1986

Nebraska Policy Choices: 1986

Jeff Luke
University of Nebraska at Omaha

Vincent J. Webb
University of Nebraska at Omaha

NEBRASKA POLICY CHOICES

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Jeffrey S. Luke and Vincent J. Webb, *Editors*

Charles L. Bare
Ann Coyne
Jerome A. Deichert
A.L. (Roy) Frederick
Herb Grandbois
Bruce J. Horacek
Bruce B. Johnson
Bruce A. Kirchhoff
Jeffrey S. Luke
Keith J. Mueller
Donald E. Pursell
James A. Thorson
Vincent J. Webb

Center for Applied Urban Research
College of Public Affairs and Community Service
University of Nebraska at Omaha

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Foreword

On behalf of the College of Public Affairs and Community Service at the University of Nebraska at Omaha, I am pleased to introduce the first volume of *Nebraska Policy Choices*. The college occupies an important position within the University of Nebraska for stimulating analysis of current and emerging public affairs issues in Nebraska. Through this publication, we hope to help identify major public affairs issues and to provide explanations of the options available to citizens for dealing with public policy in Nebraska.

Nebraska Policy Choices is a product of our Center for Applied Urban Research, the major outreach component of the College of Public Affairs and Community Service. While faculty and staff at the center have taken the leadership, scholars from various campuses have been invited to contribute. This edition, for example, contains the work of several University of Nebraska-Lincoln faculty.

The Center for Applied Urban Research is dedicated to providing applied research and public service to address the needs of Nebraska residents. I extend my sincere thanks to the faculty and staff of the center for their work on *Nebraska Policy Choices*, one example of the center fulfilling its mission.

David Hinton, Dean
College of Public Affairs
and Community Service

Acknowledgments

This inaugural volume was completed with the help of many individuals throughout Nebraska. Special thanks to the volume's ad hoc advisory committee members who provided guidance and recommendations throughout the development of the volume: Margaret Lehning, Dan Costello, and Vicki Krecek.

We are grateful to the technical reviewers who provided comments and suggestions on the chapters: Clark Archer, Mary Boschult, Jeffery Chapman, Steve Fredricks, Dick Gady, Charles Krider, Don Leuenberger, Stuart Miller, Helen Muller, Bernice Neugarten, Dail Neugarten, B. J. Reed, Jim Roberts, Joe Singer, Larry Swanson, Gary Targoff, Keith Turner, Curtis Ventriss, and David Williams. The efforts of Gloria Ruggiero, who edited the volume, are sincerely appreciated.

Special recognition goes to Dr. John Kirlin at the University of Southern California, School of Public Administration, who in 1983 gave birth to the idea of a volume on state policy choices. He is co-editor of *California Policy Choices* which is now in its fourth year of publication.

Finally, Chancellor Del Weber and Vice Chancellor Otto Bauer provided special encouragement for this project. We are grateful for their leadership and support.

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Overview

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Jeffrey S. Luke and Vincent J. Webb

The purpose of the *Nebraska Policy Choices* series is to improve the basis for making state policy choices. This series tries to enhance Nebraskans' awareness of their many alternatives for steering Nebraska into the future. Each annual volume in the series will provide a forum for considering the major issues facing the state and for identifying the various policy options or choices available to Nebraskans. The goals are to broaden public understanding and to promote informed and responsible choices among alternative policies.

Specifically, *Nebraska Policy Choices* seeks:

- To identify current and emerging policy issues facing Nebraska,
- To increase our understanding of long-term trends and to relate these to current policy choices,
- To provide comprehensive analyses of policy choices around these issues and to identify the various policy options available to state and local policymakers,
- To raise emerging policy issues for public discussion before they reach a critical state,
- To complement current state policy research by identifying innovative policies and policy strategies and by analyzing their applicability to Nebraska, and
- To stimulate and encourage further policy research on these and other issues facing Nebraska.

Nebraska Policy Choices attempts to complement the more specific budget and legislative analyses conducted by policy groups, legislative analysts, and state government managers. *Nebraska Policy Choices* takes a long-term and broad view of the issues facing Nebraska now and those that are likely to emerge in the foreseeable future. An annual volume of this type can address new and emerging issues in a timely manner. We hope that by publishing the volume in the fall, legislators, government officials, business leaders, and citizens will have the opportunity to take advantage of the issues analyzed prior to the beginning of the legislative session.

The University of Nebraska occupies a strategic position for stimulating innovative policy research and professional scholarly analysis to assess important public issues. The *Nebraska Policy Choices* series utilizes the expertise of scholars from the state's universities, colleges, and research institutions. The authors present objective information to address issues and trends, and they attempt to improve the basis of policymaking rather than advocate specific policy choices.

Public Policies, Processes, and Choices

Public policies are those made by governmental officials. Policies are, generally speaking, whatever governments choose to do or not to do, and are distinct from public programs.[1] Public policies are strategies or courses of action taken by government officials to reach a goal or to deal with a problem or matter of concern.[2] Public programs, on the other hand, are sets of authorized governmental activities aimed at achieving specific policy objectives.

Public policies produce a variety of programs and services for the citizens of Nebraska. Policy choices affect which services will be expanded and which services will be reduced. Policy choices influence the growth of businesses, the education of our children, the quality of our environment, and the availability of jobs. Public policy choices fundamentally shape the future.

The entire governmental system of Nebraska is an instrument of collective choice, and public policies are the result of these choices. How are policy choices made in Nebraska? Policy is made in a variety of ways, for example, legislative bills, executive actions, and court decisions; there is no one process by which policy is made.

Choicemaking occurs in policy formulation and involves the following related parts:[3]

- Agreement that a problem exists and selection of a desired objective,
- Understanding of the forces that are causing the current problem,
- Devising policy options for resolving the problem, and
- Selecting the best options or strategies available.

Nebraska's Economic Structure

Charles Bare, Jerome Deichert, and Donald Pursell provide an overview of Nebraska's economic structure. They suggest that Nebraska's economy is in transition, that it is becoming more of a service economy and less of a goods producing economy. Much of the transition in Nebraska is linked to national and international economic changes. Although Nebraska's economic transition is difficult for some individuals, for example, farm operators, they point out that change is necessary for economic progress.

They forecast that Nebraska's economy will grow at five-sixths to nine-tenths the rate of the national economy during the next decade. Although Nebraska can expect growth in employment and personal income, they see this growth as being the result of national economic growth. They contend that this growth will be distributed unevenly, with the telecommunications and service sectors experiencing faster growth than the manufacturing and transportation sectors. These authors maintain that agriculture will continue to decline as an important component of Nebraska's and the nation's economies.

They offer several prescriptions for enhancing the state's economy. These include a reconsideration of the family farm amendment (Initiative 300), increasing investment in higher education, maintaining and improving infrastructure, and reallocating some of the state's agricultural research funds to developing the telecommunications industry and innovation centers. The need for an economic development policy that recognizes the importance of services is also suggested. Three industries, telecommunications and information, high-technology manufacturing, and insurance, should be targets of Nebraska's economic development strategy.

The Changing Structure of Agriculture in Nebraska

Bruce Johnson examines some of the structural changes that are taking place in Nebraska's agriculture. He views structural change in agriculture as an evolutionary process, but notes that the rate of change has accelerated greatly during the past 10 years.

Johnson analyzes many characteristics of Nebraska's agriculture. First, he points out that while Nebraska's economy has become more diversified, agriculture will remain a dominant influence on the state's

Policymaking is a complex and constant interplay between choices and consequences. The purpose of this volume is not to develop a grand theory of how policy choices are made, but rather it is to analyze the policy choices available for specific issues facing Nebraska.

Nebraska Policy Choices: 1986

Seven policy issues are analyzed by some of the state's leading experts in this first volume of *Nebraska Policy Choices.* These issues fall into three broad categories: the economy, delivery of human services, and state government finance. Three chapters treat economic issues: Nebraska's Economic Structure, The Changing Structure of Agriculture in Nebraska, and Small Business and Economic Development for Nebraska. Three chapters analyze issues related to the delivery of human services: Child Poverty and Child Welfare in Nebraska, Aging and Long-term Care in Nebraska, and Indigent Health Care in Nebraska. The volume's final chapter is Financing State Government in Nebraska.

Some common themes emerge from these chapters. One theme is change. All of the issues analyzed in these chapters are rooted in fundamental changes. Policymakers must recognize that Nebraska's economic and social structures are experiencing fundamental changes, not temporary disruptions. The need to be proactive, not reactive, in resolving these issues is another implicit theme. Solvability is another theme that emerges. These issues and their attendant solutions are not beyond the control of Nebraska policymakers. Nebraska policymakers can influence an issue, even if it is dependent on federal and international policies as in the case of agriculture. Still another theme is the need to explore new solutions for resolving policy issues. Policy options reflecting new solutions to the issues analyzed are offered throughout this volume.

The Economy

Three chapters analyze Nebraska's economic issues. Nebraska's economic structure, changes in the agricultural economy, and the role of small businesses in economic development are examined. Strain on and transition in Nebraska's economy are major themes in these chapters.

economy. Therefore, fundamental changes in agriculture have tremendous consequences for the state. Because of the composition and volume of agricultural production, Nebraska is heavily dependent upon federal farm programs. Changes in these programs will have tremendous implications for the state.

Johnson identifies overproduction and declining exports as major problems with agriculture during the past few years. He also identifies several major structural trends, such as consolidation and enlargement of farms, size and concentration of farms, specialization in agriculture, ownership and control of resources, and variability in income.

Johnson then assesses the policy implications of these trends. He believes that production will have to be reduced, either through market adjustments or public policies, and that land and capital will need to be taken out of production. He also states that the number of farms will continue to decline and that programs to retrain and provide alternative sources of employment for displaced farmers should be developed. He recommends the diversification of rural economic activities as an objective of economic and community development policies and development of new approaches to providing capital to commercial agricultural producers.

Johnson also notes that changes in agriculture could result in the significant depopulation of rural Nebraska over the next several years. He concludes that policymakers will no longer be able to separate agricultural issues from those concerning the distribution of the population, the well-being of communities, and the quality of life in Nebraska.

Small Business and Economic Development for Nebraska

Bruce Kirchhoff argues that the state's economic development policies should focus on developing and promoting the growth of small businesses. He expresses skepticism about economic development policies which emphasize the relocation of major industries to Nebraska. Kirchhoff notes that growth in the number of nonagricultural businesses in Nebraska has lagged that of the nation. Kirchhoff believes that the state's economic development policies should encourage entrepreneurs to form and expand businesses in Nebraska.

Kirchhoff begins his analysis by examining several studies related to the role of small businesses in economic growth. He concludes that small innovative businesses are the major source of new jobs and economic growth and that economic development policies premised on an entrepreneurial economic model are justified. The major tasks in the state's economic development effort should be to develop policies that encourage entrepreneurial activity in Nebraska and to identify the small businesses that should be targeted and supported for development because they have real potential for economic growth.

Kirchhoff offers a classification scheme based on the dimensions of innovation and growth that he feels can be used to identify small businesses with economic growth potential. Based on this scheme, he suggests that economic development should concentrate on the constrained growth and economic core sectors of small business. Constrained growth firms are those that should be high-growth firms but are constrained from entry into selected markets. Economic core firms are characterized by low growth and low innovation rates. According to Kirchhoff, economic development policies should focus on increasing the rate of business formation and increasing the rate of growth of constrained growth and economic core businesses.

Kirchhoff identifies four types of resources that are required for the formation and growth of small businesses: managerial knowledge and ability, scientific knowledge and ability, debt capital, and equity capital. He then makes some policy recommendations concerning the provision of these resources. These recommendations range from maintaining and expanding business assistance and consulting programs, such as the Nebraska Business Development Center, to establishing an innovation center that would work with entrepreneurs and guide them into appropriate consulting relationships. He concludes that the continued development of Nebraska's economy will require the establishment of an economic environment that fosters small business formation and eliminates the growth constraints faced by many small businesses.

Delivery of Human Services

Three chapters in this volume focus on problems in the delivery of services to the elderly, the young, and the indigent. A common problem is meeting increased costs and demands for services with fewer resources.

Aging and Long-term Care in Nebraska

James Thorson and Bruce Horacek explore the implications of the increasing elderly population. They state that a high proportion of Nebraska's population is age 65 or older and that this group is the fastest growing segment of the population. They review the social and economic well-being, the health status and needs, and the service needs of the elderly, as well as alternative means for delivering services. They conclude that the status of the elderly, especially the 'young old,' is good generally. Most of the health care and social service needs of the elderly are being met, most have adequate retirement incomes, and most are able to maintain independence. Most elderly individuals are able to cope with the problems they face, and they are able to lead active and productive lives.

A growing segment of the older population experiences many of the chronic problems usually associated with old age. This segment is increasing because of extended life expectancy resulting from medical advances. As a result, a higher percentage of deaths occur later in life, and most deaths are the result of chronic diseases. Therefore, geriatric care is becoming common for individuals who are at the end of their lives. Thorson and Horacek point out that there comes a time when the services provided by agencies and families are insufficient for many elderly individuals, and placement in a nursing home or an extended care facility becomes necessary.

Presently, there are over 200 nursing homes in Nebraska. The demand for care in these facilities is likely to grow given the demographic trends in the state. Thorson and Horacek note that the population aged 85 years and older, which is the population most in need of extended care, grew by over 45 percent between 1970 and 1980. They report projections of a 202 percent increase in this segment of the population by the year 2000.

The tremendous growth in Nebraska's elderly population and the implications of this growth for extended health care are compounded by one additional factor—income. The group aged 85 years and older includes individuals who are likely to require public assistance to help meet their medical and long-term health care needs. Using Medicaid expenditure data, Thorson and Horacek estimate that the cost of providing this assistance in Nebraska will increase from $60.4 million to $164.5 million over the next 15 years. They point out that there is no easy solution to the problem of paying for this care.

They review several options that policymakers can consider as they attempt to finance long-term health care. These options include doing nothing and paying the increased costs, lowering the quality of care in order to pay less for care, increasing home services, allowing partial payment for health care services by Medicaid and insurance companies, promoting price competition among nursing homes, and providing assistance to families that provide care for their elderly members. They conclude that while the problem of providing long-term health care for the elderly is a serious one, it is not hopeless. They believe that the resourcefulness of Nebraska's families and of Nebraska's elderly will contribute much to the solution of the problem.

Child Poverty and Child Welfare in Nebraska

Ann Coyne and Herb Grandbois examine the implications of increased poverty among children in Nebraska. They point out that children represent the fastest growing group of poor people in the United States today and that this trend holds true for Nebraska. In 1980, over 13 percent of children under 5 years of age were poor, nearly 12 percent of those aged 5-17 were poor, while only about 10 percent of those aged 18 and older were poor.

They review several reasons for the increase in the number of poor children. Among these are an increase in the number of children living with one parent, an increase in teenage pregnancy, and a lack of child support for women. Lower wages and benefits for women than for men, the cost of child care for single-parent working mothers, unemployment and underemployment in two-parent families, and low wages are additional factors that contribute to child poverty. Coyne and Grandbois also state that federal tax revisions in 1981 resulted in tax increases for poor families, and that problems in meeting eligibility requirements for federal assistance programs and the state's agricultural crisis exacerbate the problem.

Several policy options are reviewed by Coyne and Grandbois. These range from changing eligibility requirements so that more children would qualify for Aid to Dependent Children and food programs, such as the Food Stamp and the Women, Infants, and Children's Supplementary Food Programs, to establishing state funded health insurance programs for unemployed or underemployed parents.

They also call for a departure from child welfare policies that remove children from families with problems to the development of a child welfare system that is sensitive to the negative effects of removing children from their families. Such a system would provide services to families and children at the community level.

