Hungary, Bulgaria, East Germany, Czechoslovakia and Yugoslavia. [Smaller nonmarket economies also include Afghani-

stan, Albania, Cambodia, Cuba, Laos, Mongolia, North Korea and Vietnam.

¹¹Obviously trade flows were not substantially affected by the extremely mild economic sanctions the U.S. imposed to protest the Tiananmen Square massacre in June of 1989.

¹²*World Development Report, 1989*. Published for the World Bank by Oxford University Press, p. 165.

¹³Albert G. Holzinger, "Eastern Europe: A New Frontier." *Nation's Business* (April, 1990): 49.

¹⁴*Ibid*.

¹⁵*Business America* (June 18, 1990): 8.

¹⁶*Business America* (June 18, 1990): 12.

¹⁷*Business International* (February 5, 1990): 38.

¹⁸*Business America* (July 16, 1990): 29.

¹⁹*Daily Oklahoman* (July 19, 1990): 19.

²⁰For example, Yugoslavia's purchases from Oklahoma in 1989 were dominated by two large purchases of bituminous coal and machinery while the exports to Bulgaria were all from one industry.

²¹These individuals are found in Oklahoma's Departments of Commerce and Agriculture, the Small Business Administration and Oklahoma State University's Center for International Trade Development.

REFERENCES

- Agmon, Tamir. "Corporate International Trade: Teaching International Trade in Business Schools." *The International Trade Journal*, IV(3), Spring 1990, pp. 233-241.
- Cox, W. Michael and John K. Hill. "Effects of the Lower Dollar on U.S. Manufacturing: Industry and State Comparisons." *Economic Review*, Federal Reserve Bank of Dallas, March 1988, pp. 1-9.
- Gilmer, Robert W. "Oil Prices and Manufacturing Growth: Their Contribution to Houston's Economic Recovery." *Economic Review*, Federal Reserve Bank of Dallas, March 1990, pp. 13-22.
- Gruben, William C. and Keith R. Phillips. "Diversifying Texas: Recent History and Prospects," *Economic Review*, Federal Reserve Bank of Dallas, July 1989, pp. 1-12.
- Holzinger, Albert G. "Eastern Europe: A New Frontier." *Nation's Business*, April 1990, pp. 45-49.
- Kondonassis, A.J. "The European Economic Community in 1992: Some Influences on the USA and Oklahoma Economies." *State Policy & Economic Development in Oklahoma: 1990*, A Report to Oklahoma 2000, Inc., January 1990, pp.19-26.
- Lage, Gerald M. "International Trade Development in Oklahoma: A Synopsis of the Problem and Review of

-
- the Literature," *Oklahoma Business Bulletin*, Vol. 59, No. 9, September 1988, pp. 24-32.
- Lage, Gerald M. and Tabitha Doescher. "Oklahoma High Technology Industrial Performance, 1982-1987," *Oklahoma Business Bulletin*, Vol. 57, No. 9, September 1989, pp. 20-26.
- Lage, Gerald M. and John Shelnett. "Oklahoma's Gross State Product: 1963-1986." *Oklahoma Business Bulletin*, Vol. 58, No. 3, March 1990, pp. 25-31.
- Lage, Gerald M. "Oklahoma's Widening Personal Income Gap." *Oklahoma Business Bulletin*, Vol. 57, No. 12, December 1989, p. 29-33.
- Little, Jane Sneddon. "The Dollar, Structural Change, and the New England Miracle," *New England Economic Review*, Federal Reserve Bank of Boston, Sept./Oct. 1989, pp. 47-57.
- Singer, T. O. and E. B. Liner. "Targeting Export Assistance Programs in the Southwest—Oklahoma." Report prepared by The Urban Institute for Southwestern Bell Foundation, May 2, 1990.
- Tilley, Daniel S. "Agricultural Product Processing in Oklahoma." *State Policy and Economic Development in Oklahoma: 1990*, A Report to Oklahoma 2000, Inc., Oklahoma City, January 1990.

CHOICE: THE NEXT EDUCATIONAL REFORM

The Bush administration recently announced a plan endorsing choice as the “cornerstone of educational reform.” Oklahomans have reacted quickly to this concept, some with criticism and some with praise. George Singer, Chairman of Task Force 2000, the group so instrumental in shaping House Bill (HB) 1017, has assigned choice a more subsidiary role. Dan Brown, leader of a state petition drive against HB 1017, said he is considering another petition calling for choice in Oklahoma, if the Legislature fails to address the issue in the next session.¹ It is too early to know if the issue will be so addressed in 1991, but choice is being discussed in so many states that it is merely a matter of time before it becomes an item on Oklahoma’s legislative agenda. Meanwhile, the issue is complicated enough that it is not too early to begin sorting it out.

Actually, expanded educational choice has been recommended as a reform measure by each of the last three groups studying Oklahoma’s elementary and secondary schools. In 1987 the Hudson Institute urged that parents be allowed freedom to choose among schools for their children, with state aid to follow the student; they also recommended the establishment of alternative schools for dropouts and potential dropouts.² In 1988, the Oklahoma Academy for State Goals suggested pilot programs that would allow parents to choose among schools, provided that a common curriculum is provided in each school.³ In 1990, Task Force 2000 recommended the development of a broad choice program, with implementation deferred until the state achieves adequate and equitable funding for its public schools.⁴ They stipulated further that there be no significant increase in “concentration of any racial or socioeconomic group,” and that there

should be “severely restricted choice of open transfer solely for athletic purposes.”

None of these sources provided a thorough discussion of the choice issue. This paper contains an extensive, but hardly an exhaustive, review of some of the principal aspects of this issue. It focuses primarily on two leading questions: (1) should the state support private education with public funds?, and (2) what principles should guide the expansion of public school choice? It begins, however, with a brief discussion of the generic nature of choice.

WHY GREATER CHOICE?

Americans choose where they work, where they play, what they buy, and where they live. But when it comes to sending their children to elementary and secondary schools they are left with very little choice. They must accept the school assigned to them on the basis of where they live, unless they can afford the cost of private schools. If parents do send their children to private schools they forego the subsidy of free public education, but not the obligation to finance it through taxes.

Since most parents cannot afford both taxes and private school tuition, they send their children to the public school to which they are assigned. Thus, the public schools face very little competition. In fact, in most cases they function as sole suppliers or monopolists.

Monopolies are almost universally condemned by economists. They usually charge a price that is higher than it would be in a competitive market. They are slow to innovate, and they have little incentive to find ways to reduce costs. They can ignore the demands by their customers for a higher quality product, and the demands by their employees for a higher quality work environment.

In most instances, central administrators hold the purse strings, make the important hiring and curricular decisions, and exercise considerable control over both principals and teachers. Teachers counter by joining unions that protect all, and

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seek wages that reward all, regardless of talent or skill. Principals often find themselves powerless but still responsible.

A working equilibrium ensues that is highly resistant to change, especially to change from within the organization. A growing number of observers believe that change is going to have to be generated by forces outside the public schools, *per se*. Many experts have concluded that giving parents choice is the best catalyst to change. Legislators are listening to these people, and choice is becoming the focus of the next wave of educational reform. In fact, choice plans are already springing up around the nation.

The essence of a choice plan is that it provides parents with alternatives, and the freedom to choose among these alternatives. In its pure form, the alternatives chosen by parents would thrive; those not chosen would not survive — just as in the marketplace for ordinary goods and services. Faced with this prospect, schools would compete for students by providing products that catered better to parents' and students' preferences, and by offering these products at a competitive price. Competition along both dimensions would spur a search for lower-cost delivery systems.

Viewed this way, parental choice in education is equivalent to consumer sovereignty in the marketplace. There, consumers are considered sovereign in so far as the goods and services produced are those for which consumers have the greatest willingness to pay. Their willingness to pay reflects, in turn, their preferences backed by their ability to pay.

We have never been willing as a society to leave the determination of the fraction of national output that will go to elementary and secondary schooling solely up to individual expressions of willingness to pay. We have opted instead to levy taxes on the private sector and use the proceeds to finance a socially-determined level of education. These funds have been devoted almost exclusively to the support of public schools. Many proponents of educational choice propose that these funds now be made available for the support of both public and private schools.

SHOULD GOVERNMENT SUPPORT PRIVATE SCHOOLS?

One primary means of increasing parental choice is using financing mechanisms, such as vouchers

or tuition tax credits, to expand the private production of schooling. In this section, several aspects of this alternative are examined.

Proponents of public support for private education claim that increased reliance on private schools will:

1. put pressure on public schools to improve,
2. provide teachers and administrators with greater job satisfaction,
3. promote greater parental involvement in the education of their children,
4. provide greater opportunity for low-income and minority students,
5. support the development of more "effective" schools, and
6. produce greater efficiency in resource use.

How valid are these claims?

Pressure on Public Schools to Improve

The claim that public support of private schools will put increased pressure on public schools to improve seems indisputable, provided that the public schools actually suffered a decrease in revenues when students switched to the private sector.

Greater Job Satisfaction

What lies behind the claim for greater job satisfaction is the notion that public schools are so similar in structure, curricula and approaches to teaching, that teachers and administrators are forced to fit the same mold, stifling initiative and creativity and reducing job satisfaction. Expansion of the private sector, it is alleged, should provide new opportunities for the fuller exercise of individual skills and talents.

This claim has merit. Many public school employees would view this as a mixed blessing, however, and some would argue that it would decrease, rather than increase, their satisfaction. Those in the former group would balance the benefits of greater freedom on the job against the greater insecurity of employment in the private sector. Those in the latter group would perceive few benefits from greater job freedom and high costs associated with greater job insecurity. In fact, the public schools may be populated by employees who place a very high value on job security. Perhaps it is for this reason that the public schools can continue to attract teachers at relatively low wages. It may

also explain why there is so much opposition to tuition vouchers by public school teachers.

Greater Parental Involvement

Research shows that students perform better when their parents show an interest in what they are learning, assist them with their studies, and monitor their homework and other uses of out-of-class time. Surveys also show that parents of private school students are more involved in their children's education than are parents of students in the public schools.

It is possible that this higher level of involvement is attributable to choice, but it may merely be an indication that people take a greater interest in things they pay for directly. If the latter, a state-subsidized voucher will not increase parental involvement to the degree that it increases private school enrollment.

Greater Opportunity for Low-Income and Minority Students

Proponents of public support of private schools claim that it would provide low-income and minority students with a means of escaping the sub-standard schools of the inner city that they are currently compelled to attend. Those who do escape would be better off, and their defection would also spur improvements in the schools they leave behind, thereby improving the education of those who choose to, or must, stay.

Critics of this view acknowledge that more private school slots would open up for low-income and minority students, but only if public subsidies are carefully structured. On the one hand, the subsidy must be large enough to pay all tuition costs for the lowest income students. On the other hand, the subsidy must decline as income rises to truly reduce the financial advantage of students from higher-income families.

Others doubt that the general climate of opportunity for low-income and minority students would be greatly advanced even if they were provided the means to compete more effectively in the marketplace for education. They argue that private schools are unlikely to ration spaces solely on the basis of price; that they will choose among applicants, as they always have, to construct the student population they prefer. A public subsidy program will simply increase the number of applicants whose aspirations are thwarted by discriminatory prac-

tices, creating a larger pool of parents who question the claim of enhanced opportunity.

Effective Schools

A promising new line of research has developed in the last decade on the characteristics of "effective schools" — schools identified as performing well. It appears from this research that effective schools are characterized by strong leadership, goals shared mutually by faculty and administration, cooperative decision-making, collegial relationships, and mutual trust.⁵

Proponents of private schooling argue that private schools are more able to develop these characteristics, principally because they have the freedom and economic motivation to do so. Alternatively, public school leaders, such as principals, are more subordinate to external authorities, such as school boards. This makes them less effective leaders. The public school teaching corps is more highly tenured and unionized than the pool of private school teachers, and less motivated as a consequence to join school administration in a cooperative venture. The net result is a smaller probability that effective schools will develop in the public sector than in the private sector. According to some choice proponents, however, the adoption of an alternative like greatly expanded parental choice among public schools can produce more effective public schools. Thus, it is not clear that public support of private schools is the only, or even the best, way to ensure more "effective schools."

Greater Efficiency

Many advocates of private school support believe that competition for students makes private schools more efficient in their use of resources than public schools. Two types of evidence are often cited as proof of this: (1) lower expenditures — on average — in private schools,⁶ and (2) higher student achievement in private schools.⁷

Expenditures per student are lower on average for private schools, especially for schools with strong church support, than they are for public schools. These comparisons tend, however, to drastically understate the costs of private schools by ignoring labor and facilities donated or provided for educational use at subsidized rates. These comparisons also ignore important differences in the "service mix" between private and public schools. Public schools must provide many mandated services and

educate high-cost special education students to a greater degree than private schools. Thus, the present evidence on so-called cost differences between public and private schools is not compelling.

Claims that private schools produce higher student achievement than public schools are often based on the 0.12 to 0.29 standard deviation advantage in achievement by private school students found by Coleman, Hopper, and Kilgore in their massive comparison of public and private schools. This finding has been criticized often, however, for inadequate controls for self-selection bias and other flaws in statistical design, and corrections for these problems have considerably reduced the private school advantage. Beyond that, critics argue that a 0.1 standard deviation hardly matters; it translates into a mere 0.2 - 0.3 percent difference in SAT scores, and no more than a 1 percent wage differential for high school graduates.⁸

Although the arguments examined above are common currency in the debate over public support of private schools, their examination does not exhaust the issue. Criticisms of public support go beyond those mentioned already. Critics of public support for private schools argue that:

1. we should make cautious inferences from averages,
2. enhanced competition will force private schools to base admissions on students' attributes,
3. the relevant model is not pure competition, but rather monopolistic competition in schooling, along with its excesses,
4. critical public benefits of education would be underproduced,
5. a detailed and costly regulatory apparatus would be required to ensure the attainment of public goals,
6. tuition vouchers (and tax credits, to a lesser extent) are more costly than proponents have acknowledged to date, and
7. people favor greater choice among public, rather than private, alternatives.

Inferences from Averages

The point to be made here is simply that while there is disagreement about whether private schools are more effective on average than public schools, "there is agreement that even the largest estimates of a private school advantage are small relative to

the variation in quality among different Catholic schools, and among different non-Catholic private schools."⁹ The author of this quote, Richard Murnane, goes on to say that this means that the school is more important than the sector in determining the quality of the educational experience. His argument implies that "privateness", per se, is not the critical determinant of student performance that it is often purported to be.

Student Attributes as a Ticket to Admission

Over the last two decades, a great deal of research has been done to discover the determinants of academic achievement. One consistent finding of this research is that the composition of the student body matters.¹⁰ Furthermore, parents and school officials know that it matters, and this knowledge influences their actions. Parents pay close attention in choosing a school to who their children's classmates will be, thus providing an incentive for school officials to consider the attributes of the children they admit. Their actions together result in significant sorting of students among schools and, consequently, in significant differences in student achievement.

In these circumstances, consumers are not free to purchase all the education for which they are willing to pay. Instead, families find that their options depend also on the attributes of their children. Children lacking the attributes that officials believe contribute to the development of other students will find their options restricted. Moreover, among schools charging students the same price, schools that do not discriminate on the basis of effects on student composition will lose desirable students to schools that do discriminate on this basis. Unfortunately, many parents, in making school choices, will base their choices on easily observed attributes, such as socioeconomic status, race, and ethnic origin.

Monopolistic Competition as an Outcome

Those who evoke the specter of public school monopoly as an argument for private education implicitly assume that significant expansion of the private sector would usher in a new era of pure competition in the provision of elementary and secondary education. Consequently, we would reap the benefits of pure competition. The chief

among these is the provision of the amount of education that maximizes consumer satisfaction, produced at the lowest possible cost.

The purely competitive model seems inappropriate, however. Each school will have its unique characteristics, including its location. All schools, therefore, have some monopoly potential, and a few may even have considerable monopoly power. The relevant model, therefore, is monopolistic competition.

Monopolistically competitive industries are normally characterized by excess capacity: too many producers of less than efficient size. Thus, more resources are devoted to such an industry than would be in the purely competitive case. Of course, there may be some resource savings in monopolistic competition relative to the public monopoly alternative. As noted above, however, the evidence for this is not persuasive.

The other characteristic of note is the need in monopolistically competitive environments for producers to differentiate their products from those of their competitors. Advertising will have a significant role to play in trying to make consumers believe that the differences are real. If they are not, and if consumers place little value on diversity, *per se*, much of the expenditures for advertising will constitute a waste of resources from a social perspective.

Private Provision of Public Benefits

Schools produce both private and public benefits. Private benefits are outcomes such as increased lifetime earnings, better health, greater longevity, greater social status, technical and cultural literacy, and improved parentage. These are benefits enjoyed primarily by the person earning the education.

Public benefits are schooling outcomes that have a positive effect on social needs, and that are enjoyed by persons other than the one who gets educated. They include education's contribution to a common set of values and knowledge that facilitate the functioning of democracy. They also include schools' contributions to equality of social, economic, and political opportunity, to cultural and scientific progress, and to national defense.

Some public benefits from education may be impossible to separate from the educational process or setting. For example, effective participation in a democratic society requires a willingness to tolerate diversity, to understand differing views, and to accept the necessity of means to reconcile dif-

ferences. It would be unrealistic, however to expect: Catholic schools to provide an unbiased forum on the abortion issue, evangelical schools to provide a sympathetic hearing of the case for both creationism and evolution, military academies to debate the value of national defense, and so on. Their curricula and faculty would reflect their own views on these issues, and they would be rewarded by consumers who happened to subscribe to the same views.

This possibility would occasion little concern except for the fact that many people believe that private schools should be subsidized to the same degree as public schools only if private schools are as efficient as public schools in producing both private and public benefits. We have already noted that private schools may not be more efficient producers of private benefits (in the form of student achievement or higher post-secondary earnings). If, in addition, private schools are less efficient producers of public benefits, the case for public subsidy seems weak.

The Regulatory Imperative

The U. S. Supreme Court ruled long ago, in *Pierce v. Society of Sisters* (1925), that the state could not enjoin parents from sending their children to private, rather than public, schools. At the same time, it underscored governments' power to regulate private schools. Although regulatory practices vary across the states, governments have not hesitated to apply their regulatory powers to nonpublic schools. States require licensure, the inspection of attendance and other records by public authorities, the adherence to special health and safety requirements, and the satisfaction of compulsory education standards, minimum curriculum requirements, and teacher certification requirements.

The states have not traditionally provided unrestricted financial aid directly to private schools, but some have supported certain private school expenses such as those for student transportation, special education programs, textbooks, student health, and driver education. State dollars in these areas have normally been accompanied by significant state regulation to ensure compliance and performance.

If states have been willing in the past to regulate private schools when they provide only a small share of resources, will they hesitate to get deeply involved when state dollars provide general support

to private schools? History suggests that they will not. There is, moreover, more at stake than just more money in the case of general subsidy of private education. The states will have a special obligation to ensure truth-in-advertising by the many monopolistic competitors striving for their share of the market. Even more importantly, they will have to devise a workable solution to the problem of ensuring adequate provision of public benefits by private schools—without either enjoining the exercise of religious freedom and freedom of inquiry, or promoting the establishment of special-interest views of the world.

Cost of Tuition Vouchers

Many proponents of public support of private schools believe that the best way it can be accomplished is for the state to provide parents with vouchers that they can tender to the schools of their choice in exchange for the education of their children. The most popular type of voucher is the income-tested voucher: a voucher with a greater value to low-income than to high-income parents. In such a scheme, the largest voucher would go to the poorest parents and successively smaller vouchers would go to parents with successively higher incomes. Eventually, an income level would be reached when the voucher's value becomes zero, and any family with an income at or above this level would receive no voucher.

This type of voucher is widely hailed as the way to enhance the prospects of low-income families for a quality education for their children. We have noted above that the degree to which it will do this is uncertain. Here we wish to emphasize certain costs associated with this type of financing scheme that commonly receive little attention.

An income-tested educational voucher would be similar in structure to existing income-tested transfers such as the benefits provided by the so-called welfare programs: Aid to Families with Dependent Children (AFDC), food stamps, and publicly-subsidized housing. Economists have long recognized that the income-tested feature of these programs—the reduction in benefits as income increases—provides an incentive for people to reduce their income by working less. Empirical studies indicate that the income loss associated with reduced work effort may amount to as much as 25 percent of the cost of the benefits transferred.¹¹ The exact amount varies with the rate at which benefits are reduced as income increases, so it

would be premature to guess the effect of educational vouchers on earned income without knowing the likely benefit-income relationship. Income-tested vouchers that are large enough to cover tuition for low-income families, however, should be large enough to exert a negative effect on work effort.

Educational vouchers have another characteristic that may add to the social costs of using this financing instrument. Although they endow parents with the means to choose, they also reduce the perceived price of education. To the degree this happens, there is a reduced incentive for parents to insist that schools economize on their use of resources. Vouchers will reduce the perceived price in two ways. First, parents who already pay tuition for private schools will have part of the cost picked up by the voucher. Second, the voucher may reduce the perceived tax-cost of education. This would be most likely to occur in states where state-level tax instruments, such as sales and income taxes, would be used to finance vouchers. These instruments would, in many cases, be substitutes for local property taxes. Given the closer link in taxpayers' perception between property taxes and education than between other taxes and education, the perceived tax-cost of vouchers is likely to be less than the actual tax-cost.

There is also a third way in which the use of educational vouchers may produce additional social costs. The advent of educational vouchers would greatly strengthen the lobbying efforts of two groups: the suppliers of private education, and the current consumers of private education. There is little reason to doubt that once they become eligible for public subsidy they will seek to increase it by exerting pressure on the political process. In fact, the potential political coalition may be strong enough to rival the pro-social security coalition that frustrates politicians at the federal level.

Public Preference for Public Education

Although the public schools have been frequently criticized in recent years, many Americans still have a special fondness for this institution. In a recent national Gallup poll more than 71 percent of respondents favored greater choice among *public* schools.¹² The results of an empirical study by Martinez-Vasquez and Seaman showed that the larger the range of public educational choices in an area, the smaller the number of private enrollments, other things equal.¹³ These findings suggest that

many people prefer public schools, but that they would welcome greater choice among public schools. We turn now to an examination of this option.

PUBLIC SCHOOL CHOICE

Although the movement to produce greater choice in the public schools is relatively new (effectively, only about two decades) there is a large and growing literature on the subject. Much of it has been exploratory in nature and it is premature to claim that a consensus has been reached on the appropriate features of public school choice. Nevertheless, there are certain design principles mentioned so frequently that they deserve careful consideration. We begin with these. Then, several potential options are described, along with accomplishments to date.

Essential Features of Public Choice

The first requisite of greater choice in the public schools is the existence of options among which parents and children may choose. A discussion of these options is deferred to the next section. Here we concentrate on features that cut across, or are common to, the various options. The list is:

1. a common core of experiences,
2. the provision of useful information,
3. safeguards for equality of opportunity,
4. the assurance of teacher quality,
5. assistance with transportation expenses,
6. teacher recruitment by individual schools, and
7. a scheme of education finance and school budgeting that facilitates the choice plan.

Common Core of Experiences. According to Henry Levin, "a common core of experiences must be maintained that will meet the requirements of preparing the young for economic and social participation and democratic life in the U. S. ..."14 Such a core would expose children to unfamiliar ideas and individuals, provide for a common language, produce familiarity with major technological issues, develop capability in numerical calculation and reasoning and an appreciation for the fine arts and music, promote an understanding of our government and our economy, and prepare students for jobs or further education and training. Individual schools would be free to determine how they would

produce this common experience. The common core would serve as government's statement of the goals that individual schools would have to meet.

Provision of Information. Confinement of educational choice to public sector alternatives will not preclude the development of a system of monopolistic competitors, each of which will find it in their own interest to try to persuade parents and students that they are the best choice. Governments can avoid the potential excesses of competing schools by establishing parent information centers which disperse objective information about alternative schools, including records of performance. To do so, states would have to mount a significant effort to accumulate the pertinent performance information.

As a complementary activity, governments may want to facilitate on-site interviews of prospective students. This gives parents and students an opportunity to make their choices on the basis of fuller information, producing a better fit between students and schools.

Equality of Opportunity. Public educational choice must further the social goal of equality of opportunity. It is easy to agree on this goal, but the real challenge will come in working out exactly what it means in the context of educational choices. Does it mean that everyone will be free to enroll in any school of their choice, or does the principle of free choice conflict in some circumstances with means of reducing barriers based on race, ethnic origin, and income? These very important details are yet to be fully worked out.

Assurance of Teacher Quality. Choice among inferior alternatives is illusory choice. Some state action, probably in the form of certification, will still be required to assure that children are taught by qualified teachers.

Assistance with Transportation Expenses. The cost of traveling outside one's neighborhood can be an important constraint on individual choice, and on equality of opportunity for children from low-income families. An effective choice plan would include some provision for transportation, or some subsidy of transportation costs.

Teacher Recruitment by Individual Schools. The current responsibility for teacher recruiting normally resides with district officials. Teachers are then assigned to particular schools according to the needs of individual schools as defined by these officials. Often, the result is a poor "fit" between teacher and school. Ideally, school personnel should

be affiliated with their program of choice. One way to achieve this is to allow hiring and dismissal at the individual school level.

Educational Finance and Budgeting. It is one thing to allow educational choice. It is quite another to produce a financing and budgeting arrangement that facilitates the implementation of a choice plan, especially if students from more than one district are involved. Traditional reliance on both local and state funding complicates the process. Chubb and Moe propose a scheme, however, that differs little from current practice in terms of source of funds: money is raised through both state and local taxes, with wealthier districts required to contribute more and state funds being used to equalize expenditures.¹⁵ The principal difference is that a specific amount of money must be credited to the account of each student out of a common pot; and this amount must be paid to the school in which the student enrolls — regardless of the district where the student resides.

Some Public Choice Options

Choice plans are springing up from Boston to Seattle. More than 20 state legislatures have acted to expand public school options. Some of the principal options and experiences are reviewed briefly in this section.

Program Development. In this scheme states provide funds to help school districts plan and develop different kinds of public school options. For example, Massachusetts provided more than \$40 million in 1988 to help school districts establish choice programs, consistent with maintaining a satisfactory racial balance. This is the least intrusive of potential public policies, but it may be money well spent in the early stages of the choice movement.

School Site Governance. In school site governance, policies are established at the level of the individual school, rather than at the district or state level. Teachers and parents are normally included in the policy making process. Kentucky's recently-enacted school reform and financing bill provides for school-based decision making in which councils of two parents, three teachers and an administrator set school policy. It will be the first statewide use of the technique. The decentralization of governance should permit parents to have more influence in schooling in areas outside the common core.

Open Enrollment. Permitting open enrollment both within and among school districts is an effective way of increasing parental choice. Intradistrict choice is permitted in a large number of school districts. Interdistrict choice plans are not very numerous, but they may be the wave of the future.

Boston set such a plan in motion last year. The plan divides the city into three zones, drawn to limit student bus rides to 40 minutes. Elementary and secondary students are allowed to choose any school in the zone where they reside. There are racial balance constraints and procedures for balancing demand for and supply of spaces. There are also procedures for dealing with schools that fail to attract students.

The city of Edmonton, Alberta, Canada has a program that combines open enrollment with school-based budgeting. Students can attend any school in the city. Each school receives an established allocation for each attendee, with larger allocations accompanying students with special needs. The size of a school's budget is dependent upon its ability to attract students. Moreover, the uses of their budgets are determined by the local schools, themselves, subject to priorities established by the school board.

Minnesota was the first state to adopt a statewide choice plan. Starting in Fall, 1990, students are allowed to choose any school outside their district. This is in addition to a program that also gives a second chance to dropouts and potential school dropouts age 12 or older, by allowing them to attend any public school inside or outside their district.

Specialty Schools. A somewhat more elaborate method of choice is the provision of schools that cover common core requirements, but then specialize in certain themes. These schools are also called magnet schools, theme schools and alternative schools.

Many large districts have such schools, commonly established to meet requirements for racial integration. A dozen states have established state specialty schools in math and science. These types of schools do not yet serve a very large number of students.

The most often mentioned example of a specialty school program that works is the one established in District 4 in New York City's East Harlem area. There, sixth graders get to choose a junior high from among the 20 in the district. The schools are all theme oriented, and include performing arts,

science, humanities and even maritime studies. Since choice was introduced, the performance of the districts' students has improved dramatically.

Post-Secondary Options. Minnesota's experience with choice programs began in 1985 by allowing 11th and 12th graders in public schools to attend colleges, universities, or vocational schools part time. More than 6,000 students used this program in 1989. Many who did not do particularly well in high school are earning above average grades in college freshman courses. The program has also induced many high schools to develop advanced placement courses and cooperative programs with colleges.

Does Public Choice Work?

There are a large number of studies of the outcomes of public schools of choice. Unfortunately, virtually none of it is experimental. This makes it difficult to determine exactly what makes choice work from among factors such as school climate or organization, nature of the curriculum, student motivation, parental involvement, and teacher quality.

Mary Anne Raywid surveys much of the literature, however, and argues that the findings, while inconclusive, cannot be ignored.¹⁶ According to her survey, public schools of choice increase teacher morale, reduce vandalism, improve student performance, increase parental involvement, and reduce dropout rates.

As impressive as her findings seem, they probably should be interpreted only as evidence that "choice matters." Unfortunately, policy makers need to be reasonably certain of *why* choice matters if they are to provide the right features in schools of choice.

Current research seems to indicate that the critical feature is a positive school climate, one which produces positive attitudes toward learning and teaching. School climate, in turn, is a reflection of a school's organizational structure and processes. What seems to matter are things like significant teacher and student autonomy and responsibility, participatory management, and control emanating from shared values and goal agreement. Chubb and Moe carry this argument to its extreme by arguing that what most needs changing is organizational structure, per se, and that the only way to accomplish this is through an alternative that maximizes public choice and minimizes public regulation.¹⁷

CONCLUSIONS AND RECOMMENDATIONS

The objective of this essay has been to make the reader a little better prepared for the debate over what will probably be the next educational reform issue: choice. Unfortunately, so many research questions remain to be answered, that there does not seem to be a clearly-charted path to designing the best choice plan. This judgement is issued, however, not as a counsel against action, but, rather, as a means of urging the Legislature to act only after they have heard from the voices of reason on both sides of this issue.

The arguments considered here strongly suggest, in any event, that HB 1017 will not, and probably should not, be the last word in educational reform. Some features of HB 1017 may ultimately prove to be in conflict with an effective educational choice plan. However, there appears to be no version of the latter that would require, or even be facilitated, by repeal of the progress achieved in HB 1017. Choice is, in the words of George Singer, an "add-on,"¹⁸ although it is an important "add-on" whose time may have come sooner than expected.

NOTES

¹The reactions of Singer and Brown are reported in Kay Johnson, "State Educators Blast Open Transfer Idea," *Tulsa World*, December 6, 1990: A-13-14.

²The Hudson Institute, *Future of Oklahoma Project*, 1987.

³Oklahoma Academy For State Goals, *Elementary and Secondary Education: Will Oklahoma Pass or Fail?* Fourth Annual Conference, November 11-12, 1988, Consensus Recommendations, January, 1989: 6.

⁴Task Force 2000, *Oklahoma's Public Education: a Blueprint for Excellence*. November, 1989: 29.

⁵Stuart C. Purkey and Marshall S. Smith, "Effective Schools: A Review," *Elementary School Journal*, 83 (March, 1983): 427-452.

⁶See, for example, American Enterprise Institute, *Tuition Tax Credits and Alternatives*, Washington, D.C., 1978: 28.

⁷The classic reference here is James S. Coleman, Thomas Hoffer, and Sally Kilgore, *High School Achievement: Public, Catholic, and Private Schools Compared*, New York: Basic Books, 1982.

⁸R. Meyer and D. Wise. "High School Preparation and Early Labor Force Experience," in R. B. Freeman and D. Wise, Editors, *The Youth Labor Market Problem*, Chicago: University of Chicago Press, 1982: Chapter 9.

⁹Richard T. Murnane. "Comparisons of Private and Public Schools: What Can We Learn?" in Daniel C. Levy, Editor, *Private Education: Studies in Choice and Public Policy*, New York: Oxford University Press, 1986: 192.

¹⁰Richard T. Murnane. "Interpreting the Evidence on School Effectiveness," *Teacher's College Record*, 83(1981): 19-35.

¹¹Sheldon Danziger, Robert Plotnick, and Robert Haveman. "How Income Transfer Programs Affect Work, Savings and the Income Distribution," *Journal of Economic Literature*, (Sept. 1981): 975-1028.

¹²Reported in Joe Nathan. "Freedom of Choice: Expanding Educational Options," *State Government News*, (August 1989): 12.

¹³J. Martinez-Vasquez and B. Seaman. "Public

Schooling and the Tiebout Hypothesis," *Public Finance Quarterly*, 13 (July, 1985): 293-318.

¹⁴Henry M. Levin. "Education as a Public and Private Good," in Neal E. Devins, Editor, *Public Values, Private Schools*, New York: The Falmer Press, 1989: 227.

¹⁵John E. Chubb and Terry M. Moe. *Politics, Markets and America's Schools*, Washington, D.C.: Brookings Institution, 1990: 220-221.

¹⁶Mary Anne Raywid. *The Case For Public School Choice*, Bloomington, IN: Phi Delta Kappa Educational Foundation, 1989.

¹⁷Chubb and Moe. *Politics, Markets and America's Schools*, Chapter 6.

¹⁸Kay Johnson. "State Educators Blast Open Transfer Idea."

CHANGES IN OKLAHOMA'S TAX BASE IN THE 1980s: IMPLICATION FOR ECONOMIC DEVELOPMENT

Taxes are the ultimate exercise of the police power of the state as it separates a citizen from his property. Taxes are the direct result of economic activity and profoundly alter economic activity. But without taxes, public services demanded by citizens cannot be provided. Thus, taxes are a two-edged sword for economic development. On the one hand good education, infrastructure, and quality of life issues important for economic development require government taxation, while on the other hand a poorly designed, unfair or badly administered tax system with overly high rates may put the state at a competitive disadvantage relative to other areas of the country and thus be a deterrent to economic development.