They also point out problems with the legal status of Indian children in Nebraska. These children often find themselves without the services of tribal or state courts. They recommend the establishment of an Indian desk in the state's Department of Social Services staffed by experts on Indian culture and child welfare. Finally, they suggest that changes in the present organizational pattern of supervision of child welfare personnel and income maintenance personnel may be desirable.

Indigent Health Care in Nebraska

Keith Mueller analyzes the problem of providing adequate medical care to Nebraska's medically indigent (those who are unable to pay for medical care). He maintains that medical indigence is increasing in Nebraska and that about 15 percent of Nebraskans are probably uninsured. He provides data that indicate that over 20 percent of Nebraskans with incomes between $5,000 and $9,999 have no insurance, and 16 percent of those in the lowest income group have no insurance. He estimates that nearly 52 percent of the Nebraskans who are defined as living in poverty are ineligible for Medicaid benefits. If medical indigence is defined as 150 percent of federal poverty guideline levels, nearly 74 percent or 169,587 Nebraskans are without Medicaid benefits. The growth in medical indigence can be attributed to several factors, but the recession of 1982-83 and the farm crisis are the primary factors according to Mueller.

Several issues that policymakers need to consider as they develop indigent health care policies are discussed by Mueller. These include determining who is eligible, which services should be provided, how indigent care will be financed, and how providers will be paid. Policy options for financing hospital care and for providing services to the indigent are offered. Programs, such as establishing case management for primary care, expanding and adopting the Douglas County Primary

Health Care Network in other locations, and contracting with health insurance organizations, may offer partial solutions to the problems of meeting the health care needs of the medically indigent. According to Mueller, sound policies must guarantee a full range of medical services to the indigent. Routine services as well as episodic services should be provided in a variety of treatment settings. Care providers should be paid for their services, even if they are paid at a reduced amount.

Finally, Mueller outlines a framework for the development of indigent health care policies for Nebraska. This framework consists of six objectives that he believes must be satisfied before Nebraska will have an adequate policy for providing health care to its indigent.

State Finance

The final chapter in this volume analyzes Nebraska's state finances. An examination of alternative sources of revenues for paying for government services is the main focus of this chapter.

Financing State Government in Nebraska

Roy Frederick reviews Nebraska's government revenues and expenditures. He notes that expenditures for state government have grown rapidly since 1970. In fiscal year (FY) 1986-87, total appropriations for state government will be just under $2 billion. Of this, $839.3 million will come from the general fund which relies on taxes and other general state revenues. This compares with expenditures of about $1.2 billion in FY 1976-77, of which $440 million came from the general fund. Frederick attributes most of the increase to inflation and increased aid to individuals and local governments. Nebraska's state finances are being stressed by relief from relatively high property taxes and declining federal aid to state and local governments.

Frederick reviews state expenditures, pointing out that five state agencies (the University of Nebraska, the Department of Social Services, the Department of Roads, the Department of Education, and the Department of Public Institutions) account for most state spending. He notes that per capita expenditures in Nebraska vary considerably from one functional area to the next. Nebraska is above the national average in spending on higher education and highways and lower than the national average in spending for state aid for local elementary and secondary education and social services.

Frederick notes that revenues collected for the general fund amounted to $834.2 million in FY 1985-86, which compares with $343.8 million in FY 1975-76, or an increase of 143 percent. On a per capita basis, Nebraska collected $1,232 in state and local taxes which ranked it 29th among the states. Individual income, corporate income, and sales taxes were lower in Nebraska than the national average, while property tax collections were higher than the national average.

Frederick then evaluates Nebraska's tax system using four criteria: equity and fairness, economic neutrality, economy of administration, and stability of yield. He suggests that policymakers also consider proportionality and the relationship between tax rates and tax bases when designing tax policies. In addition to taxes, Frederick discusses several state finance issues, such as property tax relief, a state lottery, earmarking, tax mix, and economic forecasts. His discussion of financing state government includes consideration of options, such as reducing services, expanding the tax base, increasing tax rates, increasing user fees, and reallocating funds from one governmental unit to another. He concludes that the debate will continue over what services state government should provide and how they should be financed.

Future Volumes

The process of public issue discussion and agenda setting is typically an iterative one. It is our hope that the chapters in this first volume of *Nebraska Policy Choices* will help to stimulate public discussion of some of the major issues facing Nebraskans. In the coming years, new policy issues will be addressed and facets of this first year's issues will be examined in greater detail.

Endnotes

1. Thomas Dye, *Understanding Public Policy*, Englewood Cliffs, NJ: Prentice Hall, 1972.

2. Carl Friedrich, *Man and His Government*, New York: McGraw-Hill, 1963.

3. John Kirlin, *California Policy Choices, 1984*, University of Southern California, Los Angeles, 1984.

Nebraska's Economic Structure

Charles L. Bare
Jerome A. Deichert
Donald E. Pursell

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Nebraska's economy is in transition from a goods producing economy to a service producing economy. In a sense, this economic transition is a well-established megatrend more than 100 years in the making, that has intensified during the last 5 years. From the mid-1960s to 1979, the rate of growth in nonagricultural employment and income in Nebraska nearly matched that of the nation. But, since 1979, Nebraska's rate of growth in employment has lagged the nation. Nebraskans must recognize that their economy is influenced largely by external forces, for example, national farm policy and monetary policy. Nebraskans should pursue policies that recognize the transition in the economy and direct state efforts toward policies over which they have some influence. Prospective development targets include telecommunications, insurance, and high-technology manufacturing.

Introduction

The Nebraska economy is in transition. It is characterized more and more as a service economy (transportation and public utilities; trade; finance, insurance, and real estate; services; and government sectors) and less and less as a goods producing economy (agriculture, construction, and manufacturing). In many respects, this transition reflects developments in national and international economies.

Transition is nothing new to the Nebraska economy. Over the past 110 years, the economy has evolved from one in which 70 to 80 percent of the work force was engaged in agriculture to an economy in 1986 with less than 10 percent of the work force directly involved in the production of grains or livestock.

The economic history of Nebraska is replete with communities which developed to fill an economic function only to see the need for that activity evaporate and the community disappear. The community of Antioch, Nebraska, is a case in point. Students of Nebraska history will recall that Antioch developed during World War I as a source of potash. American industry was cut off from European sources of potash by the war, and Antioch developed and flourished. With the end of hostilities and the resumption of international trade, the town eventually all but vanished.

Nearly 80 percent of Nebraska's counties attained their peak populations prior to 1940.[1] The decline of rural Nebraska has been a continuous process since the late 19th century, as technological changes in agricultural production released laborers for work in urban areas. This process continues in 1986.

The development of the interstate highway system and the network of roads feeding the interstate highway system has increased agricultural productivity by making it less costly to move grain and livestock to major population centers. Prior to the construction of the interstate highway system, the real resource cost of moving grains and livestock from Dawson County to Denver or Omaha, for example, may have been twice as high.

While transition is difficult for some individuals, transition and change are important elements of progress, and they contribute to advances in living standards. The health and vitality of our economic system come from transition and the risks individuals assume in this process.

In the early 1970s, Nebraska's economy experienced rapid real economic growth. Real personal income[2] increased 25 percent in a scant 2-year period(1972-73). Economic activity peaked in certain Nebraska sectors in 1978-79; then, the rapid growth experienced during the early 1970s was replaced by slow but steady growth in employment and real income. Unfortunately, some investment decisions were made on the assumption that the unusually high rates of growth of the 1970s would continue into the 1980s.

The rate of economic growth slowed and declined in 1980. Furthermore, growth was distributed less evenly throughout the state economy during 1979-85. Construction and manufacturing were particularly hard hit. By 1985, these sectors had not equaled the peak levels of 1978-79. By contrast, the service industry experienced no slowdown in growth over the interval 1967-85. The finance, insurance, and real estate sector has experienced solid growth since 1981, and the government sector has had limited growth since 1980.

Contrasting patterns of growth paint a mixed picture of the Nebraska economy during the 1980s. Opportunities for employment in construction, manufacturing, and agriculture may be limited in Nebraska. Employment opportunities in services are healthy and vibrant. Some observers have warned that agricultural problems will become urban problems, repeating the economic setting of the 1930s. Yet, growth in employment and income in services was so large that it offset declines in construction and manufacturing. Despite the seriousness of the agricultural crisis, there is little evidence that agricultural problems are affecting nonagricultural sectors of Nebraska's economy.

In this chapter we examine the structure of Nebraska's economy through employment and personal income. The choice of these two measures of economic activity is partly a matter of necessity; no other data series better describe the Nebraska economy than employment and personal income.

A review of employment patterns is presented, followed by an examination of income trends by industry. The role of agriculture in the economy is examined next, followed by a review of Nebraska's business climate. Conclusions and observations about the evolving structure of Nebraska's economy are presented. In some cases, data are presented for the interval 1959-85. At other times, information is presented from 1965 or 1967 to 1985. Where possible, 1985 data are used, but in some cases the most recent data are from 1984.

In preparing this chapter, choices had to be made about which subjects to cover. An economy as large, diverse, and geographically dispersed as Nebraska's resists simple characterizations. Some observers will think that our analysis ignores the most important economic issues. No claim is made that our analysis is comprehensive. The authors focused on areas that appear to be critical issues for the state's future well-being. The authors recognize that some issues will be controversial and disputed by others.

Nebraska's Employment Base, 1967-85

Employment in Nebraska has followed an upward trend since 1967, rising 28.7 percent from 623,000 in 1967 to 802,000 in 1985 (table 1). Since 1967, nonagricultural employment rose 42.7 percent, while employment in agriculture declined 33.5 percent. The decline in agricultural employment is a continuation of a 100-year trend.

The composition of employment has shifted toward services and away from agriculture. Service sector employment rose to 142,400 workers in 1985, up 92.3 percent (74,100 workers) from 1967 (table 2).

Table 1 — Civilian employment, Nebraska and United States, 1967-85

Year	Nebraska total	Annual change	U.S. total	Annual change
	Thousands	Percent	Thousands	Percent
1967	623	NA	74,372	NA
1968	629	.97	75,920	2.08
1969	643	2.25	77,902	2.61
1970	641	-.40	78,678	1.00
1971	650	1.42	79,367	.88
1972	675	3.86	82,153	3.51
1973	701	3.95	85,064	3.54
1974	723	3.03	86,794	2.03
1975	713	-1.27	85,846	-1.09
1976	726	1.77	88,752	3.39
1977	751	3.43	92,017	3.68
1978	765	1.81	96,048	4.38
1979	783	2.37	98,824	2.89
1980	776	-.92	99,303	.48
1981	773	-.34	100,397	1.10
1982	766	-.92	99,526	-.87
1983	770	.53	100,834	1.31
1984	788	2.41	105,005	4.14
1985	802	1.72	107,150	2.04

NA = Not applicable.

Source: Nebraska Department of Labor and Bureau of Business Research calculations, U.S. Department of Labor, Bureau of Labor Statistics, *Monthly Labor Review,* March 1986, p. 8.

Aside from 1976, when there was virtually zero growth, service employment has realized yearly gains. The modern service sector includes well-paid computer repair specialists, accountants, attorneys, and medical and health specialists. The traditional view of services as housekeepers, young persons working at fast-food outlets, and other low-paying jobs is incomplete.

Table 2—Annual employment data, Nebraska, 1967-85

Year	Total[1]	Nonagri-culture[2]	Agriculture	Other nonagri-culture	Mining	Construction	Manufacturing-durables	Manufacturing-nondurables	Manufacturing[3]	Transportation, communication, and utilities	Trade	Finance, insurance, and real estate	Services	Government
								Thousands						
1967	623.0	508.7	114.3	64.3	1.7	23.6	38.6	41.5	80.1	36.5	110.2	26.2	74.1	92.1
1968	629.0	519.0	110.0	62.7	1.7	23.8	41.8	41.5	83.2	36.7	114.1	26.9	76.0	94.0
1969	643.1	535.4	107.8	63.3	1.8	25.2	45.3	41.4	86.7	36.8	117.3	27.9	79.1	97.4
1970	640.6	550.8	89.7	68.8	1.6	24.6	43.9	41.1	85.0	37.2	120.8	29.0	82.9	101.0
1971	649.7	558.7	91.0	70.0	1.6	23.9	41.5	41.5	83.0	37.3	122.1	29.6	86.0	105.3
1972	674.7	586.2	88.5	71.4	1.7	27.6	44.4	42.1	86.4	37.8	130.8	30.1	91.7	108.8
1973	701.4	612.2	89.2	70.9	1.6	29.2	48.4	42.1	90.5	38.6	138.9	32.3	93.4	116.9
1974	722.6	634.6	88.0	72.5	1.8	29.8	48.9	44.5	93.4	39.9	143.9	33.6	98.5	121.4
1975	713.5	630.1	83.4	72.4	1.6	28.1	42.2	43.2	85.4	38.7	144.7	34.4	100.2	124.7
1976	726.1	644.0	82.2	71.6	1.7	30.4	44.9	43.0	87.9	40.7	150.8	35.7	100.4	124.9
1977	751.0	671.2	79.8	77.5	1.8	32.3	47.6	43.1	90.6	42.0	156.1	37.7	104.1	129.2
1978	764.6	690.5	74.1	80.5	1.8	33.0	48.6	45.4	94.0	43.8	159.0	39.5	108.8	130.3
1979	782.8	710.1	72.7	78.9	1.8	32.4	52.6	46.9	99.5	47.9	164.1	41.0	114.0	130.6
1980	775.6	703.5	72.1	76.1	1.8	29.0	49.9	46.6	96.4	47.8	163.6	42.1	116.0	130.9
1981	773.0	699.6	73.4	76.5	1.9	26.1	48.2	46.8	94.9	47.4	161.8	41.2	120.1	129.7
1982	765.8	690.7	75.1	80.8	1.9	23.5	43.2	44.7	87.9	44.6	158.5	41.5	122.7	129.4
1983	769.9	694.1	75.8	83.3	1.9	23.5	42.0	42.8	84.8	43.2	157.9	41.9	127.6	130.2
1984	788.4	712.1	76.4	83.6	1.7	24.0	45.8	43.2	89.0	42.8	160.8	43.2	135.4	131.7
1985	802.0	726.0	76.0	75.7	1.8	26.5	44.0	44.9	88.9	43.7	166.6	45.2	142.4	135.2

[1]Total = Agriculture + Nonagriculture.

[2]Nonagriculture + Other Nonagriculture + Mining + Construction + Manufacturing + Transportation, Communication, and Utilities + Trade + Finance, Insurance, and Real Estate + Services + Government.

[3]Manufacturing = Manufacturing-Durables + Manufacturing-Nondurables.

Source: Nebraska Department of Labor, updated with March 1985 benchmark.

The finance, insurance, and real estate (FIRE) industry ranked second in employment gains with an increase of 72.5 percent, while wholesale and retail trade followed in third place with a 51.3 percent rise in employment. The government sector's 46.8 percent increase ranked fourth in employment expansion, followed by the transportation, communication, and utilities sector (TCU) with a 19.8 percent gain.

Nebraska has a concentration of employment in the insurance industry. The insurance industry is more important in Nebraska than in surrounding states. More than 20,000 persons are employed in this industry and earnings are above average.[3]

The government sector in Nebraska is unique in the nation because its electric utilities are publicly owned. Consequently, all electric utilities employees are classified as local government employees. In other states, electric utilities employees usually are counted in the transportation, communication, and utilities sector.

The gap in employment generation between Nebraska and the United States has widened since 1979. Table 2 shows that employment in Nebraska peaked at 783,000 in 1979. It was not until 1984 that employment surpassed the 1979 peak. Employment in Nebraska increased at 2.4 percent over the interval 1979-85; nationally, employment increased 8.5 percent.