The tax base of a nation, state, or local unit of government is measured by *what* is taxed, not how much the tax rates are. There is, however, an important inter-relationship between the two. If the tax base is not altered, and greater funding is desired for public services, then it follows that the rates of taxation must rise. This paper analyzes the changes in the Oklahoma tax base during the past decade; a decade of unprecedented tax rate increases.

CRITERIA OF A "GOOD" TAX SYSTEM

Economists have long wrestled with the concept of a "good" tax system. From this discussion have emerged criteria that are utilized to evaluate a taxing scheme. These criteria are, first, the equity of the taxes levied. Only the electorate can ultimately evaluate the "fairness" of a tax, but calculations of relative burden on various segments of society can be determined and are an important

feature of a tax system. A second measure of a tax system is the administrative cost. A tax system which imposes high administrative cost is deemed worse than one which is less costly to administer, all other things the same. Administrative cost must include not only the narrow costs incurred by government, but also the costs to members of society, the taxpayers, in bookkeeping, reporting, et cetera. Uncollectible taxes, or taxes which can only be collected with significant intrusion into the private affairs of citizens are judged to be poor taxes by this criteria. The intangible personal property tax has been abolished in Oklahoma and most other states because of this very reason.

A third criteria of a good tax system is that it have as small an effect on economic decisions as possible. Economists argue that a tax system which has major effects on economic decisions results in inefficient allocation of resources which results in reduced economic growth. This can be true at the state and local level just as much as at the national level. It is a given, however, that all taxes have some effect on economic choices. This criteria simply states that it is preferred to minimize this effect.

Another criteria is that tax structures which provide stable revenues over a business cycle are considered preferred to ones which generate widely fluctuating revenues. Stable revenues are important in providing the ability for long-term planning, and uninterrupted public services at whatever level is chosen by policymakers.

The final criteria of a good tax system is that it be broadly based. That is to say, tax systems which provide fewer exceptions as to *what* is taxed are preferred to ones which have many special exemptions and preferences. Broadly based tax systems have the advantages of all the other criteria discussed above. Fairness is usually felt to be increased if special cases are not made for particular individuals, industries, or types of purchases. Administrative costs are reduced if the citizen and the tax collector do not have to expend resources

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determining if special legislation applies to a particular case. A broad based tax system provides greater stability of revenue than one built upon specific economic sectors.

Finally, economic dislocation is minimized if there are no incentives to tailor economic decisions to the tax code. Broad based tax systems can also generate the same level of tax revenue at a lower tax rate than more narrow tax bases which may have positive effects on a particular state's competitive position in attracting or expanding industries relative to other states.

The oil bust of the 1980s taught (re-taught?) the lesson that the economy of the state could not provide the sustained growth necessary for the welfare of Oklahoma's citizens if it were based upon narrow economic sectors. Great strides have been made in diversifying the state's economic base. But, just because the economic base is broad, does not mean that the tax base will be. As discussed above, State budgets grounded in a broad tax base have many positive attributes. It takes a concerted effort to broaden the revenue base of the state, just as it does to broaden the economic base. This has, to a degree, occurred during recent years, reversing the trend during the first few years of the decade.

OKLAHOMA'S CHANGING REVENUE SOURCES 1980-1990

During the past decade, the distribution of total state and local government revenue collected has changed with local government revenue becoming a smaller part of the total. State government currently has a more diversified revenue base which is well balanced and fiscally stable. After the oil "boom" years there was general stagnation in local government revenue and decreases in state government revenue. This was the result of the great reliance upon gross production taxes by the state and the much more stable property taxes at the local level. When the oil boom was over, it was time for a major restructuring of the state tax base to make it more stable and more responsive to economic growth.

State revenues have not always been as stable as they are now. The state economy was overly dependent on severance tax revenue in the late 1970s and early 1980s. For instance, in the early 1980s, severance taxes contributed in excess of 25 percent of total General Revenue Fund collections. In FY-

91, severance taxes are expected to provide less than 7 percent of total general revenue.

Chart 1 shows graphically both the change in the amount of tax revenues collected by the state during the past decade and the changing composition of the tax sources. Chart 2 presents an even more stark picture of these changes by comparing 1984 with the FY-91 estimated revenues. Sales taxes have grown from 5 to 30 percent of the state's tax base while gross production taxes have declined from approximately 25 percent to 6 percent. To an important degree, this is the result of the energy bust, but it also is because of increasing rates; state sales taxes have gone from 2 percent to 4.5 percent.

EFFECTS OF OIL BOOM ON TAX BASE

As can be seen on Chart 1, the oil boom had a powerful effect on tax revenues. From FY-80 to FY-83 net tax collections rose just over one billion dollars, an unprecedented 57 percent increase in three years. This came about almost exclusively through gross production tax increases although sales taxes, and to a smaller degree income taxes rose also as a result of the oil boom.

During this same period a variety of taxes were cut. These cuts, and the later increases, are listed in Table 1.

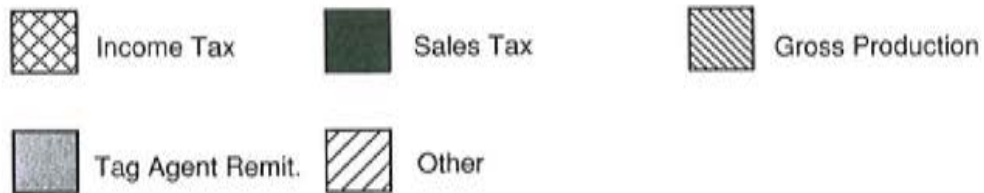
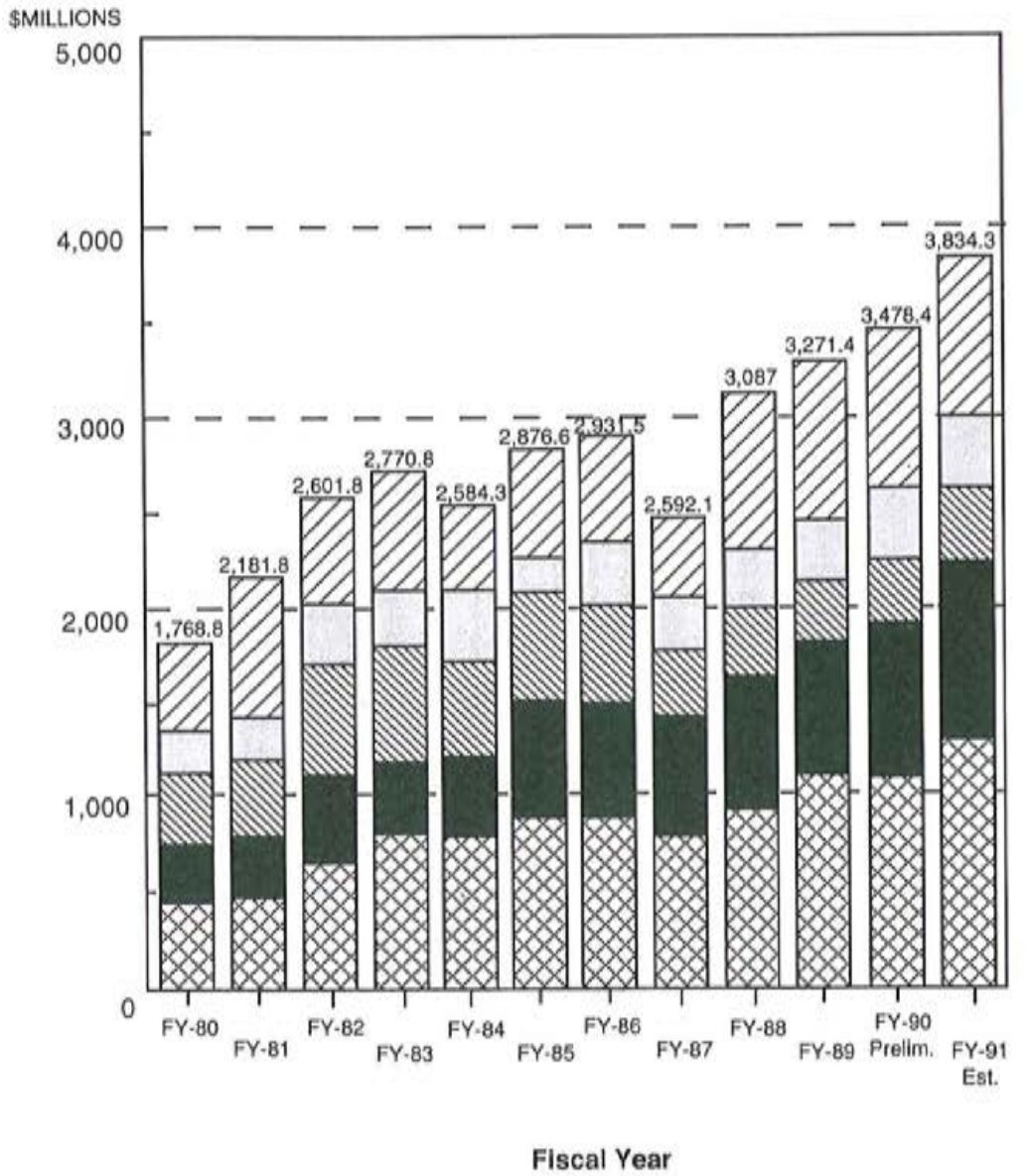
During the 1979 legislative session, the state income tax was altered by permitting federal tax liability to be deducted from state income which was estimated to decrease individual income tax revenue by \$42 million. This was a cut in general revenue by 3 percent at that time. The total tax reductions enacted by the legislature in the four-year period from 1979 through 1982 were estimated to reduce those current year revenues by a total of \$135.8 million, which translate into a larger reduction (in nominal dollars) in future years as the cuts also reduced growth revenue in the future.

While the magnitude of these cuts was large in the context of the time and even larger if re-estimated today, they are completely overshadowed by the tax increases that began in 1984. It would be unfair to say that if these cuts had not taken place that the increases that followed could have been avoided. Because operating budgets had been significantly built on gross production tax revenues, increases far outstripping these cuts would have been instituted if budgets were to be maintained.

Of particular importance are the types of cuts which were instituted. Each was not a reduction in

CHART 1

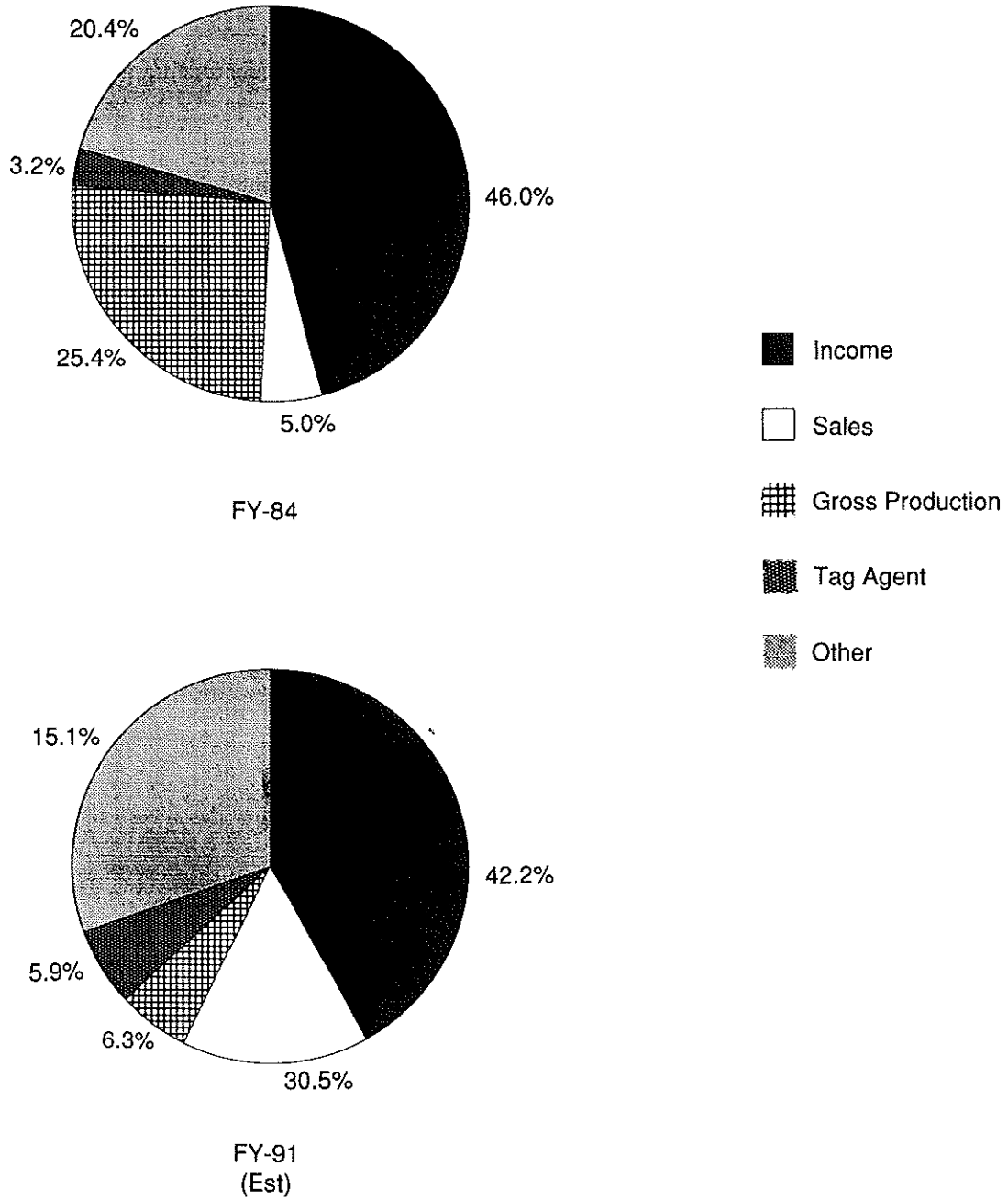
Net Oklahoma State Tax Collections



Source: Office of State Finance, 9/28/90.

CHART 2

**Composition of General Revenue Fund
FY-84 vs. FY-91 Est.**



Source: Office of State Finance 12/10/90

TABLE 1

Statutory Revenue Changes 1979 through 1990
(millions)

1979 Session	
Income Tax – Permit federal tax deduction	(\$41.9)
	<u>(41.9)</u>
1980 Session	
Income Tax – Exempt handicapped devices and partial federal civil service retirement; credits for investment for new jobs, solar energy, agricultural use of natural gas	(8.6)
Sales Tax – Exempt residential utilities	(18.8)
Franchise Tax – Exempt bank holding companies	(0.3)
Drivers Licenses – Free renewal for senior citizens	(0.8)
	<u>(28.5)</u>
1981 Session	
Estate Tax – Increase exemptions for lineal heirs	(19.5)
Income Tax – Exempt firefighters retirement	(0.3)
Sales Tax – Exempt prescription drugs	(7.9)
	<u>(27.7)</u>
1982 Session	
Income Tax – Increase standard deduction	(37.2)
Fuels Tax – Exempt local governments	(0.5)
	<u>(37.7)</u>
1983 Session	
No tax changes	0.0
	<u>0.0</u>
Sub-Total Decreases	(135.8)
1984 Session	
Sales and Use Tax to 3 percent, from 2 percent, remove exemption on beer and cigarettes	233.4
Alcoholic Beverage Tax	4.7
Motor Fuel Tax – 2.42 cents per gallon, to 9 cents	55.2
	<u>293.3</u>
1985 Session	
Corporate Income Tax, increase to 5 percent, from 4 percent	23.2
Sales and Use Tax increase to 3.25 percent, from 3 percent	51.5
Motor Vehicle fees, increase fees and excise taxes	101.6
Snuff and Smokeless Tobacco Tax	0.9
Motor Fuel Taxes to 10 cents, up 1 cent	22.0
Mixed Beverage taxes	21.9
Pari-mutuel, change split, from 6 to 2 pct	(1.4)
Income Tax – New jobs tax credit	(0.8)
Economic Development – Ad Valorem exemption for new industry	(9.0)
	<u>209.9</u>
1986 Session	
No tax changes	0.0
	<u>0.0</u>

TABLE 1 (Continued)
Statutory Revenue Changes 1979 through 1990
(millions)

1987 Session	
Sales, Use Tax, from 3.25 to 4 percent	\$ 134.9
Liquor and Beer Taxes	7.0
Cigarettes, from 18 to 23 cents	17.1
Gasoline to 16, diesel to 13, from 10 cents per gallon	116.2
Income Tax – Impact federal tax changes on state net tax liability	125.0
Increased interest earnings from improved investment practices	17.0
College tuition increases	20.0
Miscellaneous fee increases	20.0
Insurance company regional office credit	(5.1)
	<u>452.1</u>
1988 Session	
College tuition increases	20.0
Income Tax – impact federal tax changes on state income tax liability	33.6
Income Tax reduction for elderly and low income, reduction maximum rate, from 17 to 10 percent for those deducting federal income taxes	(7.2)
Income Tax – Venture capital 20% tax credit	No Estimate
Sales Tax – Exempt new plant construction	(0.5)
Sales Tax – Computer center exemption	No Estimate
	<u>45.9</u>
1989 Session	
Income Tax – Impact federal tax changes on state income tax liability	12.3
College tuition increase	20.0
Motor Fuel, 1 cent to leaky tank fund – 6 months	10.0
	<u>42.3</u>
1989 Special Session	
Motor Fuel – Extend 1-cent leaky tank fund to 12 months, additional revenue to highways	10.0
Sales, Use tax, from 4.0 to 4.5 percent	101.4
Individual Income Tax – Add 7 percent bracket to Method I	101.3
Corporate Income Tax – Increase from 5 to 6 percent	20.0
	<u>232.7</u>
1990 Session	
Income Tax – Low income individual to receive rebates/credit for	
Sales tax on food (\$10.5 million) FY-90 (\$21 million) FY-91	(21.0)
Sales and Use Tax vendor fees from 2.5 to 2.25 percent	2.5
Sales tax – Exempt leased vehicles	(2.5)
Gross Product Tax – Exemption for horizontal drilling	No Estimate
	<u>(21.0)</u>
GRAND TOTAL	<u>\$1,119.4</u>

Source: Office of State Finance, December 10, 1990.

the rate of taxation but had the effect of narrowing the tax base. This had the result of making the tax system of Oklahoma more vulnerable to the cyclical swings that were just around the corner.