Between 1979 and 1983, Nebraska lost 30,000 jobs in three key industries—construction, manufacturing, and TCU. While employment increased in these industries over the long term (1967-85), the failure of employment to reach new peaks was significant for the state's economy. Had these 30,000 jobs been maintained, Nebraska's increase in employment over the interval 1979-85 would have been 6.8 percent (better than the 2.4 percent recorded but still less than the 8.5 percent gain nationally). Because positions in construction, manufacturing, and TCU are among the better paid jobs, the loss of these 30,000 jobs may affect the long-term vitality of the state's economy. Also, it may be difficult for individuals in construction, manufacturing, and TCU jobs to find employment in the growing service sector because they may not have the skills required for these jobs.

Despite the long-term rising employment trend, Nebraska has lagged the nation in growth in employment. From 1967-85, employment in the United States increased 44.1 percent, while employment in Nebraska grew 28.7 percent. During the interval 1967-85, growth in employment in the state exceeded that of the nation only during 1971-74. Nebraska has experienced five annual declines in employment since 1967, compared with only two declines for the nation as a whole.

Nebraska's record of deteriorating job creation since 1979 is related to events beyond the state's influence. Nationally, employment in construction, manufacturing, and TCU declined from 30.6 million in 1979 to 29.4 million in 1985, a 4-percent drop.[4] Nebraska's loss resulted from technical changes and shifts in demand. Nebraska's loss of 30,000 jobs in these three industries represented a 12-percent decline, much larger than the 4-percent drop nationwide.

Energy prices may have contributed to the loss of jobs in construction, manufacturing, and TCU. As energy prices increased in the 1970s, coal and oil from Colorado, Montana, Wyoming, and other states west of Nebraska assumed new importance to the national economy. Nebraska participated in the energy price boom through the construction of new power plants, the extension of rail lines, the double tracking of some rail lines, and the construction of a rail car repair facility at Alliance.

The construction phase of these projects brought an unprecedented level of prosperity to central and western Nebraska, a level of prosperity that was not sustainable. Incomes generated by these projects may have contributed to the rise in land prices because individuals employed in these energy-related projects used their earnings to finance land purchases, thereby fueling land price increases.

A recent study by the Federal Reserve Bank of Kansas City showed that high-technology industries recently contributed to economic development in its district and are expected to continue to be important.[5] High technology was defined as "manufacturing industries that share the common characteristics of substantial scientific activity and technological innovation."

Nebraska's high-tech manufacturing base is below the national average in employment. The Kansas City Federal Reserve Bank reported high-tech employment in Nebraska as 3.2 percent of total nonagricultural employment, compared with 5.8 percent nationally. The bank reported that high-tech industries can be aided by reduced taxes, less red tape in government regulations, and incentives such as investment tax credits.

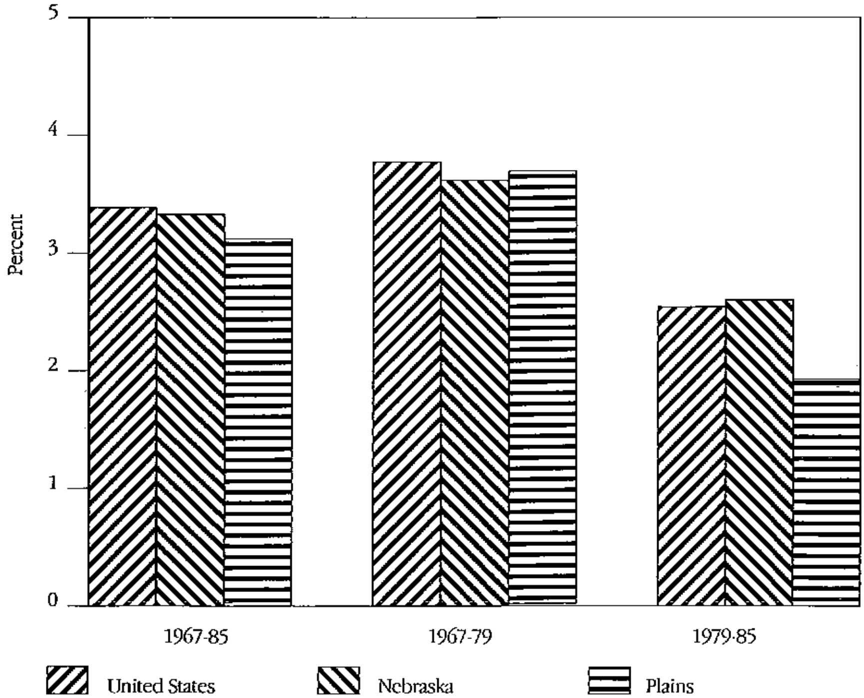
Employment gains in Nebraska, with few exceptions, are likely to continue to lag the nation over the next decade. And, the state will continue to move from a goods producing economy to a service economy.

Nebraska's Income Base

Personal income is an important measure of economic activity, providing a measure of potential retail sales and allowing comparisons with other states and areas. Personal income for the states is calculated by the U.S. Department of Commerce using the national income and accounting framework. Personal income is a net or value added concept, which means that efforts have been made to avoid double counting.

Figure 1 and table 3 illustrate that growth in personal income in Nebraska has either kept pace with or lagged growth in the United States, depending on the starting and ending dates of the comparison. Table 3

Figure 1
Total personal income
(Price-adjusted average annual changes)



also shows that if we use 1959 as the starting date, Nebraska has lagged national rates of growth, but if we use the mid-1960s as the starting point, Nebraska has kept pace with national rates of growth. If the comparison stops in 1984, Nebraska does not look as good as it does if the ending date is 1985, because large commodity payments by the federal government in 1985 boosted all Plains states' incomes.[6] It is reasonable to conclude that growth in personal income in Nebraska is 90-100 percent of growth in the United States, depending on the beginning and ending dates. During 1959-85, growth in personal income in Nebraska averaged 95 percent of that of the United States.

Table 3—Comparison of personal income, 1959-85

	Nebraska			United States			Plains states		
Year	Value	Change from prior year	Real change from prior year	Value	Change from prior year	Real change from prior year	Value	Change from prior year	Real change from prior year
	Million dollars	— — Percent — —		Million dollars	— — Percent — —		Million dollars	— — Percent — —	
1959	2,754	NA	NA	382,550	NA	NA	30,191	NA	NA
1960	2,945	6.94	5.44	398,843	4.26	2.80	31,762	5.20	3.73
1961	3,012	2.28	1.14	414,285	3.87	2.72	32,837	3.38	2.24
1962	3,282	8.96	8.07	440,023	6.21	5.34	35,102	6.90	6.02
1963	3,388	3.23	2.11	462,406	5.09	3.94	36,598	4.26	3.13
1964	3,487	2.92	1.82	495,188	7.09	5.94	38,179	4.32	3.20
1965	3,860	10.70	9.23	536,152	8.27	6.84	42,070	10.19	8.73
1966	4,169	8.00	5.76	582,630	8.67	6.41	45,373	7.85	5.61
1967	4,332	3.90	1.27	623,757	7.06	4.35	47,665	5.05	2.39
1968	4,627	6.82	2.91	683,561	9.59	5.58	51,879	8.84	4.86
1969	5,248	13.42	8.65	747,536	9.36	4.76	56,816	9.52	4.91
1970	5,578	6.28	1.76	803,922	7.54	2.97	61,087	7.52	2.95
1971	5,974	7.10	2.73	861,904	7.21	2.84	65,167	6.68	2.33
1972	6,785	13.58	9.59	944,852	9.62	5.77	72,362	11.04	7.13
1973	8,104	19.44	13.12	1,058,902	12.07	6.14	85,915	18.73	12.44
1974	8,278	2.15	-6.64	1,162,203	9.76	.31	89,960	4.71	-4.30
1975	9,310	12.46	4.42	1,258,643	8.30	.55	97,054	7.89	.17
1976	9,618	3.31	-2.22	1,385,201	10.06	4.16	103,987	7.14	1.41
1977	10,488	9.05	2.59	1,534,708	10.79	4.23	115,891	11.45	4.84
1978	11,768	12.20	4.90	1,726,185	12.48	5.15	130,196	12.34	5.03
1979	13,241	12.52	3.35	1,942,655	12.54	3.38	146,639	12.63	3.46
1980	13,968	5.49	-4.48	2,156,715	11.02	.53	158,091	7.81	-2.38
1981	16,535	18.38	8.62	2,420,098	12.21	2.96	179,672	13.65	4.28
1982	17,111	3.48	-2.11	2,575,793	6.43	.69	187,933	4.63	-1.02
1983	17,429	1.86	-2.06	2,733,579	6.13	2.04	195,077	3.77	-.22
1984	20,189	15.84	11.34	3,016,317	10.34	6.06	219,497	12.52	8.15
1985	22,013	9.04	5.71	3,206,597	6.31	3.07	233,555	6.40	3.16
1959-67	NA	5.82	4.31	NA	6.30	4.78	NA	5.87	4.36
1967-79	NA	9.76	3.64	NA	9.93	3.80	NA	9.82	3.70
1967-84	NA	9.48	3.18	NA	9.71	3.40	NA	9.40	3.10
1967-85	NA	9.45	3.32	NA	9.52	3.38	NA	9.23	3.11
1979-85	NA	8.84	2.66	NA	8.71	2.54	NA	8.07	1.93

NA = Not applicable.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *State Personal Income: 1929-82*, and unpublished data.

Recent changes in the composition of personal income may be the most significant because they affect the economy more than events of the 1950s and 1960s. From 1979-85, personal income in the Plains states grew less rapidly than personal income in the United States. Increases in personal income, both real and nominal, declined during this period in response to two recessions and a slowdown in the rate of inflation. Nebraska was affected, as were other states.

This adjustment to slower rates of growth in income was especially difficult in the Plains region. Nebraska and the other Plains states also were buffeted by a decline in grain exports and a fall in red meat consumption. Although growth in personal income in Nebraska in 1979-85 exceeded growth in the United States, sizable commodity payments by the federal government in 1985 boosted incomes in Nebraska and Plains States. This is likely to be a temporary boost to income unless Congress continues to expand the support program.

Personal income in Nebraska increased from $2.8 billion in 1959, to $4.3 billion in 1967, to $22 billion in 1985. Nominal personal income in Nebraska and the United States increased approximately 9.5 percent per year during 1967-85.

Because of Nebraska's relatively large farm sector and the volatility in farm income, nonfarm personal income allows for a more suitable comparison between Nebraska and the United States. Table 4 shows that growth in nonfarm income in Nebraska generally has lagged that of the United States, but it has been close to the rate of growth in the Plains states.

Since 1959, growth in nonfarm income has averaged 93 percent of the national rate of growth. Between 1967-85, real nonfarm income in Nebraska rose an average of 3.30 percent, compared with 3.28 percent for the Plains states and 3.46 percent for the nation. As figure 2 illustrates, most of the growth occurred between 1967-79, as Nebraska's real nonfarm income expanded 3.92 percent per year, compared with 3.85 percent for both the Plains states and the nation. Since 1979, however, Nebraska's rate of growth has fallen to 2.08 percent, below the 2.15 percent for the Plains states and substantially below the 2.68 percent for the United States.

If comparisons of personal income in Nebraska (both total and nonfarm) had been on a per capita basis, the state would have fared better than both the United States and the Plains states. This is because Nebraska's population has grown annually at less than half the national

Other shifts in the composition of income are also significant. Earnings from manufacturing in Nebraska have been less proportionate than in the United States. Both manufacturing and construction incomes declined in importance in the United States and Nebraska during 1967-85. As these two industries' earnings grew less rapidly than total personal income, income from services boomed. Personal income from manufacturing in Nebraska has declined at a slower rate than in the nation. In 1967, income from manufacturing was 29.1 percent for the nation and 16 percent in Nebraska. Personal incomes in Nebraska and the United States advanced at roughly the same rate during 1967-85. By 1985, U.S. earnings from manufacturing were 23.2 percent of the total, and, in Nebraska, earnings from manufacturing were 14.6 percent of total earnings. Manufacturing earnings in Nebraska remain well below the national average but more nearly resembled the nation in 1985 than in 1967.

Tables 5a and 5b show that earnings from transportation, communication, and utilities (TCU) are nearly as significant in Nebraska as farm income. In 1985, income from TCU was 10.2 percent in Nebraska, compared with 7.4 percent in the United States. Because of the importance of railroads in Nebraska, income from TCU has been above national averages. In 1967, TCU accounted for 8.4 percent of earnings in Nebraska and 7.1 percent of earnings in the United States. Nationally, earnings from TCU increased slightly as a percent of total, but, in Nebraska, earnings from TCU increased from 8.4 percent to 10.2 percent. Although the TCU sector includes utilities (electric power is publicly owned in Nebraska), earnings from the generation and distribution of electricity are classified as government, making Nebraska's dependence on this sector more substantial than the numbers indicate.

Earnings from the service sector have increased in Nebraska as they have in the United States. Over the interval 1967-85, earnings from services increased from 12.8 percent to 18.2 percent in Nebraska and from 14.7 percent to 20.9 percent in the United States. The shift toward service earnings has accelerated since 1981.

The important contribution of the service sector to Nebraska's economy is illustrated by annual changes in personal income over the interval 1967-85. Real personal income declined in 5 of these 18 years, but service earnings increased in each of these years. Real earnings in construction and manufacturing declined during 1979-85; in contrast, real earnings in Nebraska's service sector recorded average annual increases of over 6 percent during 1981-85. In 1985, real earnings in

Table 5a—Personal income, Nebraska, 1967-85

Year	Total	Farm	Nonfarm	Farm proprietors	Nonfarm proprietors	Agriculture services, forestry, and fisheries	Mining	Construction	Manufacturing-durables	Manufacturing-nondurables	Manufacturing	Transportation, communication, and utilities	Trade	Finance, insurance, and real estate	Services	Government
								Million dollars[1]								
1967	4,332	469	3,863	404	419	18	12	221	259	288	547	286	630	197	438	543
1968	4,627	429	4,198	374	417	16	12	241	298	305	603	310	676	214	476	610
1969	5,248	600	4,648	537	458	19	13	280	344	320	664	332	743	230	542	681
1970	5,578	547	5,031	481	445	19	14	290	352	337	689	367	793	244	580	794
1971	5,974	589	5,384	513	460	20	11	304	359	356	714	400	841	268	623	862
1972	6,785	808	5,977	721	510	22	15	349	414	384	797	449	911	297	685	923
1973	8,104	1,332	6,772	1,228	560	25	17	390	469	414	883	508	1,027	319	763	1,003
1974	8,279	793	7,486	673	583	29	31	427	510	472	982	574	1,158	342	838	1,082
1975	9,310	1,183	8,127	1,068	620	30	27	448	499	500	999	601	1,276	381	920	1,210
1976	9,618	579	9,039	440	698	29	33	535	588	557	1,145	700	1,410	444	1,039	1,307
1977	10,489	602	9,887	442	742	33	34	589	670	576	1,245	778	1,520	508	1,130	1,442
1978	11,768	893	10,875	712	848	38	29	646	742	661	1,403	918	1,669	583	1,284	1,579
1979	13,241	1,050	12,192	840	919	40	43	662	870	742	1,612	1,068	1,872	641	1,444	1,705
1980	13,968	389	13,579	161	906	40	45	641	916	828	1,744	1,160	2,007	698	1,607	1,855
1981	16,535	1,349	15,186	1,123	882	49	50	595	973	908	1,881	1,241	2,108	732	1,788	2,045
1982	17,111	789	16,321	531	918	53	60	569	922	905	1,827	1,297	2,174	797	2,011	2,214
1983	17,429	428	17,000	174	1,045	55	45	603	955	915	1,870	1,358	2,218	880	2,214	2,348
1984	20,189	1,648	18,541	1,383	1,216	60	55	696	1,115	987	2,102	1,456	2,363	959	2,452	2,501
1985	22,013	2,425	19,588	2,143	1,343	71	60	760	1,098	1,054	2,152	1,497	2,497	1,034	2,675	2,637

[1]1982 dollars.

Table 5b — Real personal income, Nebraska, 1967-85

Year	Total	Farm	Nonfarm	Farm proprietors	Nonfarm proprietors	Agriculture services, forestry, and fisheries	Mining	Construction	Manufacturing-durables	Manufacturing-nondurables	Manufacturing	Transportation, communication, and utilities	Trade	Finance, insurance, and real estate	Services	Government[1]
									Million dollars[1]							
1967	10,966	1,187	9,778	1,023	1,061	46	30	560	656	728	1,384	725	1,596	499	1,108	1,374
1968	11,285	1,047	10,238	913	1,016	39	29	587	727	744	1,471	757	1,649	521	1,162	1,488
1969	12,262	1,402	10,859	1,255	1,070	44	30	653	803	748	1,551	776	1,737	537	1,266	1,590
1970	12,478	1,223	11,254	1,077	996	43	31	648	787	754	1,541	821	1,773	546	1,298	1,777
1971	12,819	1,264	11,554	1,100	987	43	24	651	769	763	1,533	858	1,804	576	1,336	1,849
1972	14,048	1,673	12,375	1,493	1,055	46	31	723	856	794	1,650	930	1,887	614	1,419	1,911
1973	15,890	2,611	13,279	2,408	1,097	49	33	765	920	811	1,731	996	2,014	626	1,497	1,966
1974	14,836	1,421	13,415	1,205	1,044	52	56	764	914	846	1,760	1,029	2,074	613	1,501	1,939
1975	15,491	1,969	13,522	1,777	1,031	50	45	745	829	832	1,662	1,000	2,124	634	1,531	2,014
1976	15,146	911	14,235	693	1,098	46	52	842	926	877	1,803	1,102	2,220	699	1,635	2,058
1977	15,539	891	14,647	655	1,099	49	50	873	992	853	1,844	1,153	2,251	753	1,674	2,137
1978	16,435	1,247	15,189	994	1,185	53	41	903	1,036	924	1,960	1,282	2,331	814	1,793	2,206
1979	16,933	1,342	15,590	1,074	1,175	51	55	847	1,112	949	2,061	1,365	2,394	820	1,846	2,180
1980	16,129	449	15,680	186	1,046	46	52	740	1,058	956	2,014	1,339	2,318	806	1,856	2,141
1981	17,479	1,426	16,052	1,187	933	52	53	629	1,029	960	1,988	1,311	2,228	774	1,890	2,161
1982	17,111	789	16,321	531	918	53	60	569	922	905	1,827	1,297	2,174	797	2,011	2,214
1983	16,775	412	16,362	167	1,006	53	43	580	919	880	1,800	1,307	2,135	846	2,131	2,259
1984	18,659	1,523	17,136	1,278	1,124	55	51	643	1,030	912	1,942	1,346	2,184	886	2,266	2,311
1985	19,725	2,173	17,552	1,920	1,203	64	54	681	984	944	1,928	1,341	2,237	927	2,397	2,363

[1]1982 dollars.

service industries were nearly 25 percent higher than in 1981. By contrast, real earnings in durable goods and nondurable goods manufacturing in 1985 were below 1981 levels. Construction earnings were $50 million above 1981 levels, but over $200 million below the 1978 peak.

Despite the recent battering, real net farm income has held up reasonably well. Net farm personal income was $2.2 billion in 1985, well above any of the previous 10 years but less than the $2.6 billion peak recorded in 1973. Farm proprietors' real income peaked in 1973 at $2.4 billion. In 1985, it stood at $1.9 billion, $500 million below the 1973 peak, but well above any of the intervening years.

The sluggishness of Nebraska's economy during 1979-85 centered on the agriculture, construction, TCU, trade, and manufacturing sectors. The boom in construction and manufacturing earnings that occurred in the late 1970s appears to be related to the rising price of energy and a decentralization of manufacturing from metropolitan to nonmetropolitan areas. Unfortunately, these trends were very short in duration.

Nebraska is following a national trend of obtaining an increasing proportion of income from dividends, interest, and rents (DIR) and transfer payments (TP). The increasing significance in total personal income of dividends, interest, and rents and transfer payments (primarily retirement benefits, including social security) indicates an increasingly wealthy society. Part of the increase in wealth is a result of a larger proportion of the population being of retirement age, a time when asset accumulation is typically highest.

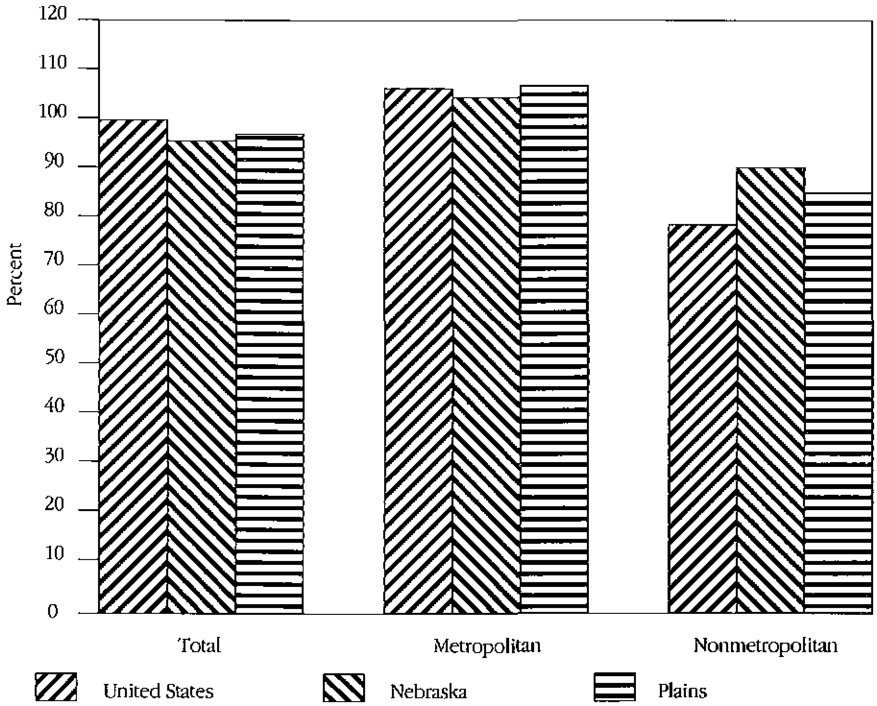
An indication of wealth can be found by looking at deposits in Nebraska's financial institutions. In 1984, the U.S. Bureau of the Census reported that Nebraska's deposits totaled $19 billion.[7] This amounted to $11,800 per person, compared with U.S. per capita deposits of $11,186. Since 1967, deposits in commercial banks and federally insured savings and loan institutions have grown 10.7 percent annually in Nebraska, but only 9.9 percent nationally. Growth of deposits for the United States approximates the growth in personal income during 1967-84, but Nebraska's deposit expansion exceeds its growth in income by more than one percentage point.

In 1985, over 21.9 percent of Nebraska's personal income came from dividends, interest, and rents, compared with 18.8 percent nationally. Since 1967, dividends, interest, and rents income has increased more rapidly in Nebraska than in the United States (11.3 percent per year compared with 10.4 percent).

Transfer payments also were more important in total income in 1985 than in 1967. In both Nebraska and the United States, transfer payments were about 8.4 percent of personal income in 1967, compared with 12.1 percent and 13.9 percent respectively in 1985 (table 5).

Within the state, per capita incomes are higher in metropolitan areas than in nonmetropolitan areas (figure 3). Per capita incomes in nonmetropolitan areas increased slightly more rapidly during the interval 1967-84. This more rapid growth is due to the sizable outmigration of residents in nonmetropolitan areas of Nebraska. Nebraska's nonmetropolitan population grew 3.4 percent during 1967-84, while the metropolitan population increased 19.3 percent. Some sectors in nonmetropolitan Nebraska (especially manufacturing and

Figure 3
Total Per Capita Personal Income
(Precentof nation, average 1967-84)



TCU) have grown more rapidly, but overall the growth in total personal income in nonmetropolitan areas lags growth in metropolitan areas.

Perspective on Agricultural Production

Nebraska is a leading crop-producing state and ranks among the top five in cash receipts. In 1985, Nebraska ranked third in corn for grain production, third in sorghum for grain production, ninth in wheat production, and eighth in soybean production. Nebraska ranks fifth nationally in rye production, seventh in hay production, and fifth in dry edible beans production.

Since 1967, Nebraska's agricultural production has shifted toward soybeans and corn and away from wheat. In 1985, Nebraska produced a record 954 million bushels of corn (11 percent of the U.S. total) and a record 85 million bushels of soybeans (4 percent of the U.S. total). Sorghum production has changed little.

Much of the increase in the production of corn and, to a lesser extent, soybeans has resulted from increased irrigation. In 1984, according to the U.S. Bureau of the Census, Nebraska farmers grew half of the nation's irrigated corn for grain and 32 percent of the nation's irrigated soybeans.

Cash farm marketings totaled $7.9 billion in 1985, with $3.3 billion (42 percent) from crops and $4.6 billion in livestock marketings.[8] The distribution of cash receipts has changed. As Professor Schultz and others have observed, farmers are keen capitalists and recognize immediately, without government prompting, the advantage of even the slightest increase in their margins of profit.[9]

Beef and corn are the major sources of cash receipts. In 1965, cattle and calves accounted for 48.8 percent of total cash receipts; in 1984, they accounted for 47.9 percent of total cash receipts. Cash receipts from corn grew from 11 percent of total in 1965 to 19 percent of total in 1984. Irrigation boosted corn yields, and more land was put into corn production. Total receipts from corn advanced from $148 million in 1965 to about $1.3 billion in 1984. Oil crops, primarily soybeans, jumped from 2.2 percent of total to 6.3 percent of total cash receipts during 1965-84. Cash receipts from vegetables garnered a smaller percent of total in 1984 than in 1965 (table 6).

Nebraska's agriculture became more specialized during the interval 1965-84. Corn and cattle accounted for nearly 60 percent of cash receipts

Table 6 — Nebraska cash receipts by commodity and commodity groups, 1965, 1975, and 1984

Commodity	1965 Value	1965 Percentage of total	1975 Value	1975 Percentage of total	1984 Value	1984 Percentage of total
	Million dollars	Percent	Million dollars	Percent	Million dollars	Percent
All commodities	1,348.7	100.0	3,859.0	100.0	7,081.7	100.0
Livestock	969.7	71.9	2,153.2	55.8	4,523.0	63.9
Meat animals	878.6	65.1	2,007.1	52.0	4,313.6	60.9
Cattle and calves	658.8	48.8	1,503.5	39.0	3,390.3	47.9
Dairy products	54.8	4.1	109.3	2.8	158.0	2.2
Poultry and eggs	31.7	2.4	29.2	.8	38.8	.5
Miscellaneous livestock	4.6	.3	7.6	.2	12.6	.2
Crops	379.0	28.1	1,705.8	44.2	2,558.7	36.1
Food grains	75.2	5.6	318.4	8.3	343.4	4.8
Wheat	73.9	5.5	316.7	8.2	341.4	4.8
Feed crops	241.1	17.9	1,099.6	28.5	1,622.9	22.9
Corn	148.5	11.0	882.1	22.9	1,344.2	19.0
Sorghum	69.7	5.2	141.6	3.7	191.2	2.7
Oil crops	29.9	2.2	162.9	4.2	443.8	6.3
Vegetables	14.0	1.0	52.4	1.4	52.7	.7
Dry beans	9.2	.7	45.8	1.2	34.0	.5
Fruits and nuts	.3	0	.4	0	1.4	0
All other crops	18.5	1.4	72.2	1.9	94.5	1.3
Sugar beets	12.1	.9	51.3	1.3	54.0	.8

Source: U.S. Department of Agriculture, Economic Research Service, *Economic Indicators of the Farm Sector: State Financial Summary, 1984.* Washington, DC, 1986 and comparable issues for 1975 and 1965.

in 1965, but by 1984, they accounted for over two-thirds of total cash receipts.

Nebraska's agricultural producers responded to higher grain prices by increasing production over the 20-year interval 1965-84. Reports, such as *Global 2000,* predicted food demand would increase sharply and real food prices would double. As Dennis Avery notes, these conclusions were based on the best available evidence the U.S. government could muster on the world food problem.[10]

Unfortunately for Nebraska producers, exports of American grain plummeted because of expanded food production throughout the world, increased competition from foreign producers, and a higher valued dollar. The demand for U.S. grains is extremely weak and may become weaker. Land prices may fall more, and a substantial amount of land in production likely will be withdrawn from production over the next 20 years. Land with the highest cost of production will be the most vulnerable to withdrawal, because it will be the least likely to earn a profit under lower prices. Irrigated corn production in Nebraska may be unable to compete with dry land production in Illinois, Iowa, and Indiana.

Agricultural exports declined from $44 billion in 1981 to $29 billion in 1985.[11] Little recovery is projected over the next 3 to 5 years. The genetic biotechnology revolution in agriculture is compounding the problem in Nebraska. Avery notes "... Biotechnology ... may ultimately add more to farm productivity than any other development."[12] This new technology has the potential for boosting productivity at rates that are higher than those of the past two centuries.

The sobering implications for Nebraska are that one-third to half of production capacity may be redundant by the year 2000, the capacity to produce corn and cattle will be higher, but the demand will have grown little. Fewer producers will be needed.

Cash farm marketings are not directly comparable to personal income, which is a net or value added concept. Cash receipts represent the sum of agricultural transactions. For instance, a rancher brings a calf to market and sells it to a feed lot operator. The feed lot fattens it and sells it to a packing plant. Cash receipts sum these transactions and do not net out value added. Cash receipts may be two, three, or more times the net value added. Furthermore, cash receipts do not measure production because grain or livestock may move from inventory to market.

The Size of the Agribusiness Sector

There are currently less than 60,000 farms and ranches in Nebraska and there likely will be fewer in 5 or 10 years.[13] Concentration is evident because 2 percent of all farms and ranches produced nearly 40 percent of all cash receipts.[14] Less than 25 percent of all farms and ranches produced over 76 percent of agricultural output, as measured by cash receipts.[15]

In the 1920s, there were over 130,000 farms and ranches in Nebraska. Through consolidation induced by increasing productivity, the number has declined to the present 60,000. The increasing use of genetics and other scientific advances will continue to increase output. As production capacity advances faster than consumption, some land will be redirected to other uses or removed from production.

It is stated frequently that Nebraska's economy is related more closely to agriculture than direct production statistics indicate. While the number of proprietors and hired laborers involved directly in agricultural production is relatively small (somewhat less than 10 percent of total employment) the number of related jobs equals or perhaps even exceeds direct employment in agricultural production. One estimate prepared by U.S. Department of Agriculture (USDA) researchers placed agricultural employment, direct and related, at 25 percent of total employment.[16]

There is no question that agricultural production of grains and livestock and the related support services are sizable in Nebraska. Nebraska's economy is associated more closely with agriculture than is the U.S. economy. The economic well-being of thousands of individuals who supply inputs to agriculture is linked directly to agricultural production. Repair personnel, fertilizer distributors, grain dealers, grain haulers, and others are employed in producing, harvesting, and marketing crops and livestock.