EFFECTS OF THE OIL BUST ON THE TAX BASE

Table 1 also lists the tax increase that followed the oil bust. Beginning in 1984 and every year thereafter except 1986, taxes have been increased to some degree. Even in 1988 when the State Legislature reduced the personal income tax for the elderly and low income individuals and dropped the maximum rate of taxation of personal income from 17 percent to 10 percent, net tax changes increased because of phase-in effects from the Federal Tax Reform Act of 1986. While the magnitude of these changes and the need for the revenue can and will be debated, for the purposes of this analysis the character of these changes is most important.

With only two exceptions, each tax increase was accomplished without broadening the base. The 1984 motor vehicle tax changes and the 1987 personal income tax changes resulting from federal tax increases are the exceptions. The 1984 motor vehicle tax changes broadened the base to treat pickup trucks and vans like automobiles. This change would receive high marks from the perspective of the criteria of a good tax system discussed earlier. It is arguable "fairer," reduces incentives to choose trucks over cars for tax reasons, reduces administrative costs associated with settling disputes over what is a truck, car, van, et cetera, and broadens the tax base.

The Federal Tax Reform Act of 1986 had the most profound effect on Oklahoma's tax base, however. This federal action of reducing rates and increasing the base by eliminating or phasing out a number of exceptions dramatically increased Oklahoma's tax base and shifted a significant portion of the budget toward income taxes, a relatively stable tax source.

All other tax increases since 1984, however, had no effect on broadening Oklahoma's tax base. These were simple increases in rates, although both in 1987 and in 1989 a base broadening approach was recommended to the Legislature both by the Governor and an independent citizen's group, Task Force 2000. All tax decreases that were enacted since 1984 have had the effect of narrowing the tax

base. The largest of these is the rebate/credit granted low income individuals on their income tax for purchases of food. The other tax cuts have been in the nature of tax preferences in the name of economic development.

THE DILEMMA OF TAX PREFERENCES

The gradual insidious process of granting tax preferences has a profound effect on the tax base over time. Following the oil bust, what used to be known to one and all as tax preferences for groups with effective lobbyists, became known as economic development programs.

Tax preferences may be a viable method for enticing new or expanding businesses, although the research generally considers these to be a secondary effect at best. In any case, a disorganized patchwork quilt approach has been used. These preferences have been offered on a purely ad hoc basis with politics playing a major role. If a firm indicates that it may be interested in relocating, lobbyists appear on the horizon seeking tax preferences or concessions. Sales tax exemption on building materials and other equipment, including computer hardware, relief from ad valorem taxes and even income tax credits for investment are recent examples. Primarily these new tax preferences have been granted to large business and only coincidentally to smaller businesses.

Often these tax preferences are so narrowly defined or are available for such a short time that they may not become widely known to businesses other than those which initially qualified. One obvious effect of these tax preferences is to narrow the tax base and thus concentrate the tax burden to areas of the economy that have few or ineffective lobbyists.

Tax preferences are not new to Oklahoma or the federal tax code where "private" bills are enacted into law. A 1988 study listed literally hundreds. Estimates at that time of the value of these preferences was more than \$780 million. The true value exceeded this because for many tax preferences no estimate could satisfactorily be calculated.

Tax preferences present a particularly thorny problem in tax theory. On the one hand, a broader base which can result in a lower tax rate is preferred for the myriad of reasons cited earlier. If total spending is not to be cut, which is often the beginning premise, then every tax preference granted

means higher taxes for others, exacerbating the economic dislocation effects any tax has. On the other hand, compelling cases can and are made that a small variance in the tax code can mean sometimes hundreds of jobs to the state. Regardless of how "good" the tax system of a state is in terms of abstract criteria, one can never expect that requests for tax preferences will disappear. And states coming out of a recession are particularly susceptible to hearing such requests. As a general principle, however, tax preferences have a deleterious effect on the tax base which shows up as reduced perceived fairness, increased volatility of revenues, and increased administration costs. Whether these costs are outweighed by the incentive provided is something that will no doubt be debated in every session of the legislature.

SUMMARY AND RECOMMENDATIONS

There have been major changes in state and local tax rates and tax revenues in the past decade in Oklahoma. Much of the change resulted from the oil boom which dramatically, if temporarily, increased state revenue. This has had a dramatic effect on the general structure of the state's tax base.

During the oil boom period tax cuts were instituted which narrowed the tax base and added to its sensitivity to boom and bust cycles. Beginning in 1984, tax increases instituted at the state level modestly broadened the base. The federal tax increase in 1986, however, significantly expanded the base which will have a positive effect in stabilizing tax revenues over the business cycle.

As discussed above, one of the important criteria of a "good" tax system is that it have as broad a base as possible. This allows the rates to be low, thus having as small an effect on economic activity as possible and making a state more competitive with other states. It further provides greater equity in funding public services by spreading the cost among all taxpayers. Oklahoma has made the difficult transition to a broader tax base than it had at the beginning of the decade. Nevertheless, continuous vigilance is required in order to keep the base as broad as it is.

Tax preferences should be viewed with skepticism. Both the effects on equity and the destabilizing effects on budgets, because of the narrowing of the tax base, should be weighed against alleged benefits. The burden of proof for tax preferences should rest with those who advocate them. Further, all tax preferences should be tracked both for their effects on tax revenue and on job development. The magnitude of the tax preferences granted in Oklahoma's tax code should be measured and reviewed at least biannually in a report to the Governor and Legislature. As argued above, public policy should be biased in favor of eliminated tax preferences because of the positive effects on the breadth of the tax base.

Significant broadening of the base is possible particularly in the critical area of the sales tax. This type of structural change could have a positive effect on both the stability and the equity of Oklahoma's tax system and aid in Oklahoma's economic development if rates could be reduced as the base is broadened. A continued review of the preferences should aid in achieving the goal of reduced tax rates on a broad base.

REFERENCES

- Bellmon, Henry, "Address to the First Extraordinary Session of the 42nd Oklahoma Legislature," August 14, 1989.
- Provus, Stan, *Calendar Year 1989 Report of the Oklahoma State Bond Advisor*. State of Oklahoma. January 10, 1990.
- Soule, Pete, *Oklahoma Tax Preference Report FY-1988*. Oklahoma Office of State Finance. October 1987.
- Executive Budget for the Fiscal Year Ending June 30, 1987*, Oklahoma Office of State Finance, Division of the Budget.
- Oklahoma's Public Education: A Blueprint for Excellence*. Task Force 2000, November 1989.
- Oklahoma State Board of Equalization, "Certification of State Revenues." Oklahoma Office of State Finance, Division of Central Accounting and Reporting. April 24, 1990; June 1990.
- Fiscal and Economic Performance and Financial Control*, Office of State Finance, Presentation to Bond Rating Agencies, October 29, 1990.

THE OKLAHOMA SUPERCONDUCTING SUPER COLLIDER PROPOSAL EFFORT: LESSONS LEARNED

As officials in the State of Oklahoma recognized the need to diversify the economy in order to remain competitive, the growth of technology based industries became especially attractive.

In partial response, Governor Bellmon and the Legislature agreed jointly to pursue the Superconducting Super Collider (SSC). The competition forced the state to look at all aspects of its economy from a high-tech perspective as part of the proposal process. Initial discussions concerning the facility had been ongoing since 1984 ending with the Invitation for Site Proposal (ISP) in April 1987. Even with a good site and a workman-like effort to prepare the proposal, Oklahoma did not make the Best Qualified List (BQL) for final evaluation. Texas won the competition in June, 1989. In reviewing the effect and expense of the application, the following questions seem appropriate:

- What benefits did Oklahoma derive from the proposal process?
- What lessons were learned in entering the competition for a large-scale high-tech project?
- What does Oklahoma need to do to be competitive for future, major scientific projects?

The first section of this paper discusses the SSC product and its value. The second section is an analysis of the strengths highlighted in the proposal and weaknesses defined by workshops and the U.S. Department of Energy (DOE). The final section is a discussion of lessons learned from the process and what actions could make Oklahoma more competitive for large-scale high-tech projects.

Richard W. Schmidt is a consultant to The Benham Group and as a supporting team member assisted the state during the Superconducting Super Collider Proposal preparation.

THE VALUE OF THE SCC PRODUCT

The SSC concept originated in a study sponsored by the Division of Particles and Fields of the American Physical Society in the summer of 1982. In 1984 a subsequent study reaffirmed the primary SSC parameters for meeting the goals of high energy physics and established the Central Design Group to develop a conceptual design. After further scientific review by the Department of Energy and U.S. House and Senate subcommittees, the President committed to the SSC. The DOE issued its "Invitation for Site Proposals for the Superconducting Super Collider (SSC)" in April 1987.¹

DOE intends for the Superconducting Super Collider to be the world's premier high energy particle accelerator. It is designed to boost protons to energies 20 times higher than ever before, enabling physicists to understand more completely the elementary constituents and fundamental forces of matter. As the next step in high energy physics research facilities, the SSC will attract outstanding particle physicists from around the world.

Besides its scientific impact, the \$5 billion project is expected to provide an economic boom to the host state in which it is built. The project requires approximately 4,500 workers during construction and 2,500 full-time employees to operate and maintain the facility. There will be approximately 500 visiting researchers each year. By the year 2000 the federal commitment will grow to over \$8 billion with an overall impact of \$11 billion with 10,000 new jobs over the life of the project.

To the impacted state, the increased household earnings will be \$212.5 million per year and \$15 million tax revenues per year. Assuming a project life of 25 years, the present value of the tax revenues alone is \$286.5 million.²

DECISION TO COMPETE

The State of Oklahoma officially decided to submit a proposal after most competing states had

their efforts underway. Governor Bellmon, in January 1987, requested his staff to review Oklahoma's prospects for entering and winning the competition. After review and conferences with legislative leaders, a decision was made to proceed, but only if a suitable site could be found and if a competent group could be organized to prepare the proposal.

Following extensive evaluation of potential sites by the state geologist, the group investigating the project identified and proposed a site to the Governor and the State Legislature. The Legislature passed a concurrent resolution, SCR9, urging the Governor to pursue the SSC project and establish a task force to prepare the bid.

Proposal development began in May with an original target completion date of August 1987. The submission date was later changed to September 2, 1987, in response to an initiative which required the separation of financial incentives requested in the original ISP from the technical proposal. The amendment improved Oklahoma's chances since the financial incentives favored large states, such as California and Texas. The submittal date deferral also afforded Oklahoma additional time for site evaluation and proposal preparation.

ORGANIZATION AND CONTROL OF PROJECT

The newly created Oklahoma SSC Commission formed a project proposal team, see Figure 1, which was a group of appointed state and private industry leaders responsible for setting policy, overseeing contractor performance, and administering the contract.³ After contract negotiations between the state and the private industry contractors, the Oklahoma Legislature appropriated \$1.5 million to the Oklahoma Department of Commerce to oversee the preparation of the bid. Eventually the executive and legislative branches agreed on the organization structure shown to oversee the preparation and submission of Oklahoma's proposal.

Under this arrangement the Department of Commerce contracted with an inactive public trust, reactivated by the Governor and renamed the Oklahoma SSC Development Authority, to act on behalf of the State of Oklahoma in preparing and submitting the proposal. This public trust conducted all business related to the financing, development, implementation and monitoring of the SSC

project⁴ through the Oklahoma SSC Commission, the Oklahoma Department of Commerce, and the contractor retained to prepare the proposal.

The proposal format prescribed by the DOE required a complete, multi-disciplinary evaluation of the proposed SSC site. DOE criteria specifically required information on climate, land acquisition status, financial incentives, site geology and an evaluation of the regional resources available which would support the diverse population which would utilize the facility. The proposal, which consisted of eight volumes, was prepared and submitted to the DOE on schedule and within budget.

In preparing the document, the team had to mitigate issues in order to present a more compelling proposal. In this process the project team identified weaknesses in the state's education system and other support services; these problems later became the subject of workshops held during bid preparation and in the evaluation period between submittal and announcement of the BQL.

EMERGING CONCERNS

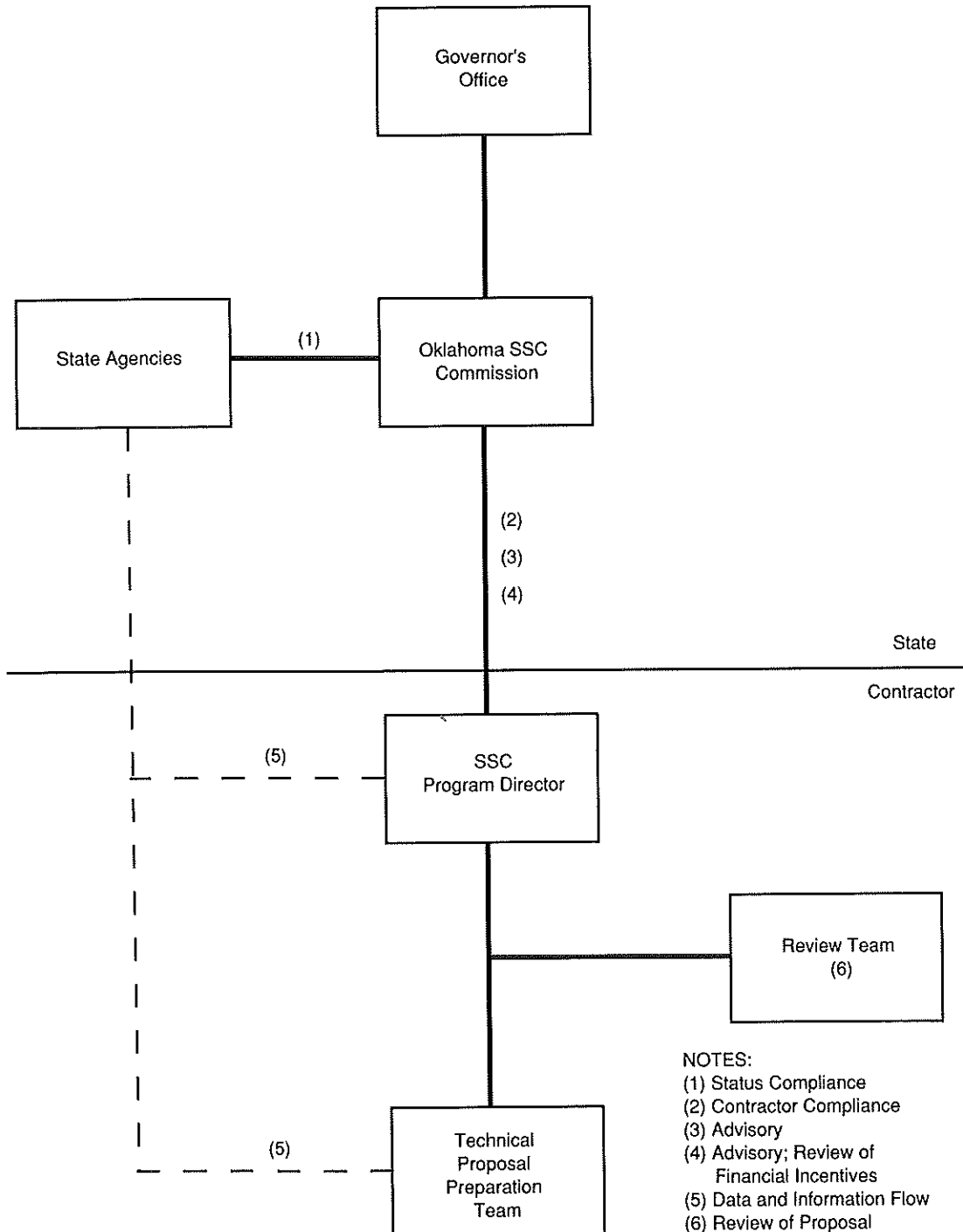
During the evaluation period, the project team identified two major concerns that were thought to adversely affect Oklahoma's chances. One major concern was the state's stature, both educationally and industrially, in the national scientific and advanced technology communities. The project team addressed these matters, both educationally and industrially, in a number of informal meetings and a workshop on "Enhancement of Living/Working Environment and Intellectual Climate at SSC Worksite."⁵

The workshop was especially productive. It included presentations by leading U.S. and foreign educators, scientists and legislators and prompted in-depth discussions of the state's strengths and weaknesses. Subsequently, many of the findings and recommendations from the workshop were incorporated into the Governor's 1988 Legislative Agenda to improve Oklahoma's educational system and to enhance economic development efforts.

A second major concern was the need for strong support from the Legislature and the Congressional delegation. Because of the late start in preparing the state's proposal, coordination was not as effective as it could have been. Although meetings and presentations were made to officials at all levels of government, state agencies, local communities, members of Congress and the Senate to solicit their support for the proposal, which resulted in

FIGURE 1

SSC Program Organization Chart
Original Concept



resolutions and documents showing support in the proposal, the time for such coordination was extremely short.

THE DEPARTMENT OF ENERGY SHORTLIST

In January, 1988 the Department of Energy, after detailed review by the National Academy of Sciences (NAS) and the National Academy of Engineering (NAE), released the Best Qualified List (BQL). The NAS/NAE narrowed the field of twenty-five competing states to a best qualified list of the following eight: Texas, Tennessee, Colorado, North Carolina, New York, Michigan, Arizona, and Illinois.

Table 1 illustrates a comparison of Oklahoma's bid and the eight states on the BQL. Clearly, Oklahoma's proposal was a strong one, particularly in areas relating to the specific site, such as geology, geography and physical environment. The NAS noted that the Oklahoma proposal had the following strengths:

- Geology and tunneling;
- Ease of access (airport, rail, highway, and port facilities);
- Suitable physical environment;
- Community support.

It is also informative that the NAS/NAE noted that Oklahoma's proposal was deficient in the following areas:

- Educational opportunities (research universities);
- Support infrastructure for the resident scientists /technicians;
- Availability of machine and electronic shops experienced in high-tech/applications.

Not surprisingly, Oklahoma's omission from the list could be traced to relative shortcomings in "regional assets"—the precise topic of the Governor's Workshop. Unfortunately, the lessons learned in the workshop and compensating actions could not affect the site selection since they occurred after the formal submittal date.

PROPOSAL BENEFITS

Although Oklahoma's effort was unsuccessful, there were benefits from the focused effort. For example, the proposal effort afforded the opportu-

nity for the proposal team to take the following actions:

(1) Identify weaknesses and evaluate needed improvements in Oklahoma's scientific infrastructure;

(2) Consolidate data from many state sources into a single repository affecting large science and construction projects;

(3) Affirm that Oklahoma can compete in fields dominated by larger states.

In the past, Oklahoma's efforts to obtain federal projects were primarily related to military and civil works projects. Competition for projects such as the SSC in the high-tech fields normally went to states with established large research enterprises.

Undoubtedly, Oklahoma's economic future depends on the state's organizations competing in national and international markets. Entry into the SSC competition signalled Oklahoma's willingness to support the advancement of science and technology and tested Oklahoma's ability to compete for national projects.

Ability to Compete

Since most states had been working on their applications for more than two years prior to formal issue of the invitation for bids, the Oklahoma team mobilized rapidly and completed necessary tasks quickly. The team completed and delivered a product in less than four months, a feat not matched by any other state in the competition.

Consolidate Data

The preparation of the proposal submitted by Oklahoma in its quest for the SSC site documented information of continuing value and, importantly, the end product was acknowledged by both the DOE and the NAS/NAE review board.

Because of the criteria demanded by the DOE for its site evaluation, the team assembled wide-ranging data regarding the state's economy that are linked to such a project. For example, separate volumes addressed the land and other incentives, regional resources, climate, environment, utilities and the state's commitment. These data came from many state agencies, educational institutions, local communities, and federal agencies and were consolidated to describe the site and Oklahoma's ability to perform the necessary tasks.

As a reference, the document provides a guide to a vast amount of heretofore unassembled information, carefully categorized and documented.

TABLE 1
The NAS/NAE Committee's
Recommended Eight Sites for the SSC
As Compared to Oklahoma's Site

Evaluation Criteria	OK	AZ	CO	IL	MI	NY	NC	TN	TX
1. General Location									
1.1 Major City	OKC	PHX	DEN	CHI	ANN	RCH	RAL	NASH	DAL
1.2 Distance and Direction	50 NW	35 NW	70 NE	40 NW	35 N	18 E	20 N	30 SE	30 S
2. Geology and Tunneling									
2.1 Groundwater Table Below	*	*	*		-	-	-	*	*
2.2 Uniform Rock and Soil Conditions	*	-	*	*	-	-	-	*	*
2.3 Uniform Rock and Soil Conditions	*		-	*	*	*	*	*	*
2.4 Requires Deep Shafts	*	-						-	
3. Regional Resources									
3.1 Community Proximity	*	*	-	*	*	*	*		*
3.2 Housing	*	*	-	*	*	*	*		*
3.3 Educational Opportunities	-	*	*	*	*	*	*		*
3.4 Employment Opportunities	*	*	-	*	*	*	*	*	*
3.5 Ease of Access	*	-	-	*	*	-	*		*
3.6 High-Tech Applications Industry	-	*		*	*	*	*	*	*
3.7 Local and Regional Cooperation	*					-			*
4. Environment									
4.1 Environmental Impact	*	*	-	-		*	-		
4.2 Resident and Business Displacement	*	*	*	-	-	-	-		-
4.3 Noise and Vibration	*	-	-	*	-	-	-		-
5. Other Technical Criteria									
5.1 Weather Conditions	*	*		-	-	-			*
5.2 Reliable and Stable Utilities	*	*		*	*			*	*
6. Life Cycle Costs									
6.1 Above Average		-							*
6.2 Average				-					*
6.3 Below Average	*		*			*	*	*	*

Sources: NAS/NAE Report, dated December 29, 1987, Oklahoma Site Proposal, dated September 2, 1987.
 * = Positive Influence.
 - = Negative Influence.
 Blank = no impact.

Legend

OKC, OK -- Oklahoma City, Oklahoma
 PHX, AZ -- Phoenix, Arizona
 DEN, CO -- Denver, Colorado
 CHI, IL -- Chicago, Illinois
 ANN, MI -- Ann Arbor, Michigan

RCH, NY -- Rochester New York
 RAL, NC -- Raleigh, North Carolina
 NASH, TN -- Nashville, Tennessee
 DAL, TX -- Dallas, Texas

Identify Proposal Weaknesses

Members of the proposal team isolated and categorized areas of concern which they thought might be detrimental to Oklahoma's application. Centered around regional assets, the workshop and other meetings dealt with such issues as educational reform, economic development and growth, support industries required by the SSC facility, and legislative reform related to contractor selection and management. This information affords an insight concerning Oklahoma's ability to compete for large science projects in the future.

LESSONS LEARNED

Despite the effort, the Oklahoma proposal did not make the Best Qualified List. Nevertheless, one can draw some inferences from the experience. What lessons were learned from the process?

Even with the problems associated with the effort, the State of Oklahoma *did* enter the competition and *did* submit a competitive proposal on time and within budget. The obstacles encountered were overcome sufficiently to submit a credible proposal. The final organizational structure, even though it was somewhat cumbersome, provided

the necessary control and guidance to complete the effort and submit a package strong enough to be in the running for the BQL.

The proposal effort suffered seriously from the short preparation time, especially in light of the complex and confusing guidelines, laws, and regulations related to acquisition of data, confidentiality, legal and policy issues.

Scientific Infrastructure

From the proposal review process and workshops, Oklahoma's scientific infrastructure is not world-class competitive. Broad areas need strengthening in government, education and the business community. In order to compete with other states for future large government science projects Oklahoma must correct and strengthen its scientific infrastructure.

Competitive Start

California and Texas began their SSC proposal efforts in 1984. The late decision by Oklahoma to compete and the two year headstart by other states was an obstacle Oklahoma could not overcome in the competition. An earlier start would have afforded state officials and the project team an opportunity to control *all aspects* of the effort and to expand participation in the process. It would also have provided an opportunity to use fundings from the workshop to shape the proposal.

Organization and Administration

Because of the short period for preparing the proposal, many agreements between the state and the contractor were verbal. The State of Oklahoma could not execute a final contract of this magnitude in the time required to prepare the proposal. Under terms of the statute appropriating funds for the project, the final contract required approval of the Oklahoma Attorney General, the Office of Public Affairs, the Oklahoma Department of Commerce, and the Oklahoma SSC Development Authority (see Figure 2) for expenditure of funds. A complex maze of agencies and organizations had to review and approve the complex issues in the proposal prior to submittal. Contract negotiations continued throughout the complete proposal process to the detriment of the contract effort. Funds appropriated through the Oklahoma Department of Commerce, and disbursed through a public trust, gave the state a very effective control mechanism.

In addition to timing problems, no formal mechanism existed to allow for changes to scope of the agreement or addition of new tasks or assignments. Changes, such as the amendment removing financial incentives and changing the submittal date, impacted the scope and schedule of the project but could not be implemented through the organization structure fashioned for this program. The organizational structure also restricted the state in formulating a comprehensive public relations program to compliment the proposal to sell Oklahoma and the site. Forethought regarding the requirements of such proposal teams could facilitate future efforts.

Intelligence Network

Scientific planners developed the SSC concept in the early 1980s. Many members of Oklahoma's congressional delegation were at the time seated on influential committees which decided the appropriation of funds for projects similar to the SSC. A stronger intelligence network, and direct communications with a single entity, would have eliminated the need for substantial briefings and presentations to various groups. Oklahoma could have decided whether or not to enter the competition with the aid of a systematic evaluation of the long-term economic advantages to the state.

Public Communications Program

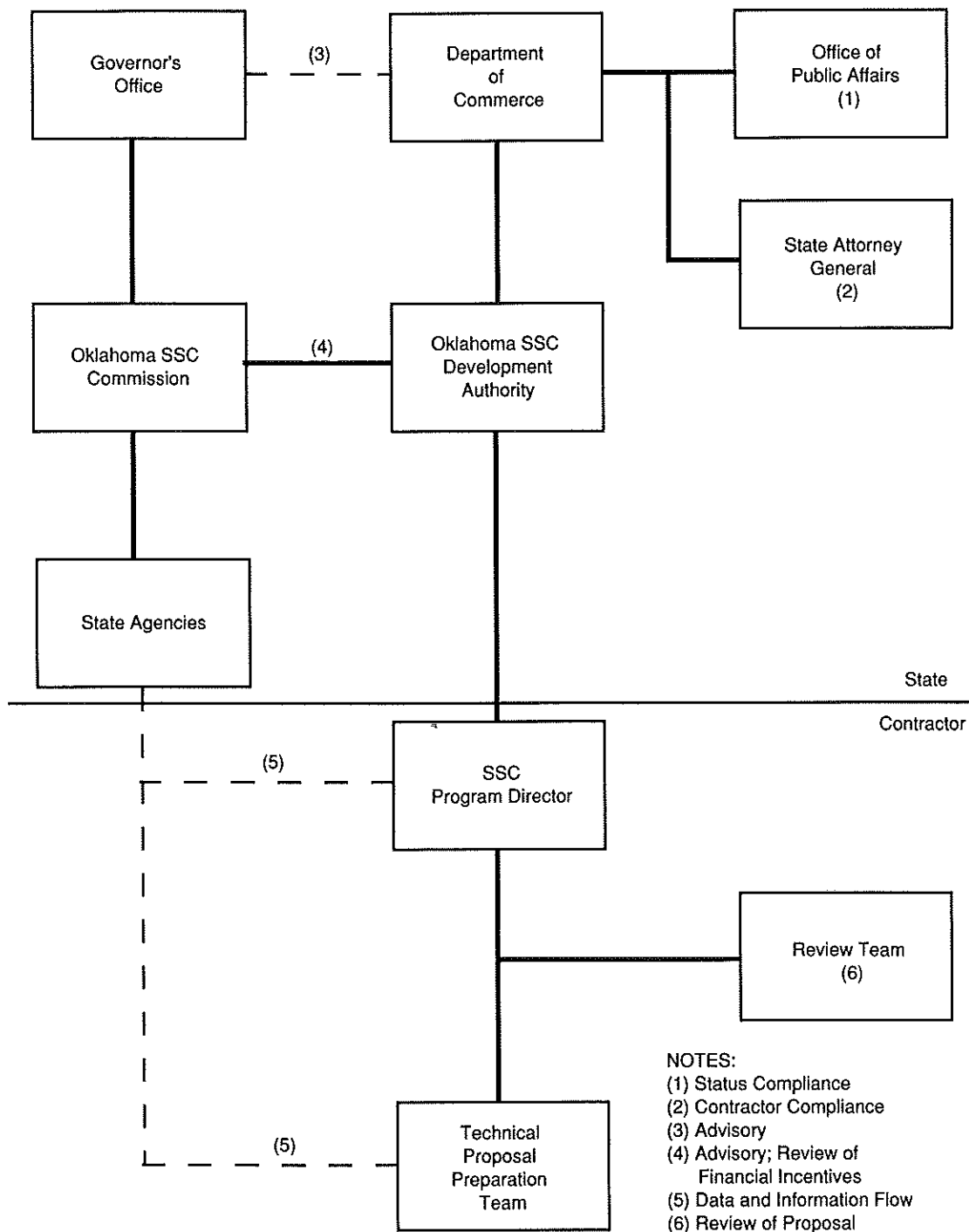
The state did not implement a public communications program explaining the effort. A public communications plan was drafted, but the Legislature failed to provide funding, thus preventing the engagement of professionals or assignment of communications responsibility to a state agency. As a result, the proposal team implemented only a reactive program to respond to requests from the media, state agencies and the public.

Public Agency Cooperation

Expediency dictated the need for collecting large amounts of data and information from various sources in a relatively short period of time. A single contact in the Governor's office coordinated the effort which was critical to completing the proposal on time. Stronger representation from private organizations and other institutions, such as the State Chamber of Commerce and the State Board of Regents for Higher Education, would have improved communications among the private sector, education, and state government.

FIGURE 2

SSC Program Organization Chart
Approved Concept



State Policies and Incentives

Because of the competitive nature of the application, there was a need for confidentiality regarding financial incentives. Many of the incentives offered in Oklahoma's proposal were unique and innovative and necessary to provide an edge in a competitive bid. Offering such incentives was a new experience for Oklahoma government; however, such incentives would obligate the state. State policies do not allow for confidential treatment of financial incentives to be offered by the Governor without review and appropriation by the Legislature.

The organizational structure helped to meet the confidentiality problem. The separation of Oklahoma SSC Commission responsibilities from those of the Oklahoma SSC Development Authority allowed the confidential handling of financial incentives. The commission, stripped of authority to handle public funds, was released from jurisdiction of Oklahoma "sunshine" laws on open meetings and open records, permitting executive sessions for detailed proposal discussions. All activities of the Oklahoma SSC Development Authority were open and subject to citizen and media scrutiny. With the chairman for both organizations being the same, this provided an advantage by eliminating communication problems while protecting confidentiality of the incentives. Since the Governor appointed the chairman, commitments which obligated the state were reviewed and approved prior to inclusion in the document.

In comparison with other states, Oklahoma's financial incentives on the surface were meager. However, the innovative approach taken by the SSC Commission and the preparation team allowed the state to present a comparable package to those provided by larger and wealthier states. (The financial incentives offered by the state were submitted under separate cover to be opened only after selection of the final site by the DOE. All packages presented by losing states were returned unopened.) State agencies, foundations, local communities and private industry provided a variety of incentives to the DOE on behalf of Oklahoma.

RECOMMENDATIONS

For Oklahoma to compete in similar, future "world class" competition, the above lessons produce some apparent recommendations:

(1) *Establish an "Alert Committee" to identify major programs to pursue.*

An early beginning is critical. The state has various task forces, committees, agencies which could perform an early warning function. For example, two such groups are Oklahoma Futures and the Congressional Economic Development Task Force. Both groups have the organizational structure and involvement with necessary entities from government and private industry to handle such a task. However, for an effective organizational link between the public and private sector, stronger communications between state and federal delegations is necessary to future prospects.

(2) *Streamline the state contract/proposal process.*

In developing the data for such a large proposal over one hundred state agencies, task forces, departments and state offices need to be contacted for information. Many of the organizations serve duplicative functions. A review of data sources could develop a more efficient system and probably eliminate unnecessary duplication.

(3) *Strengthen public and private sector partnership.*

Strengthened bridges between public organization and the private sector will improve Oklahoma's ability to respond when large project opportunities present themselves.

(4) *Develop policy guidelines for executive branch contracts for competitive bidding.*

State regulations and legislative control required the development of the complex organization structure necessary to administer the program. A review of existing procedures could produce a streamlined process for future competitions. If Oklahoma can eliminate unnecessary or duplicate reviews, that will save time and money and make future competitions effective.