There is, however, a very important distinction between those who work to service agriculture and those who work directly in the production of agricultural crops and livestock. The wages and conditions of employment for agricultural service personnel are determined by the larger labor market for those services. If the price of grain goes up, the wages and salaries of the service personnel may or may not increase, depending on the labor market for these services. Likewise, if the price of grain or livestock declines, service personnel do not have their wages cut automatically.

Service personnel are interchangeable or substitutable in other parts of the economy. For example, a truck driver employed in grain hauling can transfer to long-distance freight hauling. The diesel tractor mechanic can migrate to a similar position repairing automobiles and trucks. Consequently, if wages in agriculture are unattractive relative to wages outside the industry, employees will migrate in the long run. To assume that difficult times or prosperous times in agriculture lead to similar activity for service personnel is incorrect.

Similarly, the profits of the food processing industry are not related to incomes of the farm sector. Little statistical correlation exists between the economic well-being of food producers and food distributors because of the difference in market structure. Farmers and ranchers number in the hundreds of thousands. They are price takers. Food processors are fewer in number and exert some influence over the price at which they sell their products. At times, the interests of agricultural producers clash with those of food producers.

What is the significance of agribusiness in Nebraska? One-quarter to one-third of the economic activity in the state is related to the production of agricultural commodities or agricultural services.

Although agribusiness is large in Nebraska, prosperity (or depression) for grain or livestock producers does not translate into prosperity (or depression) for agribusinesses. As noted earlier, there are some important differences between agricultural producers and the agricultural service industries.

Continued investment in Nebraska's many small communities is a related issue. Production capacity for grain and livestock is expected to expand much faster than world demand. Technology will reduce the need for labor in agriculture and will put pressure on renewing land for production. These trends suggest that the economic function of some small communities will disappear and that some small towns will cease to exist. Larger towns may benefit by consolidating the functions of smaller towns. Outmigration from small communities will continue, for there will not be enough jobs generated in the agricultural service area to retain the present population. The cost of providing the essential infrastructure (education, water, sanitation, and highway maintenance) will increase on a per capita basis in sparsely populated areas. The political influence of smaller communities will be lessened, and, ultimately, the social influence of smaller communities will diminish. We are not writing off entire communities, but we believe that economic diversification will simply be more difficult in some smaller communities.

Nebraska's Business Climate

The term business climate is illusive and means different things to different individuals. Our interpretation is the collective attitudes, statutes, and actions of public officials toward business, including the services provided by the state, such as education and social and health services. In this context, zoning and regulatory bodies can be critical to the business climate.

The results of business climate studies vary widely. For instance, a study done by the accounting firm of Alexander Grant ranked Nebraska's business climate fourth among the fifty states, while a study done at approximately the same time by *INC.* magazine ranked Nebraska forty-ninth (table 7).[17] Measures of the business climate are subjective and reflect the preferences and biases of the investigators.

The number of new incorporations is one measure of the business climate. Nebraska ranks low in new business incorporations. In 1985, it ranked 46th in percentage change in incorporations. Is the number of incorporations low because the business climate is poor, as *INC.* magazine suggests, or is it because Nebraskans lack ideas and the willingness to assume risk? Are government regulations a hindrance to new businesses in Nebraska?

Table 7—Business climate in Nebraska and nearby states

State	INC.	Alexander Grant	Change in new incorporations 1980-85
	— — Number	— —	Percent
Nebraska	49	4	46
Iowa	38	26	49
South Dakota	26	1	38
Minnesota	7	35	23
Colorado	3	15	17
Kansas	23	13	41
Wyoming	48	43	50
Missouri	41	20	30

Source: *INC.*, October 1985; Alexander Grant and Company, *Business Climate*, 1984; and *The Wall Street Journal*, May 19, 1986, p. 320.)

There are no apparent simple answers to these questions. Nebraska's low ranking on measures of entrepreneurial activity is a matter of serious concern. One explanation for this low ranking may be that the agricultural subsidies received by Nebraska farmers have blunted risk taking and entrepreneurial vision. Subsidies discourage change and innovation.[18] This could be a drag on development in the 1980s and 1990s.

Bryan Jones in *The Farming Game* discusses the social pressures that face prospective agricultural innovators.[19] In the chapter on organic vertegration (vertegration in this context means vertical integration, the addition of processing equipment), Jones tells how traditional farmers reacted with skepticism to a neighbor's efforts to raise organic products. Not only did the producer have to find new marketing channels, but he also had to overcome repeated ridicule until his success quieted the critics. Social pressures to conform may be as strong as economic pressures.[20]

The unwillingness of Nebraskans to assume even moderate risk was noted in the *Business Profile and Targets—City of Omaha*.[21] The original settlers were boomers, risk takers who left after the first few difficult years. The boomers were replaced by conservators who buy and hold. The buy and hold concept of investment is not likely to risk investment in new ventures. Any deviation from the tried and proven is regarded with skepticism.

Outlook and Observations

The Nebraska five-sixths to nine-tenths rule likely will be operative in the next decade. This rule indicates that Nebraska's economy will expand at five-sixths to nine-tenths the rate of the national economy. Despite the fact that Nebraska's growth in income matched U.S. levels during 1967-85, the outlook for the coming decade is for less growth in Nebraska than in the nation. Expansion will not always coincide with national trends, but when viewed over an extended period, a 10-percent increase in personal income in the United States will translate into a 8-9 percent gain in personal income in Nebraska. Employment will follow this same general trend. In the 1970s, Nebraska's rate of growth nearly matched that of the nation. Over the 1960s and part of the 1980s, Nebraska lagged national trends.

The outlook for the national economy over the next decade is encouraging. Real economic growth of 2-3 percent a year is expected with relatively modest rates of inflation. Employment growth is anticipated at 1-1.5 percent per year. Over the next 10 years, Nebraska should expect growth in personal income and employment because the national economy is expanding.[22]

This growth will be unevenly distributed, however. Agriculture will continue to decline in relative importance in both the Nebraska and the national economy. The prospects for grain exports are not encouraging and per capita consumption of beef is not expected to equal levels of a few years ago. Nebraska's manufacturing and transportation sectors are likely to grow more slowly than telecommunications and service sectors.

Areas of potential growth in agriculture include specialty products, such as lean beef, beef free of any hormone additives, vegetables, fruits, and nuts. Diversification of agriculture will be important for a limited number of agricultural producers, but it is unlikely that agriculture in Nebraska will ever be as diverse as agriculture in California. It is important to encourage the diversification of agriculture, for it may enable some producers to remain in Nebraska and in production in the coming decade.

Nebraska's economy will continue to be driven by external forces. Farm policy will be made in Washington, and interest rates will be determined by federal monetary and fiscal policies. The rise or decline in Nebraska's economy and regional economies (for example, southwest oil and gas producers) will depend on outside forces.

Nebraskans can undertake certain steps to enhance their state's economy and to reduce their vulnerability. First, Nebraskans should examine perceived antibusiness attitudes concerning the family farm amendment (Initiative 300). As yet, it cannot be conclusively proven that Initiative 300 has had an adverse impact on the state's economy. Many believe that Initiative 300 will bolster Nebraska's agricultural economy, while preserving a way of life. To others, the family farm amendment implies antibusiness and antidevelopment attitudes, creating special conditions and a separate class for Nebraska farmers and ranchers.

Corporations with an interest in locating in Nebraska may be discouraged by Initiative 300. Corporations may locate outside of Nebraska rather than deal with the complications and restrictions imposed by the family farm amendment. Agricultural producers who want to expand into manufacturing, such as food processing, may be prohibited from doing so because of Initiative 300. In some respects, Initiative 300 can be viewed as an impediment to change in the state's economy. Nebraska is competing with 49 other states and is handicapped by the family farm amendment.

Second, Nebraskans can increase their investment in education and coordinate educational policies with the needs of industries targeted for development. Policymakers in states such as Kentucky, Tennessee, Colorado, Ohio, and Texas have adopted strong measures to improve education because they believe that citizens of their states will be unable to compete in the emerging technologically driven society unless they are well-educated. A strong commitment to education is an essential part of a development policy that is within the control of Nebraskans.

Third, Nebraskans can maintain and improve their infrastructure to provide the necessary services that permit firms to expand in an orderly fashion. The streets, roads, airports, and water facilities are in reasonably good condition in Nebraska. Nebraskans can continue to maintain and improve these facilities to encourage economic development. Nebraskans must decide whether public infrastructure money will be concentrated in urban areas or whether it will be distributed evenly throughout the state.

Nebraskans can examine the use of the state's resources in agriculture and related programs. Nebraska currently invests over $20 million in federal and state funds in agricultural research and an additional $12 million in cooperative extension activities. With the dim prospects for grain and livestock, Nebraska may want to shift some of these resources into other areas, such as a center for the development of the telecommunications industry or the development of innovation centers throughout the state. Nebraska's resources are limited; its historically strong commitment to agriculture may be more of a burden than a benefit to development in the next decade.

Nebraska's development policy should recognize the role of services in economic growth. Several recent studies, mentioned below, have suggested industries that could be targeted for development. Industries with development potential in Nebraska include telecommunications, insurance, and high-technology manufacturing, such as instruments and pharmaceuticals. Each of these industries requires a well-educated labor force and low-cost office space. Nebraska has an above-average educated labor force and ample space for office development and should compete well.

A common theme among these studies is the need for appropriate government policies, coordinated with the specific needs of the industries. These studies emphasize the need for appropriate education, taxation, and regulation policies. Nebraska's regulatory policies are critical to further development because industries operate in a regulated environment that has been changing rapidly.

Nebraska can influence the development of high-tech industries in the state. The survey of high-technology firms conducted by the Federal Reserve Bank of Kansas City showed that the most important reasons for locating in a particular state were access to markets, followed by labor skills and labor costs. Three actions that state and local governments can undertake to encourage high-tech and general business expansion are to reduce taxes, to cut red tape, and to offer financial incentives, such as low-interest loans, investment tax credits, property tax abatement, and industrial revenue bonds. But, these factors will not offset the cost of transportation facilities, materials and products, and property.

In the fall of 1983, Nebraska's Governor Kerrey appointed a task force to look at the communication and information industries in Nebraska.[23] The task force concluded that Nebraska already has a strong base in the communication and information industries with the potential to become a world-class center in several areas.

The task force recommended that "Nebraska should look at what can be done to enrich the basic knowledge environment as it relates to the information industry." They also suggested that "Nebraska's public policymakers need to reassess and reorient the state's approach to the regulation of communication." To take advantage of Nebraska's potential, the task force concluded that Nebraskans must change their attitudes to allow a coordinated effort by business, education, and government leaders to promote communication industries.

A third area in which Nebraska may enhance its development prospects is the insurance industry. A report by the Bureau of Business Research recommended that the insurance industry be a very prominent target of Nebraska's economic efforts.[24] This industry has grown steadily and adds jobs that typically pay above-average wages and salaries.

Nebraska appears to have a comparative advantage in attracting the insurance industry. The following factors contribute to Nebraska's advantage: a labor force with above-average education, relatively low-cost office space, an above-average communications network, and a positive legislative and regulatory environment.

Endnotes

1. Deichert, Jerome A. "Trends in Nebraska Population, 1870-1980." *Business in Nebraska* 41 (February 1986): 1-3, 6.

2. To account for changing price levels, actual (nominal) income is divided by a price index. The adjusted income is called real income and measures income for various years as if prices had remained constant.

3. Deichert, Jerome A., and Donald E. Pursell. *The Economic Impact of the Nebraska Insurance Industry.* Lincoln, NE: Bureau of Business Research, January 1986: 5-19.

4. U.S. Department of Labor, Bureau of Labor Statistics. *Monthly Labor Review,* various issues. Washington, DC.

5. Smith, Tim R., and Marla Borowski. "High-Technology Development in the Tenth District." *Economic Review* (November 1985): 9-24.

6. The Plains region as defined by the U.S. Bureau of Economic Analysis consists of Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota.

7. U.S. Department of Commerce, Bureau of the Census. *Statistical Abstract of the United States: 1986, 106th Edition.* Washington, DC, 1985.

8. Data for 1985 are preliminary and available only for certain categories.

9. Schultz, Theodore W. *Transforming Traditional Agriculture.* Chicago: University of Chicago Press, 1962.

10. Avery, Dennis. "U.S. Farm Dilemma." *Science* 230 (1985): 408-12.

11. U.S. Department of Commerce, Bureau of Economic Analysis. *Survey of Current Business,* various issues. Washington, DC.

12. Op. cit., Averty, 1985.

13. Ibid.

14. U.S. Department of Commerce, Bureau of the Census. *1982 Census of Agriculture,* Volume 1, Part 27, Table 49.

15. Ibid.

16. Schluter, Gerald, and William Edmondson. "How to Tell How Important Agriculture is to Your State." *Rural Development Perspectives* 2 (1986): 32-34. Schluter and Edmondson's definition of the food and fiber system is very extensive. Unfortunately, direct food producers receive less than five cents of each food dollar spent by consumers.

17. Alexander Grant and Company, *Business Climate,* 1984; and Nell Margolis, "Report on the States," *INC.,* October 1985: 90-93.

18. Nothdurft, William E., Roger J. Vaughan, and Mark Popovich. *Creating an Entrepreneurial Farm Economy: A New State Policy Approach.* Washington, DC: Council of State Planning Agencies, January 1986.

19. Jones, Bryan. *The Farming Game.* Lincoln, NE: University of Nebraska Press, 1981: 49-52.

20. Jones writes about his neighbors in central Nebraska, but social pressure led him to write under a pseudonym.

21. *Business Profile and Targets — City of Omaha,* January 1986:ii-iii.

22. Chase Econometrics. *U.S.Macroeconomic Long-Term Forecast.* Bala Cynwyd, PA, first quarter 1986.

23. Task Force on Communications and Information Systems Technology. *Nebraska as a World-Class Center for the Communications Industry.* Nebraska, January 1984.

24. Op. cit., Deichert and Pursell, 1986.

The Changing Structure of Agriculture in Nebraska

3

Bruce B. Johnson

Production agriculture in Nebraska is undergoing profound change. Longrun structural trends have emerged during the financially stressed 1980s. Increasingly, fewer farms account for most of the production volume, while thousands of smaller farms exist by combining nonfarm income with modest farm receipts. By the year 2000, Nebraska may have less than 30,000 farms, half the current number. These trends, in combination with the likelihood of continued economic stress for U.S. agriculture, pose considerable policy challenges to a state whose economy remains heavily interrelated with agriculture. Bold institutional measures need to be made to ease the transition and to position the state and its people for entering the 21st century.

Since the beginning of time, the structure and the process of agriculture have reflected the changing needs and preferences of humans in a dynamic environment of resource opportunities and constraints. Yet, throughout history there have been periods of accelerated change. For Nebraska and U.S. agriculture, the 1980s appear to be such a period. The current forces of economic stress will likely result in substantial changes not only in the structure of the farming sector but also in the social and economic fabric of rural America. Many changes will be reactive in nature, brought about by forces beyond the domain of this state's policy arena. But, many will be proactive and reflective of sound decisions made by Nebraskans and their elected representatives.

In this chapter, we focus on Nebraska's farm production sector, highlighting recent trends and associated policy implications for the state. In the first section, we present an analysis framework and define agricultural structure and other factors which society may deem important measures of performance. A model of structural change is also discussed. In the second section, we examine Nebraska's production agriculture in terms of its magnitude, diversity, and degree of global interdependence.

Our focus shifts in section three to the agricultural producer and the nature of production units. Key structural trends are discussed in the fourth section, followed by conclusions, implications, and policy choices in the final section.