NOTES

¹*Invitation for Site Proposals for the Superconducting Super Collider (SSC)*, U.S. Department of Energy, April 1987.

²Statistical data presented in a study performed by a team of Oklahoma State University economists, headed by Dr. Tabitha Doescher, September 1987.

³The Oklahoma SSC Commission appointed by Governor Bellmon included influential captains of industry in Oklahoma, as well as, representatives from state government. The commission consisted of eight members with the primary objective to act in an advisory capacity

in review of the proposal and the financial incentives offered to the DOE by the State of Oklahoma. The members of the Commission were as follows:

Mr. Breene Kerr, Chairman, Kerr Consolidated; M. C. J. "Pete" Silas, Phillips Petroleum; Mr. John Williams, Williams Companies; Mr. James Harlow, Jr., OG&E; Dr. Ken Richards, Kerr McGee; Senator Herb Rozell, State Senator; Mr. Walt Hill, State Representative; Mr. Glenn Sullivan, Director of Recreation and Tourism.

⁴The Governor activated a defunct state trust to oversee the SSC. The Oklahoma Industrial, Cultural and Public Facilities Authority, later renamed to the Oklahoma SSC Development Authority, was activated to provide the preparation team with a state entity that had the ability to guarantee the acquisition of the required property and the right to obligate the state to any financial incentives offered. Members of the Authority

were appointed by the Governor and included:

Mr. Breene Kerr, Chairman, Mr. Frank McPherson, Mr. Jack Neely, Mrs. Nancy Davies, Mr. C.J. "Pete" Silas, Mr. R. Dobie Langenkamp, Mr. Michael Boyd, Mr. Gary Parker, and Mr. Douglas Nesbitt.

⁵Governor Bellmon authorized a workshop for November 20, 1987. Thirty-five representatives from various sectors of government, education, and private industry attended. The CERN laboratory in Switzerland presented guidelines for the enhancement of living/working conditions for visiting scientists. The Governor's FY88 legislative agenda included recommendations developed at this workshop.

⁶Summary comments contained in the Executive Summary of the proposal submitted by the state to the Department of Energy.

MEDICAL CARE FOR THE UNINSURED: APPROACHES TO STATE POLICY

Oklahoma's health care system delivers many services for which providers receive less than what they charge. In the hospital sector, alone, patients were charged \$2,375 million in 1988, but only \$1,693 million was collected—a difference of \$682 million.¹

Nearly \$422 million of this uncompensated care is attributable to governments' unwillingness to pay the full amount charged to Medicare and Medicaid patients. Commercial insurers negotiated discounts of \$49 million for their clients. Bad debts and charity care accounted for most of the remainder.

Uncompensated care of this magnitude allegedly threatens the financial viability of health care providers.² They are able to recover some of the cost by shifting it from those who won't pay to those who will. There is growing resistance, however, to cost-shifting, and increasing pressure on state government officials to do something about it. This article contains a brief examination of some of the principal means of dealing with this problem.

WHO IS TO BLAME?

The problem of uncompensated care is not new. Health care professionals have always provided services to patients who were not willing and/or not able to pay the full amount charged. When necessary, uncompensated costs have been shifted to patients who were more willing and able to pay. What is new is the magnitude of the practice.

Most observers attribute the problem to two factors: (1) the lack of private health insurance coverage for individuals who are ineligible for government-financed health care, and (2) the un-

willingness of federal and state governments to pay the full cost of services provided to Medicare and Medicaid patients. The impact of these factors has been exacerbated by medical care costs that have grown at a faster pace than personal income and government revenue.

In the fourth quarter of 1988, 14.7 percent of the U.S. non-elderly population, or 31.4 million persons, were not covered by any type of health insurance.³ Health insurance refers to the following types of coverage: (1) employer- or union-provided insurance, (2) other privately purchased health insurance, (3) Medicare, (4) CHAMPUS, VA or military health care, and (5) Medicaid. Twenty eight percent of the U.S. population lacked continuous coverage for the 28 months prior to January 1, 1989.

Insurance coverage was less extensive in Oklahoma than in the rest of the nation. Over 75 percent of the nonelderly persons outside Oklahoma had private health insurance coverage in 1988. In Oklahoma, only 66.8 percent of the nonelderly were covered by private insurance.⁴ This was a percentage surpassed by 43 other states.

Nationwide, 66 percent of the poor had at least some Medicaid coverage, compared to only 55 percent in Oklahoma. Medicaid payments averaged from 5 to 41 percent more nationwide than in Oklahoma. Thus, Oklahomans had less private and public insurance protection than the norm in the rest of the country.

Some of the uninsured are uninsurable; that is, they are unable to obtain insurance because of preexisting conditions. Some are unemployed and have lost coverage once provided by employer-provider policies. Some are poor, but not eligible for Medicaid — principally because they are not eligible for Aid to Families with Dependent Children. The largest number of the uninsured, however, are working people and their dependents. In fact, there may be as many as 500,000 uninsured persons in Oklahoma who live in families where the head is working.⁵

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The availability of insurance through employment is closely associated with firm size. Nationwide, an estimated three-fourths of the working uninsured are employed in companies of less than 500 employees.⁶ A 1978 Batelle survey found that only 50 percent of firms with less than 10 employees offered employer-provided health insurance.

The paucity of employer-provided insurance among small companies is easy to explain. First, they must pay higher premiums (from 10 to 40 percent) to cover the higher administrative costs and increased risk associated with small groups. Second, many small businesses are unincorporated and their owners can't deduct all health insurance costs as can incorporated businesses.

HOW MUCH UNCOMPENSATED CARE?

The rising level of uncompensated care has prompted a variety of recommendations for state (and federal) government action. Uncompensated care does seem like an undesirable practice. Closer examination shows, however, that it has both negative and positive aspects.

The provision of uncompensated care is not the normal way of rationing goods and services in a market-directed economy. In this setting, rationing is normally accomplished through the use of market-determined prices, and those who get the fruits of production are those who are willing and able to pay the price. Non-price rationing does exist outside the health care sector, of course, but not nearly to the degree that it exists within this sector.

Some people object to the non-price rationing of medical care on the grounds that beneficiaries should pay for care received. Far more object, however, on the grounds that uncompensated care results in the imposition of a "hidden tax" on some patients to pay for the care received by others. The former are forced by this device to pay for the care of others without knowing how much they are paying, what they are paying for, and who is receiving the services they finance.

Defenders of uncompensated care argue that this hidden tax falls largely on those who *should* pay, and that the health care financed by this tax goes to those most in need. They reason that the tax is paid largely out of what would otherwise be profits or that it is shifted to the working insured. Insofar as the tax comes from reduced profits, they justify

it as compensation for the tax advantages conferred by the non-profit status of many health care providers. Proponents of uncompensated care justify the tax burden on the working insured as compensation for the special tax treatment of employer-provided fringe benefits. Proponents reason further that those who do pay the hidden tax of uncompensated care are richer than the beneficiaries of such care, and that this is an appropriate redistribution of income.

Some portion of uncompensated care reflects discounts to large-scale insurers. This practice may enhance providers' (chiefly, hospitals') attempts to achieve fuller utilization of existing capacity, lower average costs, and higher profits. In so far as discounts accomplish this end, there is no cause for public concern.

The definitive study on the extent, and distribution, of the social costs and benefits of uncompensated care has not yet appeared. Until it does, it seems safe to conclude that we do not know the optimal level of uncompensated care.

POLICY ALTERNATIVES

State policy makers have not acted as though the optimal level of uncompensated care is zero, but they have increasingly taken action designed to reduce it. Efforts to date include actions to increase the number of insured workers, and to provide expanded coverage of medical expenses incurred by the non-working uninsured.

The Working Uninsured

There are three basic types of state action aimed at increasing the number of insured workers: (1) removal of existing regulations that increase insurance costs, (2) state assistance to small businesses or individuals, and (3) state-mandated health insurance.

According to *Nation's Business*, there are 816 mandates spread among the 50 states prescribing specific health insurance benefits.⁷ These mandates most commonly require coverage for newborn care, alcohol and drug abuse, psychiatric care, routine dental care, and treatment by chiropractors and podiatrists. Some cover acupuncture, hair transplants and naturopathic medicine. Mandates like these may drive the cost of health insurance beyond the reach of many small companies.

Eliminating mandates entirely would not make health insurance affordable to all small business

be wise for that reason to eliminate it entirely, cost-shifting actually accounts for only a small share of private insurance premiums and it may not be a prize worth pursuing – at least not at high cost.

The size of the cost shift from non-payers to private insurers is normally determined by comparing the "fair share" of each payer (or group of payers) with actual payments. The payer's fair share is the proportion of that payer's hospital gross charges. According to this measure, cost-shifting nationwide amounted to about 4.4 percent of hospital revenues in 1986.¹¹ Mandated coverage would reach only about two-thirds of the medically uninsured. Thus, mandated coverage would save private insurers only about 3 percent (4.4 percent x .67) of hospital insurance premiums.

Freedom of Choice. Many workers choose to take their labor compensation in the form of wages and salaries or fringe benefits such as life insurance policies and retirement annuities, rather than in the form of health insurance. Presumably, they prefer such a mix of benefits, and mandated health insurance coverage would reduce their satisfaction to some degree.

This argument cannot be extended, however, to all workers. Some may have no choice because they cannot afford to sacrifice the consumption of other things that wages and salaries will buy, or because their employers constrain their choice among alternative means of compensation. However, some may not choose health insurance because they may get uncompensated care if they lack insurance coverage.

Resource Allocation. Government officials who mandate insurance coverage are also likely to mandate coverage for certain kinds of medical problems and procedures. There is no guarantee that these items are, or will continue to be, those for which there is the greatest net benefit. If it turns out that initial prescriptions are wrong, the government bureaucracy is slow in correcting its errors. In any event, such mandates will limit the flexibility of insurance companies and their ability to compete by putting together the different combinations of deductibles, copayments, and covered services that consumers want most. Resources are bound to be misallocated among health services as a consequence.

Resource misallocation would spread well beyond the health sector, however, via the distortion in relative prices created by mandated health insurance. Since mandated coverage would cost basically the same for each employee, it would raise labor costs more in those industries with low

rates of labor compensation and high proportions of uninsured workers. Industries with larger cost increases will be forced to raise prices more. This change in relative prices will change the allocation of consumer expenditures among industries. Businesses will follow suit by changing the allocation of resources among industries.

The businesses affected most adversely will be the smaller producers in the agriculture, forestry and fisheries sector, and in the retail trade and services sectors. These are sectors with the highest incidence of firms with low rates of compensation and high proportions of uninsured workers.

State Economic Development. States that have higher than average costs because of higher than average taxes, unemployment insurance and workers' compensation premiums may suffer in the race among the states for economic development. So, too, those states with higher than average health insurance costs for employers.

The exact effect will depend on the dimensions of the particular health insurance mandate. Existing evidence on the effects of taxes on economic development should apply to mandates that have effects on business costs similar to the effects of taxes on business costs.

Employment. Mandated health insurance would immediately increase labor compensation costs. Without an offsetting change in labor productivity, many workers would have to accept a reduction in some other part of labor compensation (wages or other fringe benefits) or have their existing employment terminated.

It has been estimated that a federally-mandated health insurance policy costing \$1,200 per employee would add one million workers to the ranks of the unemployed.¹² Oklahoma's share of this impact would be about 1 percent, or 10,000 - 11,000 workers. A similar effect could be expected from a state-mandated insurance policy of comparable size.

There is the possibility that the shock of such a policy would spur an increase in productivity. Past experience with increases in the federal minimum wage (a policy with impacts similar to those of mandated insurance), however, are not encouraging in this regard. There is also a possibility that the costs of mandated insurance could be paid from profits. The kinds of firms most likely to be affected, however, are highly competitive, low-profit enterprises. The excess profits needed to fund mandated insurance are simply not there.

Health Care Costs. Although mandated health insurance is often characterized as a substitute for

existing uncompensated care, it will probably increase the demand for medical care. If it does, there will be further upward pressure on the costs of medical care.

Some insured care will be a substitute for what would have been uncompensated care, but it is likely that the formerly uninsured will use the health care system more frequently. Mandated care will also lead to duplicate coverage for some workers, further enhancing the demand for medical care.

State Tax Revenues. State-mandated insurance coverage also will reduce the state income tax base. Taxable wages currently received by many employees would be taken instead in the form of untaxable employer insurance contributions.

The size of the state revenue loss will depend, of course, on the size of premiums per employee and the number of employees benefitting from the special tax treatment of fringe benefits. A full-scale mandated policy, however, could affect as many as 200,000 workers. If each worker had a \$2,000 policy, the tax base would be reduced by \$400 million. With an average tax rate of between 3 and 4 percent, taxes would probably be reduced on the order of \$12 - 16 million.

Discrimination. State-mandated coverage also may increase employer discrimination among workers. The increase in unemployment created by the mandate would give employers greater freedom to choose workers on the basis of characteristics they favor, rather than on the basis of worker productivity. Employers would also have an incentive to discriminate against groups likely to have higher medical risk profiles, such as women of child-bearing age and the near-elderly.

Because of the long list of costs associated with state-mandated health insurance, it has significant opposition and it may be politically infeasible in most states. In addition, it is likely that the federal Employee Retirement Income Security Act (ERISA) preempts states' authority to mandate insurance coverage. Massachusetts hopes to sidestep this problem by levying a tax on business firms to pay for a state-financed policy, but this approach may not survive a court challenge.

The Uninsured Poor

Measures that are successful in increasing the number of insured workers will also help poor families headed by a worker — the so-called working poor. The non-working poor, and the remaining

working poor would be left to rely on existing sources, e.g., Medicaid, public and community health clinics, charity, and intra-family transfers.

Medicaid covers all persons receiving payments from the Aid to Families with Dependent Children (AFDC) program. However, AFDC does not cover all poor families, even all poor families not headed by a worker. It follows, of course, that Medicaid does not pay the medical bills of all of the poor.

The Oklahoma Council on Health Care Delivery recommended that the state expand Medicaid to all Oklahomans at or below the federal poverty line.¹³ Nationally, Medicaid provides continuous coverage to only 37 percent of the poor not otherwise covered by Medicare or private insurance.¹⁴ Thus, the Council appears to be recommending, in effect, a virtual tripling of Medicaid outlays.

A proposal by Louise B. Russell indicates, however, that it may be possible to achieve universal coverage for the poor at a much lower increase in cost.¹⁵ Russell proposes providing care through existing government hospitals and clinics — federal, state, and local — or in hospitals or clinics under government contract. She estimates that such a system could be financed with a tax on hospital bills at a cost of \$6 - 9 billion more than the \$46 billion already being spent on the poor for Medicaid, Medicare, public health programs, state and local hospitals, health assistance, and other public programs for personal care.

Russell's proposal seems deserving of wider study and debate but its implementation would require vigorous federal leadership. However, such leadership seems unlikely when the federal budget deficit precludes serious consideration of new federal spending initiatives.

The responsibility for providing more health care for the poor falls squarely at present on the shoulders of state government. But most state governments are faced with budget problems of their own. It is for this reason, perhaps, that the Oklahoma Council on Health Care Delivery recommended the establishment of a new state agency charged with developing a priority list of medical services. Coverage of funding shortfalls would be made by reducing lower-priority services. This recommendation is similar to the plan proposed in Oregon for non-price rationing of medical care for Medicaid beneficiaries. According to that plan medical care priorities would be based on diagnosis and on the likelihood that the care would be beneficial.

Proponents of such plans point out that health care for the poor is already rationed by non-price

means with eligibility criteria for Medicaid. Rationing according to eligibility has nothing to do with either the severity of the medical problems or the likelihood of a beneficial outcome.

There is little doubt that a state which chooses this route is faced with a difficult and contentious task in establishing priorities. The issue has an important medical dimension, but it is too important to be left entirely to medical personnel. Fundamental ethical, social, and economic values are involved.

The state that chooses this route should also brace itself for a swelling of the Medicaid population. Studies in Oregon indicate that such universal coverage could add as many as 77,000 people to the Medicaid roles,¹⁶ including those who are poor but not on Medicaid, and those who would lower their income to become eligible for Medicaid.

The biggest objection to non-price rationing comes from those who argue that it is not necessary because it can be avoided by reducing the waste and inefficiency that characterize health care in America. This is a powerful argument because it seems reasonable — at least at first blush.

Economic theory suggests that spending on health care is excessive. The principal factor at work is insurance. Patients with insurance paid only 10 cents out of each dollar of hospital revenues in 1987, and 26 cents of each dollar paid to physicians; insurance paid the rest.¹⁷ When people are aware of only part of the full cost of what they use, as they surely are in this instance, they consume more than is socially optimal. Moreover, patients have no incentive to demand that health care providers economize on medical services. Thus, services are often prescribed that incorporate the latest, and most expensive, if not the most needed, technology.