Looking at Agricultural Structure

What is agricultural structure? Structure itself is not a simple concept. A concise, clean definition for which there is broad agreement is nonexistent. Instead, discussion of agricultural structure tends to focus on a set of components which generally include the following:[1]

How farming units of different sizes, types, and locations organize their natural, financial, and labor resources.

Control, management, and operation of farming units and the associated degree of freedom of choice and degree of risks borne by the operator.

Manner in which the firm procures its inputs and markets its products.

Distribution of resource ownership and wealth among persons contributing to agricultural production as well as the distribution of production and associated income.

Means for entry into farming as an occupation.

Provisions for asset transfer to succeeding generations.

Performance of the food system in providing the quantity and quality of food desired by society.

Resiliency of the system to withstand shock and to adapt to changing technology and economic circumstances.

This list indicates that the concept of structure goes far beyond simple economics of production. Political forces bear on structure as well, and, in turn, basic societal beliefs and values. The emphasis is not on structure, but on the relative performance of some structural configuration over others. How does a particular agricultural structure contribute to or compete with the flow of quality, reasonably priced food? How efficient is resource use and does it complement the preservation of the environment? Is it flexible and adaptable? What effects does structure have on the well-being of producers and rural communities? These are the types of critical and complex questions which form the heart of the debate about agricultural structure. They are not answered easily; and, even when these questions are answered, complete concensus will never be a practical reality. Nonetheless, these questions merit serious consideration.

A Model of Change

Structural evolution is probably an appropriate term for defining structural change in agriculture. Change is evolutionary rather than revolutionary. Yet, the process of change is not always smooth and deliberate. Tension arises with change. This can be better understood as we consider a model of change which Lee described as follows:

> The state of technology and the physical resource base largely determine the economic organization of production; the way production is organized causes a superstructure of economic institutions to emerge; these, in turn, lead to the development of certain social and political institutions.[2]

The above implies that there will tend to be a lag in the adjustment of economic, then social and political, institutions to underlying changes in technology and the organization of production. The lagged effect can create tension as behavioral patterns are required to change. Thus, for a time, values and beliefs as well as long-standing institutions tend to reflect an earlier era and not the emerging reality of agriculture. And, likewise, technological advancement may overstep ongoing social norms and, therefore, be altered to conform. As we now examine the situation in Nebraska specifically, the dynamics of agricultural structure will become more evident as will the tensions which accompany change.

Production Agriculture in Nebraska

Most Nebraskans are aware that agriculture is a primary industry, but fewer are aware of this state's importance as a national leader. In 1984, cash receipts from agricultural commodities produced in Nebraska amounted to more than $7 billion, ranking it fourth among the 50 states (table 1).[3, 4]

Livestock production is particularly significant. Cattle and calves production in Nebraska amounted to 12 percent of the U.S. output in 1984, second only to Texas. Nebraska also ranked third in the production of corn and grain sorghum. Moreover, in 1984, the state ranked first in alfalfa meal production, first in Great Northern beans production, and fourth in pinto beans production.[5]

Nebraska's significance in agricultural output has expanded relative to other states. The state ranked fifth in the nation in cash receipts

Table 1 — Nebraska's agricultural production, measured in cash receipts value, 1984

Item	Nebraska's total cash receipts	Percentage of U.S. total	State ranking
	Million dollars	Percent	Number
All agricultural commodities	$7,082	5.0	4
All livestock	4,523	6.2	3
All crops	2,559	4.1	7
Selected commodities:			
Cattle and calves	3,666	12.0	2
Corn	1,344	11.6	5
Hogs	635	6.6	5
Soybeans	444	3.7	9
Wheat	341	4.0	10
Grain sorghum	191	14.7	3
Sugar beets	54	6.9	6

Source: U.S. Department of Agriculture, Economic Research Service. *Economic Indicators of the Farm Sector: State Financial Summary, 1984.* ECIFS 4-5. March 1986.

during the early 1970s; its ranking in corn production was also fifth. However, largely because of a major expansion of irrigated crop acreage (a near doubling from 4 million acres in 1970 to an estimated 7.8 million acres in 1985), production output has surged ahead.[6]

Indeed, the size of Nebraska's agricultural production plant is massive. It is little wonder that agriculture continues as a bull wheel in this state's economy. In fact, a recent study by the U.S. Department of Agriculture (USDA) indicated that employment in the food and fiber system as a percentage of total state employment was 31.9 percent in Nebraska, the highest of any state in the nation.[7] The U.S. average was only 22.1 percent. About three-fourths of Nebraska's net trade surplus, which has exceeded $1 billion in recent years, has been created by shipments of agricultural products to other states and nations (mostly meat products, feed grains, grains, and machinery).[8]

Although economic diversification has occurred in Nebraska, much like other states, evidence suggests that agriculture will remain the state's primary economic activity. Nebraska's abundant resource base of land, water, climate, infrastructure, and skilled people is well suited to agriculture. Therefore, structural changes in agriculture carry profound implications for the state.

Diversity of Production

Even for the most casual observer, a day of travel across Nebraska on Interstate 80 provides ample evidence of Nebraska's agricultural diversity. An array of major crop and livestock enterprises exists, often within a single farming community as complementary enterprises. To a large extent, Nebraska's agricultural diversity is a reflection of a diverse resource base. Soils, water, climate, and cultural patterns of the residents all contribute to kaleidoscopic agriculture. In essence, Nebraska represents the interface of Corn Belt and Great Plains agriculture, the former emphasizes cash grain production while the latter emphasizes livestock.

Yet, despite its heterogeneous nature, much of the state's agricultural activity centers on a few crop and livestock enterprises which are not unique to Nebraska. The state's major crop enterprises are those for which overproduction has been a problem historically. In turn, these activities have been associated with government price and income support programs.

During the 1980s, Nebraska has ranked among the top five recipient states in government program payments. During 1982-84, government payments accounted for nearly 62 percent of Nebraska's total net farm income; most were payments through the wheat and feed grain programs. In short, because of the nature of its enterprise mix and its production volume, Nebraska's agricultural production sector is heavily dependent upon government farm programs. The economic implications for this state could be substantial if national policy moves toward dismantling these government support programs.

Global Interdependence

U.S. agriculture is truly global. Many farm inputs are purchased from overseas. But, more importantly, a substantial share of agricultural production is for export. As a result, U.S. commodity futures markets fluctuate greatly in reaction to news events, such as radioactive fallout in the Soviet Union or adverse weather conditions in the southern hemisphere.

A high degree of global interdependence is a relatively new phenomenon. Total U.S. exports of agricultural commodities jumped nearly sixfold from 1970 ($7.3 billion) to 1981 ($43.3 billion)—an obvious explanation for the relative prosperity agricultural producers enjoyed during the 1970s.[9]

Nebraska's agricultural producers shared in this exploding export market. Feed and food grains constituted nearly 45 percent of the U.S. export market, oilseeds and products and livestock commodities accounted for another 32 percent, all significant products in this state. As a consequence, by 1981, nearly 30 percent of Nebraska's agricultural output was produced for export.

Since 1981, U.S. agricultural export sales have fallen sharply. By 1985, total sales volume was down about 25 percent from the 1981 peak, leading to huge carryover stocks, depressed prices, and greater economic dependence on commodity price support programs.

Several factors (sharply rising value of the dollar, major economic recession in many parts of the world, rapidly rising productivity and competition from other countries, and realignment of trade patterns as a result of the heavy foreign debt burdens of several countries) contributed to this downturn in exports. As a consequence, it appears very unlikely that agricultural exports will return to the levels of the early 1980s, even with the lower valued dollar of recent months. This export turnaround has profound economic implications for Nebraska and other states which are heavily dependent upon export markets. While the consequences of production expansion (such as, appreciating land values and increased debt financing), were accentuated during the 1970s, so were the spillover effects of contraction in the mid-1980s.

Agricultural Producers and Their Farming Units

Ask yourself these questions: How would I describe the typical farmer of today? What is a typical farm? Despite our minds' imagery, these questions beg answers. In today's agriculture, there is no typical farmer or farming operation. Instead the farm universe is a wide spectrum, and what one perceives as typical can be as spurious as the averages associated with Nebraska's everchanging weather patterns.

Number of Farms

According to the latest Census of Agriculture, there were about 60,000 farms in Nebraska in 1982 (table 2).[10] Nationally, the number of farms has declined steadily since the 1930s as technological advances

Table 2 — Number of farms in Nebraska, census years, 1930-82

Census year	Farms	From previous census: Net change in number of farms	From previous census: Annual rate of change
	———— Number	————	Percent
1930	129,458	NA	NA
1935	133,616	4,158	.62
1940	121,062	-12,554	-2.07
1945	111,756	- 9,306	-1.67
1950	107,183	- 4,573	- .85
1954	100,846	- 6,337	-1.57
1959	90,475	-10,371	-2.29
1964	80,163	-10,313	-2.57
1969	72,257	- 7,906	-2.19
1974	67,597	- 4,660	-1.38
1978	63,768	- 3,829	-1.54
1982	60,243	- 3,525	-1.46

NA = Not available.
Source: U.S. Department of Commerce, Bureau of the Census. *Census of Agriculture, Nebraska, Vol. 1.* 1959 and 1982.

have facilitated and required the consolidation of farms and the exodus of farm operators from agriculture. Even during the relatively profitable 1970s, the number of farms in the state declined at a rate of about 1.5 percent per year.

The rate of decline in the number of farms has probably accelerated since 1982, perhaps as much as two to three times the longer term pattern. Economic stress has forced many farmers to exit and has reduced the incentives for others to enter farming. Yet, until documented by a new census benchmark, the recent changes remain only conjecture.

Age of Operators

Changes in the number of farms reflect the entry into and exit from farming by individuals and families. An examination of the age distribution of farm operators (age cohorts) contributes to our understanding of how and why the number of farms has declined. Age distribution data for farm operators in Nebraska are shown in table 3.

Table 3 — Distribution of farm operators in Nebraska, by age, census years 1930-82

Age of farm operator	Census year													
	1930		1940		1950		1959		1969		1978		1982	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Less than 25	6,288	5	4,615	4	4,511	4	2,238	3	2,143	3	3,335	5	3,107	5
25-34	28,808	23	22,178	19	19,660	19	13,622	15	8,806	12	9,590	15	10,239	17
35-44	35,688	28	28,033	24	24,643	24	20,315	23	15,357	21	10,987	17	10,478	17
45-54	28,299	23	30,031	25	23,742	23	23,168	26	18,814	26	15,484	24	12,949	22
55-64	17,671	14	21,037	18	19,162	19	18,977	21	17,909	25	15,615	25	14,603	24
65 and older	8,787	7	11,773	10	9,995	10	10,913	12	9,228	13	8,757	14	8,777	15
Total	125,541	100	117,667	100	101,713	100	89,233	100	72,257	100	63,768	100	60,243	100

Source: U.S. Department of Commerce, Bureau of the Census. *Census of Agriculture, Nebraska, Vol. 1.* 1959, 1969, and 1982.

The data for Nebraska reveal the following patterns:

Most farm operators enter farming between the ages of 25 and 34, although some are younger.

After falling for several decades, the number of operators under age 35 increased somewhat during the 1970s.

In recent years, nearly four out of ten operators were age 55 or older; 30 years earlier, that ratio was three in ten.

Because more farm operators are older the number of farms will continue to decline. In 1982, nearly 9,000 Nebraska farmers were already at retirement age, and by 2000, more than 27,000 others (age 45-64) will reach retirement age. In other words, for the number of farms to remain stable until the turn of the century, more than 2,000 individuals must initiate farming operations each year simply to compensate for the loss due to retirement, a rate of entry which is roughly twice that of recent years. Unless economic conditions for agriculture improve measureably in the years ahead, such a rate of entry appears unlikely.

Farm Organization

An important structural dimension of agriculture is the organization of the production unit. Contrary to virtually every other sector of the U.S. economy, production agriculture remains largely the domain of individuals and families. In most instances, farms are organized as simple proprietorships, although some families have incorporated their farming operations.

In 1982, individual or family proprietorships accounted for 85 percent of all farms in Nebraska and more than 70 percent of all land in farms (table 4). Most of the corporate units were family held. In 1982, nearly 1 of every 6 acres of farmland in the state was operated by a corporation; most were large, family held corporations. Most, but not all, of the land operated by corporations was owned by them.

The relative significance of corporate activity in production agriculture in Nebraska is most pronounced in annual sales value. In 1982, nearly 30 percent of the state's dollar volume of production was from corporate units. In general, such units are concentrated more heavily in livestock enterprises, such as cattle feeding, and tend to generate large

Table 4 — Characteristics of farms in Nebraska, by type of organization, 1982

Item	All farms[1]	Individual or family	Partnership	Corporation: Family held	Corporation: Other than family held
Farms:					
Number	60,209	51,323	5,608	2,732	281
Percent	100.0	85.2	9.3	4.5	.5
Land in farms:					
Acres	44,655,914	31,576,462	5,740,130	6,762,219	177,168
Percent	100.0	70.7	12.9	15.1	.4
Average acreage	742	615	1,024	2,475	630
Land owned by operator:					
Acres	28,805,313	19,540,488	3,681,456	5,108,533	118,644
Percentage of land in farms	64.5	61.9	64.1	75.5	67.0
Market value of agricultural products sold annually:					
Total sales ($1,000)	6,617,238	3,777,413	845,785	1,678,178	294,527
Percent	100.0	57.1	12.8	25.4	4.4
Average sales/farm	109,900	73,600	150,800	614,300	1,048,100

[1]Total includes a miscellaneous category in addition to those listed here.
Source: U.S. Department of Commerce, Bureau of the Census. *Census of Agriculture, Nebraska.* 1982.

sales volumes. In fact, in 1982, 45 percent of the monetary value of fed cattle and calves sold in the state was attributed to corporations.[11]

Farm organization patterns in Nebraska depend not only on economic conditions and trends but also on institutional factors. Certainly, the constitutional amendment approved by Nebraska voters in November 1982, is a major factor. In essence, it generally bars nonfamily corporations from entering or expanding farming operations in Nebraska. This restriction applies to the ownership of land and to nonexempt farming operations. But, active debate continues over the interpretation, enforcement, and perceived benefits and costs of this amendment.

Tax reform legislation at the national level may hold even more significant implications for the organizational configuration of agriculture in Nebraska. Tax rule changes can, and usually do, change the economic rules, and configurations of businesses will respond accordingly.

Nonfarm Income

U.S. farmers and their families often draw more income from nonfarm sources than they do from the farm. Nationally, the nonfarm income of farmers has exceeded farm income in 16 of the last 20 years. Such a pattern reflects both preference and economic necessity. The relative attractiveness of nonfarm employment and business has led many farmers to blend a variety of pursuits with farming. For others, economic necessity dictates that they pursue nonfarm income to meet household obligations.

In Nebraska, the full array of farm income dependency exists. Yet, relative to many states in the eastern half of the United States both the incidence and magnitude of nonfarm income appears to be less. According to the 1982 Census of Agriculture, 79 percent of Nebraska's farm operators reported farming to be their principal occupation; only in North Dakota and South Dakota was this percentage higher. Conversely, only 18 percent of Nebraska's farm operators reported working off the farm 200 or more days per year (essentially full time); again, only in the Dakotas was this rate lower. The reasons for these patterns in the Northern Plains need to be studied further. However, it seems plausible that relatively fewer off-farm employment and income opportunities exist in these semi-isolated and sparsely populated rural areas, thus limiting nonfarm income.

Size of Units

Farm size is frequently measured by acreage. Obviously, as the number of farms declines and land is consolidated the average size (acres per farm) will increase steadily. In 1982, the average farm consisted of 746 acres, an increase of more than 40 percent since 1959 (table 5).

Of course, not all farms have grown in size over the past 25 years. Rather, the increase in statistical average size represents changes in a complex set of size patterns. In essence, there is evidence of a movement toward a bimodal structural pattern of fewer mid-size units and more large and small farms (table 5).[12] The number of farms of less

Table 5 — Farm size distribution in Nebraska, 1959-82

Farm size (acres operated)	Farm operators 1959		1969		1982		Change 1982/1959
	Number	Percent	Number	Percent	Number	Percent	Percent
1-139	15,848	17.5	13,671	18.9	14,124	23.4	89.1
140-259	28,649	31.7	16,405	22.7	10,324	17.1	36.0
260-499	26,675	29.5	20,853	28.9	14,005	23.3	52.5
500-999	11,266	12.4	12,324	17.0	11,847	19.7	105.2
1,000-1,999	4,811	5.3	5,495	7.6	6,036	10.0	125.5
2,000 and over	3,226	3.6	3,509	4.9	3,908	6.5	121.1
Total	90,475	100.0	72,257	100.0	60,243	100.0	66.6
Average size	530 acres		677 acres		746 acres		

Source: U.S. Department of Commerce, Bureau of the Census. *Census of Agriculture, Nebraska.* 1959, 1969, and 1982.

than 140 acres has increased as a percentage of the total number of farms since 1959, and in absolute terms since 1969. Likewise, the number of farms of 1,000 acres or more has increased in absolute terms by more than 20 percent. By contrast, the number of farms in the 140-500 acre category decreased dramatically during 1959-82.

Several factors have likely influenced these changes. Some individuals have entered farming with relatively few acres, depending heavily on off-farm income or intensive farming enterprises, such as swine or specialty crops, which do not require a large land base.

Many operators of intermediate-size units apparently either left farming or scaled down their operated acreage (frequently older farmers). Others acquired more acreage, thereby shifting to a larger acreage category.

Increases in the number of farms in the larger acreage categories reflect a motivation on the part of many producers to attain farms that are sufficiently large to generate adequate income. Continued technological advances have facilitated this change. However, federal farm price and income support programs and various federal tax provisions have also played a key role in promoting the expansion of farms. In fact, as Cochrane notes, "the very programs that were supposed to help moderate-sized family farmers have contributed to their demise."[13]

Sales Volume

Another measure of farm size is the amount of annual cash receipts generated from farm marketings. In 1982, Nebraska farmers averaged nearly $110,000 in sales per farm, about twice the average sales volume in 1974. Inflation, which greatly reduced the value of the dollar during this period, was a major contributing factor. But, economic pressure for increased farm size and output to obtain acceptable profits and cash flow for family living and business investments is another explanation.

More significant, however, is the distribution of farms by economic (sales) class. In 1982, the 3,918 largest farms with annual sales of over $250,000 accounted for more than half (52 percent) of the state's total cash receipts (table 6). At the opposite end of the size spectrum, farms grossing less than $100,000 of sales constituted three-fourths of the number of farms but produced less than one-fourth (23 percent) of total cash receipts. Clearly, production volume is concentrated on larger units.

Concentration of agricultural output has increased. Looking at the post-World War II period, the Gini Coefficient of agricultural sales by economic size of farm operation has increased significantly (table 7).[14]

Table 6 — Distribution of farms and cash receipts by economic class of farm, Nebraska, 1982

Economic class (annual cash receipts)	Number of farms	Percentage of farms	Average annual cash receipts per farm	Percentage of total cash receipts
	Number	**Percent**	**Dollars**	**Percent**
$500,000 or more	1,301	2.2	1,974,600	38.8
$250,000 to $499,999	2,617	4.3	338,200	13.4
$100,000 to $249,999	10,753	17.9	151,200	24.6
$40,000 to $99,999	16,573	27.5	65,100	16.3
$20,000 to $39,999	10,366	17.2	29,400	4.6
$10,000 to $19,999	7,182	11.9	14,700	1.6
$5,000 to $9,999	4,615	7.7	7,400	.5
Less than $5,000	6,802	11.3	2,200	.2

Source: U.S. Department of Commerce, Bureau of the Census. *Census of Agriculture*. 1982.

Table 7 — Measures of concentration of agricultural sales in Nebraska, selected years, 1950-82.

Year	Gini Coefficient of agricultural sales	Percentage of total annual cash receipts generated by producers		
		Lower 50 percent	Top 10 percent	Top 5 percent
1950	0.4619	20	40	29
1959	.4847	18	43	31
1969	.6353	10	54	44
1978	.6756	9	58	47
1982	.6871	8	59	49

Source: U.S. Department of Commerce, Bureau of the Census. *Census of Agriculture, Nebraska.* 1950, 1959, 1969, 1978, and 1982.

As a result, the portion of total cash receipts generated by the largest 5 percent of Nebraska producers rose from 29 percent in 1950 to 49 percent in 1982.

Because of the disparity in economic size of farms, a better perspective of Nebraska farms is gained by constructing a profile by economic class of farms (table 8). Several differences are noteworthy. First, larger farms are more frequently operated by middle-aged operators, with a high proportion being part owners. Likewise, the incidence of corporate organization is higher. Acres operated show a direct relationship to sales volume and also point out that exceptions exist.

Livestock enterprises dominate sales activity from the largest units. This is not unexpected. Even rather modest-sized units produce higher volume sales. For example, a cattle-feeding operation with just 1,000 head per year output could generate annual sales in excess of $0.5 million.

Off-farm employment for operators of the smaller firms was common and often essentially full time. Conversely, as farm size and associated labor demands increased, off-farm employment declined measureably.

Table 8 — Selected characteristics of Nebraska farm operators, by economic class, 1982

Item	All farms	Very large ($500,00 or more)	Large ($250,000 to $499,999)	Medium ($100,000 to $249,999)	Small $40,000 to $99,999)	Very small (less than $40,000)
			Percent			
Operator age:						
Less than 35	22.3	11.8	14.3	20.5	23.5	23.5
35-54	38.9	52.7	54.5	50.2	39.0	32.5
55 and older	38.8	35.5	31.3	29.3	37.5	44.0
Tenure:						
Full owner	41.2	28.5	24.9	23.9	28.9	56.8
Part owner	38.2	62.0	67.5	62.1	48.5	19.9
Tenant	20.5	9.5	7.6	14.0	22.6	23.3
Percentage of land in farms leased	40.8	34.3	36.1	43.2	45.7	37.2
Business organization (individual or family)	85.2	40.6	61.1	80.1	87.7	89.9
Partnership	9.3	18.1	15.6	11.7	8.8	7.8
Family corporation	4.5	35.3	19.9	7.5	3.0	1.5
Other corporation	1.0	6.0	3.4	.7	.5	.8
Size of farm (acres operated):						
Less than 100	20.0	6.8	4.7	2.2	4.1	37.7
100 to 259	20.6	4.1	2.0	4.4	15.5	32.0
260 to 499	23.2	9.4	9.0	21.6	37.5	17.6
500 to 999	19.7	16.9	25.1	40.2	26.1	8.0
1,000 to 1,999	10.0	25.4	34.6	18.8	10.7	3.4
2,000 and more	6.5	37.4	24.6	12.8	6.1	1.3
Majority of sales from:						
Livestock	64.1	89.6	57.7	46.8	42.9	44.3
Crops	35.9	10.4	42.3	53.2	57.1	55.7
Other characteristics:						
Farm operators working off-farm job —						
None	58.4	81.3	83.3	77.6	67.8	43.1
1-99 days	15.0	10.6	11.5	15.6	18.7	13.3
100-199 days	6.2	2.2	1.7	2.4	4.9	8.8
200 days or more	20.4	5.9	3.5	4.4	8.6	34.8
Principal occupation not farming	21.1	7.5	4.2	4.1	7.3	37.4

Source: U.S. Department of Commerce, Bureau of the Census. *Census of Agriculture, Nebraska*. 1982.

In short, sales volume, perhaps more than any other measure, confirms the extreme diversity among Nebraska's farming units. Monetary value of output is highly skewed toward a relatively small portion of producing units, leaving half of the state's farms accounting for a very small share. The latter, which could probably be more appropriately termed farm residences than farm producing units, continue to exist for a variety of reasons. But, because of the number of people involved, their relative impact on the socio-economic viability of rural communities may be as great or even greater than that of large-scale operations.

Land Ownership and Tenure

Despite an increasing concentration of production, ownership of the primary asset, land, remains relatively dispersed. In Nebraska, approximately 4 of every 10 acres (41 percent) of agricultural land is owned by someone other than the operator. In most cases, landlords are nonfarmers. This general pattern of land ownership has existed for many years without a discernable trend.

The land which operators lease is usually in parcels rather than whole farm units. In turn, the parcels tend to be combined with other parcels to form the total land base of an operating unit.

While the amount of farmland rented has not changed measurably over time, the tenure patterns of farm operators have changed (table 9). Part owners now represent the primary tenure group. By combining owned and rented land, this group generally operates larger units than full owners or full tenants.

This pattern of farm tenancy is probably related partially to the desire of most operators to own at least part of the land they farm. However, given the land base required for a viable unit, ownership of the total unit has become increasingly difficult due to capital (debt and equity) constraints.

The recent plunge of agricultural land values to less than half of the 1981 level has been a devastating blow to owners of agricultural land.[15] In many instances, the decline in value has completely eliminated owner equity. Farmers who bought land after 1975 with heavy debt leveraging have been affected most, and some have been liquidated. Moreover, their preferences as well as their economic resources may preclude land acquisition in the future. For other farm operators, how-

Table 9 — **Land tenure trends in Nebraska, 1930-82**

Year and item	Tenure class: Full owner	Part owner	Tenant
		Percent	
1930:			
Percent of farms	34	19	47
Percent of land in farms	27	32	41
1940:			
Percent of farms	29	18	53
Percent of land in farms	23	37	40
1950:			
Percent of farms	36	25	39
Percent of land in farms	27	44	29
1959:			
Percent of farms	35	30	35
Percent of land in farms	24	50	26
1969:			
Percent of farms	39	36	25
Percent of land in farms	23	59	18
1978:			
Percent of farms	41	38	21
Percent of land in farms	24	61	15
1982:			
Percent of farms	41	38	21
Percent of land in farms	27	60	13

Source: U.S. Department of Commerce. Bureau of the Census: *Census of Agriculture, Nebraska.* Series.

ever, greatly depreciated land values may now represent greater opportunities to acquire land. Thus, the general pattern of land ownership and control and the associated tenure characteristics will probably continue to change gradually.

Financial Conditions in the 1980s

For a host of reasons, the financial condition of production agriculture in Nebraska has deteriorated sharply in the 1980s. During the first half of the decade, the state's farm income dropped to two-thirds the level attained during the 1970s. Because of the heavy buildup of indebtedness, particularly during the late 1970s, record-high interest rates during the early 1980s proved devastating to many producers. Simultaneously, by 1986, farmland values in Nebraska had depreciated an average 55 percent from peak levels of 1981, leading to an erosion of equity (or net worth) in the sector of more than $21 billion (table 10). In constant dollars, equity has declined by about two-thirds.

While farm sectors in other states have also experienced financial stress, the magnitude of the problem has been particularly severe in Nebraska. By 1985, the farm sector's debt-to-asset ratio in Nebraska was the highest in the nation.[16] The percentage decline in agricultural land values was second only to Iowa. Correspondingly, nearly 40 percent of the state's farm operators have debt-to-asset ratios of 40 percent or more, a level generally believed to be indicative of financial stress.[17] Thus, economic survival is a primary objective for many operators today.

Table 10 — Abbreviated balance sheet of Nebraska's farming sector (including farm households), January 1, 1980-86[1]

Item	Year						
	1980	1981	1982	1983	1984	1985	1986 (Preliminary)
				Billion dollars			
Assets:							
Real estate	28.6	34.8	34.7	33.2	29.1	21.0	15.8
Other	11.7	11.9	12.2	13.0	11.9	11.2	10.5
Total	40.3	46.7	46.9	46.2	41.1	32.2	26.3
Claims:							
Real estate	3.2	3.6	4.0	4.3	4.3	4.3	4.1
Other	4.9	5.2	5.6	6.9	6.5	6.0	5.6
Total	8.1	8.8	9.6	11.2	10.8	10.3	9.7
Equity	32.2	37.9	37.3	35.0	30.2	21.9	16.6
Equity in real dollars (1977 = 100)	25.6	27.3	25.1	22.5	18.7	13.1	9.6
				Percent			
Ratios:							
Equity/assets	79.9	81.2	79.5	75.8	73.5	68.0	63.1
Debt/equity	25.1	23.2	25.7	32.0	35.8	47.0	58.4
Debt/assets	20.1	18.8	20.4	24.3	26.3	32.0	36.9

[1]Primary Source: U.S. Department of Agriculture, Economic Research Service. *Economic Indicators of the Farm Sector, State Income and Balance Sheet Statistics,* series. Washington, DC. 1986.

In essence, Nebraska's farming sector faces an acute situation of agricultural returns being inadequate to service the level of indebtedness built up during the more profitable 1970s. Adjustment is now painfully underway in the form of downward movement of asset values, partial and complete farm liquidations, farm bankruptcies, and other types of debt writedowns. Farmers representing the full spectrum of types described earlier who entered the 1980s leveraged heavily with debt have faced the full-bore effect of this adjustment. Not all will be able to continue their farming operations and the pattern of resource ownership and control for others will emerge radically different.

Major Structural Trends

Having viewed Nebraska's production agriculture from several vantage points, let's now consider several key elements of change which will likely carry us into the next decade and century. These factors, which are highly interwoven, include the following:

Farm consolidation and enlargement,
Economic size and concentration,
Specialization,
Resource ownership and control, and
Farm income viability and dependency.

To be sure, the above are not unique to Nebraska, but, nonetheless, they may have far-reaching effects for this state's agriculture.

Farm Consolidation and Enlargement

The 50-year trend of farm business cannibalism is likely to continue unabated. As previously noted, operator age profiles clearly point to farm exit exceeding entry in the years ahead. But, other factors also point to this propensity, including: labor-saving technology, off-farm income potential, and the gap between farm and nonfarm income per capita.[18] As technology continues to develop, it is estimated that the average production output of commercial farms will grow at a rate of at least 3 percent annually to the year 2000.

Off-farm income potential is, of course, an offsetting force to farm growth, allowing smaller units to exist. And, this factor offset some of the farm expansion pressures of technology from 1940 to 1980. But rural economic opportunities are, to varying degrees, very limited, and growth in the share of income farmers receive from off-farm sources can be expected to slow for the remainder of the century.[19]

As Tweeten and others have pointed out repeatedly, much of the growth in farm size has been explained by farm expansion and consolidation to close the gap between farm and nonfarm per capita income. Much adjustment has already occurred, and the income gap has narrowed as the farm population has channeled its excess labor into nonfarm employment or larger farming operations. However, thousands of medium-sized farms continue to operate in Nebraska and throughout the region without the volume of agricultural production or nonfarm employment to produce sufficient family income. Current financial stresses have only exacerbated this dilemma. Many of these units are in jeopardy and will either undergo significant size transitions or terminate in the near future. Unless unforeseen conditions intervene, the number of farms in Nebraska will likely decline to 25,000 to 30,000 by the year 2000, less than half the number in operation in 1982.

Economic Size and Concentration

Concurrent with farm consolidation is the trend toward even greater concentration of commercial agricultural production on large-scale units. Government officials estimate that by the year 2000, as few as 50,000 large-scale farms could be producing as much as three-fourths of U.S. agricultural output,[20] based on a continuation of current policies, past trends, and future technological expectations. If similar production concentration were to occur in Nebraska, less than 1,500 farms might account for three-fourths of the state's agricultural production by the end of this century.