Various methods have been proposed for cutting costs and improving efficiency. Henry Aaron and William Schwartz argue persuasively, however, that the full realization of lower costs and improved efficiency would only provide a one-time savings large enough to halt the growth of health care costs for 3 or 4 years.¹⁸ Following this brief respite, costs would resume their steady path upward, spurred by the inexorable development of new technology, slow productivity growth, and the aging of the population. In the face of these trends, they contend that non-price rationing is inevitable. Whether they are right or not, it is probable that the issue of health care rationing will be high on the national health care policy agenda of the future. It will also be the subject of prolonged debate in Oklahoma.

CONCLUSIONS AND RECOMMENDATIONS

Finding a way to provide medical care for the uninsured is a problem facing most states, including Oklahoma. The 1989 Legislature provided a tax credit to small businesses as a means of inducing them to offer medical insurance as a benefit. The credit is quite small, and therefore unlikely to have a significant impact on the problem. It is difficult, however, to justify a larger credit, primarily because it is not targeted on low-income workers. The Legislature should take a close look at existing state-mandated coverages, and eliminate those for which a clear excess of social benefits over social costs cannot be demonstrated. Mandates which clearly promote competition among different types of medical care providers will probably pass such a test.

The Legislature should reject proposals to adopt state-mandated employer-provided health insurance plans. This is a very high cost means of providing medical care for the working uninsured.

The state government's efforts should be focused primarily on the task of finding a way to allocate whatever it can afford in the most efficient and equitable manner among the poor. The bulk of the funds currently devoted to this purpose go to members of families headed by females and to impoverished elderly people receiving long-term care in nursing homes. The state may be forced by the pressure of rising costs to consider alternative criteria for allocating the health care budget for the poor. Any such changes should be made only after a thorough examination of the medical, ethical, economic, and political issues involved.

NOTES

¹Oklahoma Medical Research Foundation, "Health Policy Brief: 1988 Fiscal Health of Oklahoma Hospitals" :7.

²The link between uncompensated care and hospital failures is not firmly established by empirical evidence, according to Frank A. Sloan, James F. Blumstein and James M. Perrin, *Uncompensated Hospital Care: Rights and Responsibilities*, (Baltimore: The Johns Hopkins Press, 1986): 41.

³U. S. Bureau of the Census, Census of Population Reports, Series P-70, No. 17, *Health Insurance Coverage: 1986-88* (Washington: Government Printing Office, 1990).

⁴*State Policy Reports*, Vol. 18, Issue 15. (Washington: Research Associates of Washington, 1990): 15.

⁵Angela Monson, "The Oklahoma Perspective," *The Child Advocate* (Oklahoma City: Oklahoma Institute for Child Advocacy, November, 1990): 3.

⁶Susan Engeleiter, "Should Private Employee Health Insurance Coverage be Mandatory?", *State Government News*, (May 1990): 25.

⁷Roger Thompson, "Mandates Reduced," *Nation's Business*, (August, 1990): 25.

⁸*Ibid.*

⁹Oklahoma State Statutes, Supp. 1990: Title 36, Sections 6501-6507; Title 68, Section 2537.31.

¹⁰Oklahoma Council on Health Care Delivery, *Final Report*, 1989.

¹¹Institute for Research on the Economics of Taxation,

"Mandating Health Insurance," *Economic Policy Bulletin*, No. 39, (July 8, 1987): 11.

¹²*Ibid.*

¹³Oklahoma Council on Health Care Delivery.

¹⁴Calculated from data in U.S. Bureau of the Census, *Health Insurance Coverage: 1986-88*.

¹⁵Louise B. Russell, "Proposed: A Comprehensive Health Care System for the Poor," *The Brookings Review*, (Summer 1989): 13-20.

¹⁶Dag Ryen, "Setting Health Priorities," *State Government News*, (May, 1990): 11.

¹⁷Henry Aaron and William B. Schwartz, "Rationing Health Care: The Choice Before Us," *Science*, 247 (January, 1990): 418.

¹⁸*Ibid.*

THE COTTON INDUSTRY IN OKLAHOMA: CURRENT STATUS AND FUTURE PROSPECTS

The cotton industry has a long history in Oklahoma. Cotton production dates back to Indian Territory days when transplanted Indians from the southeastern U.S. brought cotton culture with them to what is now Oklahoma. Early production was concentrated in the eastern portions of the state and gradually spread westward. By 1919, the major production areas were in the central, south central, and southeastern portions of the state (Ballenger and Soxman) and by 1925, cotton was grown on over five million acres in Oklahoma. The industry has continued to change, and production has shifted away from the eastern and southeastern sections of the state. The purpose of this chapter is to discuss factors that are likely to determine the future of the cotton industry in Oklahoma.

COTTON INDUSTRY IN OKLAHOMA AND THE U.S.

Currently, Oklahoma's cotton production is concentrated in southwestern Oklahoma. Greatest concentration is in Tillman, Jackson, Harmon, Kiowa and Washita counties as shown in Figure 1 (Oklahoma Agricultural Statistics, 1988). Data for 1988 are shown to illustrate a more typical year. In 1989, extensive fall rains and an early freeze resulted in much lower than normal production. From 1985 to 1989, cotton lint ranked as the sixth or seventh most valuable agricultural commodity in Oklahoma accounting for between \$44 and \$97 million of farm value (Oklahoma Agricultural Statistics, 1990). Among field crops over that time span, it only ranks behind winter wheat and hay in total value to producers.

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The principle cotton production states in the U.S. are Texas, California, Mississippi, Arizona, Louisiana, Arkansas, Tennessee, Alabama, Georgia and Oklahoma (Table 1). Cotton production is reported for both upland and for extra-long-staple cotton. Oklahoma produces upland cotton.

Total U.S. cotton production fluctuates greatly from year to year. The fluctuations are due to a combination of growing conditions that affect yield and acreage abandonment, price expectations that are greatly influenced by export demand and government commodity programs. Table 2 shows U.S. cotton supply and use statistics for 1979-80 through 1989-90. U.S. production has ranged from 7.8 to 15.6 million 480-pound bales. The industry depends heavily on the export market with exports sometimes exceeding domestic mill use. The impact of a dramatic fall in exports in 1985 can be seen in the extremely large inventory growth and low farm prices in 1985 and 1986 (Table 2). Since 1982, planted upland cotton acreage has been increasing in the Delta and Southeast and declining in the Southern Plains and West. Delta states with increasing acreage include Tennessee, Louisiana, Arkansas, Missouri, and Mississippi. Alabama, Georgia, North Carolina, and South Carolina in the Southeast also increased production. Texas, California, New Mexico and Oklahoma have decreased production since 1982 (Table 3).

Increased production in the Delta and Southeast can be partially explained by a lower government commodity program participation rate. Government commodity program participants must set aside a percentage of their base acreage to be eligible for program benefits. Non-participants are not limited by acreage restrictions. Thus, lower participation rates in the Delta and Southeast resulted in a level of production greater than the base acreage allowed for program compliance for three of the last five years. (USDA, August 1990, p. 7).

Production in the West has fallen to less than 90 percent of the base acres in four of the last five years and is down to an estimated 74 percent for

1990 (USDA, August 1990, p. 7). According to the USDA, shortage of irrigation water, lucrative vegetable contracts, and tree crops are assuming priority over cotton production in some areas of California are some of the causes of the declining acreage (USDA, May 1990, p. 8).

Government program participation benefits include price support loans and deficiency payments. Price support loan rates support prices at a level required to cover production costs while the deficiency payments provide income support. The price support loan rate is set at 85 percent of the five-year average (excluding the high and low years) market price while deficiency payments are the difference between the established target price and the greater of the price support loan rate and the five-month marketing season average price. Deficiency payments are paid only when target prices are above the average price. Government commodity program participants are required to reduce planted acreage to be eligible from program benefits.

In 1991, the required acreage reduction is 15 percent. The 1991 program provisions set in the budget deficit reduction process reduce program crop acreage eligible for deficiency payments by an

additional 15 percent. Considerable flexibility as to how the additional 15 percent of the base acres are planted is allowed. This means that a participant in the wheat program may plant up to 15 percent of his base wheat acreage in cotton and still qualify for wheat program benefits on 70 percent of the wheat base acreage. The extent to which cotton plantings will increase or decrease in Oklahoma is difficult to predict. Possible adjustments in cotton plantings from producers in other states are also a concern. Part of the reason for the reduced plantings in some parts of California include greater participation in the 50/92 provisions of programs which allow producers to restrict cotton planting by up to 50 percent while receiving 92 percent of their deficiency payments. The full implications of these and other provisions of the new 1990 farm legislation are currently being analyzed.

Other legislation that could influence cotton production include environmental concerns that may lead to increased restriction on use of specific insecticides, fungicides, or herbicides. The effects of the restrictions will depend on the intensity of use, availability of environmentally acceptable substitutes, and production practices in a particular area.

TABLE 1
Principle Cotton-Producing States
1980/81 - 1990/91
(1,000 480-lbs. net weight bales)

States	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990 ^a
Alabama	275	422	460	183	447	545	330	397	380	383	522
Arizona	1,354	1,556	1,095	725	1,097	928	675	849	865	649	930
Arkansas	444	604	534	323	612	703	602	901	1,044	851	1,100
California	3,109	3,535	3,073	1,971	2,913	3,114	2,245	2,989	2,824	2,661	2,600
Georgia	86	159	235	112	281	370	185	338	370	342	350
Louisiana	460	742	870	532	1,056	742	673	977	948	868	1,200
Mississippi	1,143	1,565	1,760	900	1,650	1,655	1,190	1,745	1,825	1,555	1,800
Missouri	177	168	204	73	187	204	196	330	306	269	290
New Mexico	107	133	78	70	87	71	62	89	102	80	75
North Carolina	52	95	102	43	120	117	109	98	133	141	230
Oklahoma	205	440	238	145	183	285	210	346	303	173	260
South Carolina	77	164	155	53	170	180	87	106	140	154	170
Tennessee	200	315	339	151	337	419	396	634	584	476	645
Texas	3,320	5,645	2,700	2,380	3,680	3,910	2,535	4,635	5,215	2,870	4,200
United States	11,018	15,566	11,864	7,677	12,851	13,277	9,525	14,475	15,077	11,504	14,425

Source: USDA, ERS, *Cotton and Wool Situation and Outlook Yearbook*, August 1990, p. 29, 1990/91 projected. Illinois, Kansas, Kentucky, Florida and Virginia are also included in the U.S. total but are omitted from the table.

^aAugust 1990 Crop Production Report.

TABLE 2
U.S. Cotton Supply and Use
1980/81-1990/91

Crop Year	Area			Supply				Disappearance				Farm Price ^e Cents/lb.	
	Planted	Harvested	Yield lbs./acre	Beginning Stocks ^a	Production ^b	Imports	Total	Mill Use ^c	Exports	Total	Unaccounted ^d		Ending Stocks
	1,000 acres			1,000 480-lb. net weight bales									
1980	14,534	13,215	404	3,000	11,122	28	14,150	5,891	5,926	11,817	335	2,668	72.7
1981	14,330	13,841	543	2,668	15,646	26	18,340	5,264	6,567	11,831	123	6,632	54.3
1982	11,345	9,734	590	6,632	11,963	20	18,615	5,513	5,207	10,720	42	7,937	59.4
1983	7,926	7,348	508	7,937	7,771	12	15,720	5,921	6,786	12,707	(238)	2,775	66.4
1984	11,145	10,379	600	2,775	12,982	24	15,781	5,539	6,215	11,754	75	4,102	57.8
1985	10,685	10,229	630	4,102	13,432	33	17,567	6,413	1,960	8,373	154	9,348	56.3
1986	10,045	8,468	552	9,348	9,731	3	19,082	7,452	6,684	14,136	80	5,026	52.4
1987	10,397	10,030	706	5,026	14,760	2	19,788	7,617	6,582	14,199	182	5,771	64.3
1988	12,515	11,948	619	5,771	15,411	5	21,187	7,781	6,148	13,930	(165)	7,092	56.6
1989 ^f	10,587	9,538	614	7,092	12,196	1	19,289	8,600	7,800	16,400	11	2,900 ^g	65.6
1990 ^g	12,309	11,471	622	2,900	14,864	20	17,784	8,000	7,000	15,000	116	2,900	1

Source: USDA, ERS, Cotton and Wool Situation and Outlook Yearbook, August 1990, p. 23. 1990/91 projected.

^aCompiled from Bureau of the Census data and adjusted to an August 1 480-lb. net weight basis. Excludes preseason ginnings.

^bIncludes preseason ginnings.

^cAdjusted to August 1-July 31 marketing year.

^dDifference between ending stocks based on census data and preceding season's supply less disappearance. Numbers in parentheses are negative.

^eSeason average including allowance for unredeemed loans.

^fEstimated.

^gAverage to April 1, 1990, with no allowance for unredeemed loans.

^hForecast.

ⁱUSDA is prohibited by law from publishing cotton price forecasts.

TABLE 3
Upland Cotton: Planted Acreage by State
1980/81 - 1990/91
(1,000 acres)

States	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990 ^a
Alabama	325	377	287	219	309	330	315	335	390	328	400
Arizona	549	600	471	291	430	360	250	290	350	240	340
Arkansas	700	610	410	320	470	465	490	555	695	610	760
California	1,550	1,540	1,380	960	1,410	1,330	1,000	1,150	1,350	1,050	1,050
Georgia	170	180	163	120	175	255	225	250	350	265	340
Louisiana	570	700	605	420	650	640	580	605	735	645	780
Mississippi	1,150	1,230	1,000	687	1,045	1,050	1,020	1,020	1,230	1,050	1,200
Missouri	245	242	154	108	164	152	178	200	245	214	240
New Mexico	151	136	79	56	77	70	63	66	77	61	55
North Carolina	66	83	71	60	97	88	82	96	126	112	201
Oklahoma	715	650	480	320	425	370	400	400	460	370	380
South Carolina	122	119	97	69	104	124	118	120	145	120	160
Tennessee	290	325	260	220	340	340	340	440	535	465	530
Texas	7,850	7,460	5,800	4,000	5,350	5,000	4,850	4,700	5,600	4,650	5,600
U.S.	14,460	14,272	11,275	7,863	11,065	10,601	9,933	10,259	12,325	10,210	12,073

Source: USDA, ERS, *Cotton and Wool Situation and Outlook Yearbook*, August 1990, p. 26. 1990/91 projected. Illinois, Kansas, Kentucky, Florida and Virginia are also included in the U.S. total but are omitted from the table.

^aAugust 1990 Crop Production Report.

Cotton Producers

Based on the 1987 U.S. Census of Agriculture, there are 1,131 cotton farms in Oklahoma representing 4.1 percent of the 27,673 cotton farms in the U.S. Oklahoma cotton farms average 743 acres while U.S. cotton farms had an average of 831 acres. Compared to the U.S., Oklahoma is relatively under represented in the greater-than-2,000 acre category and over represented in the 140-179 acre category (Meyer and Sanford).

Farming is the principle occupation of 76.5 percent of Oklahoma cotton farmers while 81 percent of U.S. cotton farmers reported farming as their primary occupation. For Oklahoma, 29.0 percent reported full ownership, 48.3 percent reported part ownership, and 22.7 percent reported that they were tenants (Meyer and Sanford).

The average age of Oklahoma cotton farmers was 51.9 years while for the U.S. the average was 49.7 years. The over 64 group represented 23.3 percent of Oklahoma cotton farmers and 16.8 percent of U.S. cotton farmers. Over 45 percent of Oklahoma cotton farmers are over 55 (Meyer and Sanford).

Cotton Production Practices, Costs and Returns

U.S. plantings begin in February in the Rio Grande Valley of Texas, spread through Southeastern states and westward to California and Arizona. Oklahoma is among the latest producing areas with seedbed preparation and planting occurring during May and early June. The Oklahoma harvest is usually completed in November, December and January.

Production and harvesting practices, yields and costs vary significantly within Oklahoma depending on whether the production is irrigated or dryland. In 1988, Oklahoman's harvested 435,000 acres of dryland cotton and 104,000 acres of irrigated cotton. Only 1,000 acres of irrigated and 25,000 acres of dryland were planted but not harvested. Yields per acre in 1988 were 660 and 334 pounds per acre for irrigated and dryland cotton, respectively. In 1989, Oklahoman's harvested 340,000 acres of dryland cotton with an estimated average yield of 244 pounds per acre and 80,000 acres of irrigated cotton with an estimated average yield of 426 pounds per acre (Oklahoma Department of

Agriculture, Oklahoma Agricultural Statistics 1988, 1989). In 1989, an estimated 5,000 acres of irrigated and 30,000 acres of dryland cotton were planted but not harvested due to adverse weather conditions. Production costs per acre are also substantially higher for irrigated cotton.

State-level production cost estimates for 1986, 1987 and 1988 were published by the USDA for 10 cotton-producing states including Oklahoma (Mathews et al.). The cost estimates for Oklahoma are a composite of both irrigated and nonirrigated production. For the three years shown, Oklahoma production costs per pound of lint were estimated to be one to three cents above costs per pound for the Delta region and one to four cents per pound below estimated U.S. costs.

While Oklahoma costs per pound are comparable to the U.S. average, total cash expenses and production costs per acre in Oklahoma are lower than the average for other states in the U.S. For 1988, total cash expenses in Oklahoma were estimated to be \$151.75 per acre while for the U.S. total cash expenses were estimated to be \$317.40 per acre. However, average yields in Oklahoma are also lower than the U.S. average. For 1988, people returning cost of production questionnaires reported yield in Oklahoma to be 303 pounds per acre compared to 595 pounds per acre for the U.S. (Table 4). Cotton production costs per pound of cotton lint produced are highly variable depending upon yield per acre. Yield will depend on weather conditions, availability of irrigation, production practices and harvesting methods. Oklahoma, Texas and eastern New Mexico are the only areas harvesting considerable acreages of cotton with mechanical cotton strippers. Strippers remove all cotton bolls in one pass through the fields. In most states, nearly 100 percent of the crop is machine picked. Pickers will pass through fields more than once (usually twice) depending on maturity of the cotton and yield. The percentage of the Oklahoma and Texas crop that is machine picked has been increasing (USDA, August 1990, p. 35). Because of the large amount of stems, leaves, burs and other trash in cotton harvested by strippers, the amount of product delivered from the fields required to produce one bale of lint is greater than with pickers. Approximately 2,200 pounds of stripped cotton yield one 480-pound bale of lint, 875 pounds of seed, 25 pounds of moisture, and 820 pounds of trash. Approximately 1,500 pounds of machine picked cotton will produce one 480-pound bale of lint, 875 pounds of seed, 25 pounds of moisture and 120 pounds of trash (USDA, October 1983).

Government Programs

The returns reported in Table 4 exclude direct costs and returns associated with government commodity programs. In 1987, the Census reported average government payments exceeding \$29,000 per U.S. cotton farm. Oklahoma government payments were just under \$20,000 per cotton farm. Dividing by the average number of cotton acres, return from government programs in 1987 would be between \$25 and \$30 per acre. Government payments were estimated to be 19 percent of total sales in the 1987 Census but would be a much larger percentage of the returns above cash costs. Government payments have been an important component of returns for cotton producers for some time. From 1975 to 1987, Stults reported that "the farm value of cotton has not provided enough income to pay all production costs. Government payments have added enough income so that producers have generally paid all costs and experienced significant profits (Stults)."

The total impact of government payments is difficult to estimate because the data reported in Table 4 include a return to land. The return to land is higher than it would be if government programs were not available for cotton.

Products from Cotton and Cotton Ginning in Oklahoma

The two principle products of cotton are cotton lint and cottonseed. Cotton gins separate cotton lint and cottonseed from the product delivered from the fields and from each other. Lint is primarily used for fabric in clothing, home and industrial uses. Cottonseed is processed into oil, meal, linters and hulls. The oil is used primarily for human consumption while the meal serves as a protein source in ruminant animal feeds. Linters are sources of cellulose for chemical and nonchemical uses while hulls are a good carbohydrate source in animal feeds.

The number of active cotton gins in the U.S. has declined from 1,996 in 1982-83 to 1,645 in 1988-89 (Table 5). Oklahoma has experienced a similar decline from 79 in 1982-83 to 64 in 1988-89. As of February 1990, the Oklahoma Corporation Commission reported 62 gins in Oklahoma. Those gins are concentrated in the production region in southwestern Oklahoma.

Efficiency of the Oklahoma cotton ginning industry affects prices received by producers and the relative competitiveness of the cotton industry in

the future. The importance of the cotton ginning industry has long been recognized in Oklahoma. Cotton ginning in Oklahoma is regulated as a public utility by the Oklahoma Corporation Commission. The legal authority for the regulation of

cotton ginning as a public utility is based on Section 35 of Article 9 of the Oklahoma Constitution. This constitutional provision empowers the legislature to designate businesses deemed semipublic in nature to be regulated as public utilities under

TABLE 4
U.S. and Oklahoma: Cotton Production Costs and Returns per Planted Acre
1986-88^{ab}

Item	U.S. (millions)			Oklahoma (millions)		
	1986	1987	1988	1986	1987	1988
Gross value of production:						
Primary crop	\$225.95	\$442.64	\$323.32	\$134.57	\$244.36	\$139.80
Secondary crop	29.73	46.61	57.99	14.02	29.52	27.47
Total	255.68	489.25	381.31	148.59	273.88	167.27
Cash Expenses:						
Seed, fertilizer, lime and gypsum, chemicals, custom operations, fuel, lubrication, and electricity, repairs, hired labor, purchased irrigation water, ginning, technical services						
Total variable cash expenses	217.84	250.74	249.36	95.66	117.56	108.30
General farm overhead, taxes and insurance, interest on operating loans, interest on real estate,						
Total, fixed cash expenses	77.96	69.57	68.04	51.38	44.73	43.45
Total, cash expenses	295.80	320.31	317.40	147.04	162.29	151.75
Net returns less cash expenses ^c	-40.12	168.94	63.91	1.55	111.59	15.52
Capital replacement	50.35	51.65	54.59	24.46	28.69	30.20
Net returns less cash expenses and capital replacement	-90.47	117.29	9.32	-22.91	82.90	-14.68
Economic (full ownership) costs:						
Variable cash expenses	217.84	250.74	249.36	95.66	117.56	108.30
General farm overhead	21.29	21.59	22.97	13.26	12.95	13.73
Taxes and insurance	12.66	13.76	13.99	6.82	7.92	8.03
Capital replacement	50.35	51.65	54.59	24.46	28.69	30.20
Allocated returns to owned inputs:						
Return to operating capital ^d	5.09	5.98	6.94	2.32	2.75	3.10
Return to other nonland capital ^e	8.76	9.99	12.03	4.04	5.18	6.20
Net land return ^f	51.44	83.48	72.51	37.11	63.36	41.11
Unpaid labor	20.65	21.36	21.67	17.10	17.68	17.71
Total economic costs	388.08	458.55	454.06	200.77	256.09	228.38
Residual returns to management and risk ^g	-132.40	30.70	-72.75	-52.18	17.79	-61.11
Harvest-month price (dollars per pound)	.49	.65	.54	.53	.62	.46
Yield (Pounds per planted acre)	462.97	683.29	594.94	252.00	395.40	302.60

^aExcludes direct effects of Government programs on costs and returns.

^bSum of operator and landlord costs and returns.

^cGross value of production less total cash expenses.

^dVariable expenses multiplied by time between use and harvest and by 6-month U.S. Treasury bill rate.

^eValue of machinery and equipment multiplied by longrun real rate of return to production assets in the farm sector.

^fRental value based on composite share and cash rent.

^gGross value of production less total economic costs.

TABLE 5
Number of Active Cotton Gins by State
1982/83 - 1988/89

States	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89
Alabama	96	87	91	84	82	82	82
Arizona	112	98	100	91	85	84	89
Arkansas	155	138	143	132	129	128	129
California	192	166	169	163	146	144	146
Georgia	59	56	53	61	57	60	64
Louisiana	95	92	93	89	86	84	82
Mississippi	263	247	247	237	223	217	210
Missouri	59	48	54	50	50	50	49
New Mexico	37	33	33	31	30	28	28
North Carolina	37	34	37	36	36	36	37
Oklahoma	79	78	76	71	69	69	64
South Carolina	57	51	53	49	48	47	43
Tennessee	83	78	79	74	73	70	76
Texas	672	643	629	601	545	551	543
U.S.	1,996	1,849	1,857	1,772	1,662	1,653	1,645

Source: U.S. Department of Commerce, Bureau of the Census, Agriculture Division, as published by USDA, ERS, *Cotton and Wool Situation and Outlook Yearbook*, August 1990, p. 35.

supervision of the Corporation Commission. The law placing cotton gins under regulation of the Corporation Commission was passed in 1915.

In most states, public utility regulation is restricted to situations which are called natural monopolies. Natural monopolies enjoy very substantial economies of scale, utilize a scarce natural resource (i.e., the radio frequency spectrum) or have very high capital expenditures as a percentage of sales (Scherer, p. 520). The probable inappropriate designation of cotton gins as a utility was recognized as early as 1935 by Ballenger. Ballenger (pp. 4-5) suggested that gins do not have the characteristics of a public utility and compared cotton gins to local country elevators or retail stores.

The current "General Rules and Regulations of Cotton Gin Utility" became effective October 29, 1980 (Corporation Commission of the State of Oklahoma). The 1980 rules were revisions of rules originally adopted in 1940. The 32 rules cover topics such as new gin establishment, changes in ownership or location, establishment of convenience and necessity of a gin at a particular location, maintenance and operation, production practices, insurance, annual reports, additions and replacements, and record keeping and accounting practices.

To establish a new gin, a company must be licensed. The license application procedure requires that the applicant show the convenience

and necessity for a gin at the proposed location. In addition, the applicant is required to supply the names and addresses of all gins within a 30-mile radius of the proposed location. Other ginning companies which would compete with a new gin, can potentially block establishment of a new gin by arguing to the Corporation Commission that they already have excess capacity and that the convenience and necessity requirements are not met. Competing gins within a 30-mile radius are required to be notified by a new applicant of their specific intentions including a list of cotton producers that will be served if the new gin were licensed (Corporation Commission of the State of Oklahoma, Rule 6, General Rules and Regulations of Cotton Gin Utility, 1980). An individual farmer wishing to build a new gin for his own production does not fall under those regulation.

Similarly, a gin seeking dormant status or seeking to sell, lease, dismantle or move a gin must seek authority from the Corporation Commission and show that convenience and necessity no longer require the gin at its present location. The number of gins is declining, and the industry is generally considered to have excess capacity. The Commission rules have successfully prevented licensing of at least one new gin that has already been constructed (Daily Oklahoman, June 14, 1990).

The practice of regulating ginning as a public utility has been controversial for over 50 years as

reflected by research published at the Oklahoma Agricultural Experiment Station (Ballenger and Boxman, 1936, and Ballenger, 1936). Ballenger concluded that "The regulation of cotton gins as public utilities in Oklahoma appears to have resulted in higher rather than lower ginning rates to the cotton farmers of the state than they would have obtained under competitive conditions. Farmers may have received a higher quality of ginning..." (Ballenger, p. 16).

Cotton ginning charges were last adjusted by Oklahoma Corporation Commission Order number 1575321 which was made effective September 28, 1981. Ginning costs in Oklahoma are generally above the national average but below those reported for Texas, California, and New Mexico (Table 6). Data concerning the relative quality of service provided by gins in various states are not available. Had cotton gins in Oklahoma been regulated such that ginning costs were at the U.S. average in 1988/89, revenues to producers in Oklahoma would have been \$800,000 greater. Because of the predominance of stripping as a harvesting method, Oklahoma and Texas gins that are processing stripped cotton are required to handle approximately seven times as much trash per bale of cotton than are gins that process machine-picked cotton. It should be expected that Oklahoma gins would have additional costs of separating the trash from the seed and lint when

compared to gins processing machine-picked cotton.

Cotton harvesting techniques can also affect the length of the ginning season and the distance that cotton can be efficiently hauled to a gin. Traditional harvesting and delivery (both for machine-stripped and -picked cotton) to gins occurs in trailers that are unloaded as the cotton is ginned. The speed of harvest for a particular producer traditionally depended on the number of trailers available and how fast those trailers could be unloaded at the gin and returned to the fields. Typical cotton trailers are not well equipped for long distance hauling and need to be returned to fields to allow harvest to continue. Alternative rick compactor and module hauling systems are being adopted more and more each year. These systems allow on-farm storage such that the ginning season can be lengthened by ginning cotton long after harvest. Module storage systems allow cotton to be hauled by truck at highway speeds to gins. Using the rick compactor or module methods, speed of harvest is not restricted by ginning capacity or trailer availability, and gins can continue to gin stored seedcotton when weather does not permit harvest. While these systems require additional capital investment, the benefits of more continuous harvesting and ginning and of broader geographic territory per gin has greatly increased the use of the newer harvesting and hauling systems. Because of the greater investment cost, module systems are

TABLE 6
Cotton Ginning Charges by State
1982/83 - 1988/89
(dollars per bale)

States	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89
Alabama	\$33.70	\$36.46	\$36.27	\$37.76	\$37.04	\$36.85	\$36.84
Arizona	42.87	43.17	40.16	40.70	40.33	40.31	41.04
Arkansas	37.61	41.12	40.82	38.94	37.19	38.72	39.31
California	48.59	50.15	49.84	48.91	48.62	48.44	47.31
Georgia	44.50	43.34	42.93	42.89	42.41	42.53	43.06
Louisiana	35.32	35.24	38.43	38.46	37.20	37.41	36.98
Mississippi	36.00	38.54	37.62	36.59	37.16	37.64	38.40
Missouri	39.99	41.90	39.49	37.39	39.76	41.25	42.17
New Mexico	47.02	49.72	51.85	54.26	52.80	55.31	53.43
North Carolina	44.50	45.40	46.18	45.42	45.83	45.72	46.80
Oklahoma	47.35	46.35	50.15	48.57	50.35	50.60	47.74
South Carolina	42.75	41.11	41.52	42.97	42.81	43.04	44.07
Tennessee	33.86	39.50	39.71	38.78	34.69	34.80	35.02
Texas	49.01	50.20	52.48	50.18	52.92	53.81	51.45
U.S.	43.46	45.87	45.64	44.86	44.91	45.82	45.14

Source: U.S. Department of Agriculture, Economic Research Service, Cotton Ginning Charges, Harvesting Practices, and Selected Marketing Costs, 1988/89 Season as published by USDA, ERS, *Cotton and Wool Situation and Outlook Yearbook*, August 1990, p. 35.

more likely to be adopted by producers with greater volumes.

FUTURE PROSPECTS

Given the competitiveness of production costs in Oklahoma relative to the national average, it is likely that cotton will remain an important crop in Oklahoma as long as another higher valued alternative crop does not materialize. Given the age distribution of cotton farmers, it is likely that many of them will retire in the next ten years. Changes in the average size of cotton farms will depend on whether existing farmers acquire the land currently farmed by older farmers or whether new farmers do so. The viability of the cotton industry will depend in part on cost competitive gins. The regulation of gins as a public utility by the Oklahoma Corporation Commission has not resulted in lower than average ginning charges. Gins do not meet criteria normally used to define a public utility. The impacts of removing some of the regulatory barriers to entry and exit of cotton gins from the industry should be evaluated.

Changes in harvesting methods could also have an impact on the cotton ginning industry in Oklahoma. If rick compactor and module seedcotton storage methods are more completely adopted in Oklahoma, farm-to-gin hauling distances and effective length of the ginning season could be lengthened. These changes would suggest that the number of cotton gins in Oklahoma could continue to decline without harmful effects to the industry as a whole.

U.S. government commodity program payments are an important component of farm income for cotton farmers. In many years, the existence of government commodity program payments has represented the difference between positive and negative returns. Changes made in government programs in the 1990 commodity program and in future farm legislation could significantly affect the location of cotton production in the United States.

REFERENCES

- Ballenger, R. A. "Results of the Regulation of Cotton Gins as Public Utilities in Oklahoma." Dept. of Agr. Econ., Oklahoma Agricultural Experiment Station Bulletin No. 230. Oklahoma Agricultural and Mechanical College, Stillwater. May 1936.
- Ballenger, R. A. and R. C. Soxman. "Some Economic Problems of Cotton Gins in Oklahoma" Oklahoma Agricultural Experiment Station Bulletin No. 231. Oklahoma Agricultural and Mechanical College, Stillwater. October 1936.
- Corporation Commission of the State of Oklahoma. "General Rules and Regulations of Cotton Gin Utility." Oklahoma City, effective October 29, 1980.
- Mathews, Jr., K. H., R. Dismukes, R. A. Pelly, and M. B. Ali. "Cotton State-Level Costs of Production, 1986-88." USDA, ERS, AGES 9061. September 1990.
- Meyer, L. A. "1987 Census of Agriculture Highlights of Economic Characteristics of U.S. Cotton Farming Operations." Published in *Cotton and Wool Situation and Outlook Report*, USDA, ERS, May 1990, pp. 21-29.
- Meyer, L. A. and S. Sanford. "A Portrait of U.S. Cotton Farm Operators and their Farms: The 1987 Census of Agriculture." USDA, ERS, *Cotton and Wool Situation and Outlook Report*, November, 1989, pp. 19-29.
- National Cottonseed Products Association, Inc. "Cottonseed and Its Products." Ninth edition. Memphis, Tenn. 1989.
- Oklahoma Department of Agriculture. *Oklahoma Agricultural Statistics*, Oklahoma City, various years.
- Scherer, F. M. *Industrial Market Structure and Economic Performance*. Rand McNally and Co., Chicago, 1970.
- Stults, Harold. "Costs of U.S. Cotton Production." Published in *Cotton and Wool Situation and Outlook Report*, USDA, ERS, February 1990, pp. 29-35.
- USDA, ERS. *Cotton and Wool Situation and Outlook Report*, February 1990.
- USDA, ERS. *Cotton and Wool Situation and Outlook Report*, May 1990.
- USDA, ERS. *Cotton and Wool Situation and Outlook Yearbook*, August 1990.
- USDA, Extension Service. *Ginning Cotton to Preserve Quality*, Program Aid 1323, October 1983.
- Vandewater, B. "Anthony Dissents from Vote Denying Cotton Gin Permit." *Daily Oklahoman*, p. 17, June

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