In short, the bimodal pattern of agriculture already evident will likely become much more pronounced. Large farm units will continue to grow in number and production significance as they quickly adopt emerging technology, capture size economies, and surpass smaller competitors in business and financial management.

The number of moderate-sized farms will decline precipitously as income generating capacity erodes. Even when the production efficiency of these units is reasonably competitive with larger units, returns from limited production tend to be inadequate to provide incomes acceptable to farm families. Moreover, this group is relatively dependent on farm income support programs, and if these programs are withdrawn gradually, the economic impact will further reduce the number of moderate-sized units.

The future of smaller units depends heavily on nonfarm income sources, therefore, their economic resiliency may be greater. However, the number of smaller units could decrease if opportunities for combining farm and nonfarm incomes subside or if the perceived benefits of rural living via part-time farming are reduced. For much of Nebraska, both of these factors are rather uncertain in the coming years.

Specialization

Another trend that is woven into the structural fabric of agriculture is greater specialization of production. A generation ago, a typical farm was diversified; it consisted of several crop and livestock production activities. Today, that is no longer the case. In 1950, two-thirds of Nebraska's farmers had hog and dairy operations and three-fourths had poultry enterprises. By 1982, only 27 percent of the state's farmers had hog enterprises, 8 percent operated dairy enterprises, and 5 percent had poultry enterprises.

Such specialization is the natural outgrowth of technological advancement and economies of size. Producers who once relied on crop rotation and enterprise diversification to conserve soil fertility, prevent soil erosion, and control pests have gradually replaced these practices with chemical fertilizers and pesticides. Correspondingly, the decision to acquire a specialized piece of equipment or facility will often dictate the need for greater concentration of economic activity in a particular enterprise, thus encouraging size expansion. The result has been a tendency toward monocultural agriculture. Producers concentrate their land, capital, and human resources on one or two major enterprises and maintain a relatively constant pattern from year to year.

Factors other than technology also have contributed to increased specialization. Opportunities for diversification have declined; farmers may not have the equipment, facilities, and know-how to allow them to engage competitively in several enterprises; and the marketing infrastructure for some commodites beyond the farmgate may have been dismantled. Thus, the farmers' options for greater enterprise diversification, even when deemed economically desirable, have become relatively narrow.

To some extent, off-farm employment opportunities have also channeled farm families' excess labor supply away from the more labor-intensive farm. In essence, fundamental change in farming lifestyle has accompanied a movement toward monocultural agriculture.

Will Nebraska's farms become more specialized in the years ahead? While movement toward greater concentration of production would suggest this, it is not certain that greater specialization will ensue. Producers are more sensitive to the costs of specialization. Production risks and economic risks can increase with monocultural farming. The resiliency of farm businesses to withstand and adapt to adverse conditions can be reduced seriously. Moreover, there is less potential for complementary enterprise activities, those which allow for fuller use of capital labor and natural resources. These considerations cannot be disregarded in economically stressful times.

External forces may also limit the degree of production specialization in Great Plains agriculture. For example, the lack of off-farm employment opportunities may dictate the need for greater onfarm diversity. Likewise, greater societal concern over various environmental issues and food quality may lead to reduced chemical farming and other cultural practices that are conducive to specialization. Consequently, we may experience movement away from monocultural farming to more diversified farming. Many farmers are now experimenting with new crop enterprises and re-establishing crop rotational systems to cut costs and to use their resources more effectively. However, their options are limited. Specialization may become a rather stable structural characteristic of Nebraska agriculture for the remainder of this century.

Resource Ownership and Control

Financial hardship in production agriculture during the 1980s appears to be profoundly shaping the future. Many farm operations have been terminated in recent years because of untimely land purchases and highly debt-leveraged positions. The degree of financial stress experienced by many farm operators is related directly to earlier land and capital acquisitions.

Ironically, many farmers who earlier were unable to purchase land and other major asset items are now in relatively sound financial positions. Today's farming community is relearning the lessons of 50 years ago—production assets must demonstrate an adequate level of profitability, and debt should be incurred only within conservative estimates of serviceability.

Various land tenure configurations are emerging; they are characterized by separation of ownership and operation. The farmer of tomorrow will rely more heavily on leased land. Although this does not preclude some ownership, the goal of farming will be changing from land ownership to farm profitability. Accompanying this change will be the farmers' interest in developing more sophisticated and secure leasing arrangements. The oral agreement based solely on goodwill and a handshake will become the exception and not the rule. Multiyear contracts will be common with provisions for flexible payments reflecting income variability and relative contributions of the parties.

If farmers will own less land, who will own the land? Perhaps the most likely scenario is an expanded version of the present pattern of nonfarm ownership. Despite the concentration of agricultural production, the dispersal of land ownership remains relatively parceled and diffuse. Individuals spanning a range of ages and vocations own farmland in Nebraska today. Usually they have direct ties to the land, either through kinship or the community. Frequently, their holdings are parcels which are farmed as part of larger farming units. Because land ownership tends to be long-term, this ownership pattern will probably continue. And, as more land ownership gradually moves from farmers to nonfarmers, more individuals will become involved.

Legal restrictions may continue to preclude acquisition by corporations or limited partnerships. But, even if these restrictions do not exist, the parceling of land may promote acquisition by individuals (that is, it is extremely difficult to acquire large contiguous land holdings which limits the interest of corporations, institutional buyers, and other large investors).

The greater emphasis on leased capital verses debt capital will likely carry over to other production assets as well. Machinery, equipment, and livestock will be controlled through short-term leases and contracts. Overhead and debt load are kept at more manageable levels and a greater degree of financial flexibility is achieved with such arrangements.

Obviously, credit will continue to play a pivotal role in production agriculture, but the magnitude will be reduced and converted to shorter term commitments. Moreover, the availability of credit to farm borrowers will be more restricted and contingent upon demonstrated profitability. Tomorrow's borrower will have to be highly skilled in the technical aspects of agricultural production and marketing as well as in financial accounting, financial management, and risk analysis.[21]

Income Variability

Whatever the future holds for production agriculture, greater farm income variability is almost certain. As discussed previously, U.S. agriculture is already profoundly influenced by the global economy, and unforeseen events (natural, economic, and political) reverberate back to Nebraska. When these impacts are deemed negative, policy intervention may be, at best, only marginally effective.

Also contributing to more income variability in the future is the apparent transition of federal farm policy away from price and income support programs. While the nature and speed of this process remains to be determined, it is very likely that producers will be operating in the economic mainstream. The dollar per bushel government deficiency payments of 1986 may well be an economic artifact of the 1990s.

Finally, the apparent dawning of a whole new era of agricultural technology holds awesome implications for the profitability levels of the sector. The development and implementation of biotechnology which can substantially increase production output may, indeed, be a biological miracle but overproduction may cause economic loss to producers.

Given a more volatile economic environment, tomorrow's farmers will need to take more deliberate steps individually to reduce their economic vulnerability. For some, this may mean greater enterprise diversity, for others a reduced debt level. Many producers, particularly those with large output volumes, will increase the use of production contracting to buffer themselves from undesirable economic shocks. Of course, more sophisticated vertical coordination by these producers may result in more limited market access for others, subsequently leading to fewer farms.[22] Still another group of farm families will attempt to cope with greater farm income variability by expanding nonfarm employment/income pursuits. And, to the extent that such options exist, our agricultural structure will maintain a part-time farming component. In the final analysis, a farm operation's survival will depend heavily upon its risk management strategy.

Policy Implications

The stresses and changes that are now occurring in Nebraska's farming sector are major and extremely pivotal to this state's citizenry. Perhaps in no other state are these economic forces so pronounced and their socioeconomic impact so great. Yet, despite the ramifications of structural change in agriculture, Nebraskan's and their elected representatives have only limited opportunities for influencing the destiny of production agriculture. Many factors affecting change (such as monetary and fiscal policy, farm policy, tax reform, international trade negotiations, and foreign policy) are national and international in nature. Recognizing this, it behooves us to seize the limited opportunities we have by gaining an understanding of the issues, engaging in constructive debate, and enacting appropriate and creative policy action. The following are offered as catalysts for this process.

First, Nebraskans must understand the basic issues of the current situation in agriculture and not just the symptoms. In essence, we must face the fact that chronic overproduction exists. Despite millions of people in other parts of the world facing food shortages, malnutrition, and famine, an expanding export market is not on the horizon. Quite the contrary, world agricultural productivity is expanding dramatically to challenge America's current share. U.S. farmers will not produce themselves out of the current financial crisis. Rather, decreasing our production agriculture is the most likely result.

We are uncertain of how this process will occur. The market itself may dictate sharp reductions of resource inputs allocated to agricultural production, or, alternatively, public policy may influence it.

But either way, ultimately we must reduce the amount of land and capital in production. For Nebraska, this may mean that a considerable amount of our land base and capital investment will be taken out of production for an extended period. In some of the marginal production areas of the state this could be a permanent reduction. The distribution of economic costs associated with such an adjustment is, indeed, a very weighty policy consideration.

Secondly, it appears inevitable that the number of farms will continue to decline substantially throughout the remainder of this century. The economic stress of recent years has only exacerbated the longrun trend. Rather than vainly trying to reverse this trend, it seems appropriate to consider institutional steps to ensure an orderly decline and an easy transition for all. For example, job retraining and employment services for displaced farmers and their families should be a high priority. Vocational agriculture, as now taught in countless high schools across the state, could be oriented toward other trades and skills. Likewise, the encouragement of new and more diversified economic activities in rural areas may allow thousands of farm families to continue to farm and reside in their rural communities, albeit via part-time farming.

Specific needs which may require new policy directions may arise for those who evolve into the role of major commercial producers. One such area may be availability of financial capital. Given the inability to service current debt levels, it seems likely that nonfarm equity capital will need to replace a sizable portion of today's farmer-held debt capital. An institutional environment which facilitates this transition is necessary. In addition, state involvement in providing venture capital for new agricultural directions may be quite appropriate, particularly if the potential for high economic payoff exists for the state's economy.

Policymakers must also realize that tomorrows' commercial farmer will approach agriculture as a profit-making venture and will act according to shortrun economic signals. Farmers operating in this kind of setting may, at times, make decisions which jeopardize the public interest (for example, the natural environment may be damaged) unless appropriate policy bounds are established and enforced.

Third, Nebraskans will need to weigh carefully the impact of structural change in agriculture on the economies of rural communities. The implications are sobering. Much of the state faces significant depopulation in the next 15 years as production agriculture changes.

Because Nebraska is a state of many small towns (more than 400 with a population of less than 1,000) the demise of many is a distinct possibility. Not all of these towns will have sufficient clientele to maintain viable business communities. Dependent on the economic base of production agriculture from an earlier era, many communities are battling to survive.

Many of Nebraska's small towns face a continuing deterioration of economic activity, tax base, public services, social networks, and other important quality-of-life components. At the extreme, an irreversible spiral of deterioration can cause the town to lose any discernible sense of community, and it becomes a mere cluster of occupied residences among vacant structures.

To be sure, such a process represents a significant waste of both private and public capital. Business properties remain vacant with essentially no salvage value. Schools, if not abandoned, become overbuilt, while an elaborate network of deteriorating roads and bridges provides an excess of alternative routes to a depopulated hinterland. But, even more tragic are the constraints imposed on the remaining residents whose potential is limited by their environment.

Thus, a changing agriculture poses new challenges for all rural citizens. For example, the high dependency of local governments upon property tax revenues must be faced. The problem is not only one of deteriorating magnitude but also the questionable equity of using property tax revenues for public services that are not property related (education, for example). Alternative revenue sources and service delivery methods will need to be developed.

In summary, participants in tomorrow's policy arenas will no longer be able to divorce the farm structure debate from questions of population settlement patterns, community well-being, and basic issues of quality of life. The relationships are substantial, and policymakers will need to articulate these aspects in national arenas as well, where factors of economic efficiency and expediency appear to rank much higher in the collective mindset. The costs and benefits of structural changes now underway will need to be weighed carefully, not solely by economic measures but by social, cultural, and traditional values that are still deemed important. Likewise, alternative policy directions must be evaluated. The policy challenge is great and the stakes are high for they will shape the image of Nebraska as it enters the 21st century.

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Small Business and Economic Development for Nebraska

Bruce A. Kirchhoff

4

Economic theory and research data suggest that Nebraska policymakers should redirect economic development efforts toward the formation and growth of small businesses. A mechanism is presented for categorizing small businesses into sectors which are most likely to provide the economic growth so necessary to the state. Recommendations for implementing a search and screening process to identify businesses with high-growth potential in the state are discussed. Finally, recommendations for changing policies and programs to increase the formation and growth of small businesses in Nebraska are presented.

Since the early 1980s, policy formulators have been intensely interested in the role that small businesses play in economic development. The popular belief in post-World War II America that big businesses were the source of economic growth in our society has been discredited by recent research. In 1979, Massachusetts Institute of Technology (MIT) published research which showed that from 1969 through 1976, small businesses created 82 percent of the net new jobs generated in the United States. Other research since 1976 has added support to MIT's findings.

Evidence suggests that economic development policies should focus on the formation and growth of small businesses, not the growth or relocation of large businesses. This is especially important in Nebraska where, historically, economic development has emphasized recruiting large businesses to locate new manufacturing plants in the state. Recent research suggests that the thrust of economic development should be to encourage entrepreneurs to form and expand businesses in Nebraska.

Nebraska's growth in the number of nonagricultural businesses has lagged the growth of such businesses nationwide. According to data published by the U.S. Small Business Administration (SBA), Nebraska had 35,459 nonagricultural business establishments in 1976; in 1982, this number had grown by 6.1 percent to 37,638. But, nationwide, the number of nonagricultural business establishments had grown by 10.3 percent.[1]

To correct such lagging growth, Nebraska's policymakers are faced with the difficulty of moving from the historical basis for economic development to a new view based upon entrepreneurship. Three major issues must be considered carefully: (1) Is the new view of entrepreneurial economic growth justified; (2) How do policymakers identify the small businesses which should be given economic development attention; and (3) What policies can be used to encourage entrepreneurial activity in Nebraska?

The New View of Small Business

The central question is whether economic growth based upon small businesses is a lasting phenomenon or just a passing fad. If the new view lacks either a theoretical base or strong empirical research support it is likely to be a fad rather than a foundation for economic development policies.

Theoretical Base for Entrepreneurial Growth

Historically, small businesses have not been perceived as major contributors to economic growth. Conventional wisdom reasoned that many small businesses were needed to produce as much economic activity as only one big business. Thus, large businesses were the focus of most economic development efforts. This logic was so much a part of American life that few questioned it. John Kenneth Galbraith codified this belief in *The New Industrial State.* Therein, Galbraith theorized that our nation's economic and social fabric was controlled by a technostructure composed of large businesses, large government bureaucracies, and large labor unions working together to accomplish society's goals of economic growth and stability.[2]

The potential for economic growth in Galbraith's new industrial state was vested in large corporations and large government bureaucracies. Small businesses were of little importance; many economists, sympathetic to Galbraith's view, considered small businesses to be anachronisms — inefficient and economically unimportant.

Recent Research Evidence

Yet, even as Galbraith wrote, empirical evidence was being collected to refute his big business hypothesis. By 1979, research at MIT revealed that 82 percent of the new jobs created in our society between 1969 and 1976 were created by firms with less than 100 employees. Dave Birch's innovative approach to analyzing employment data uncovered what no previous economic study was capable of disclosing. And, once he applied his analysis, the traditional view that large businesses dominate economic growth began to crumble.[3]

In quick succession, others searched for explanations for why small businesses created more jobs. One answer had been found earlier, but no one had been able to explain it. In a 1976 study conducted for the National Science Foundation, Gellman Research Associates found that small businesses create 2½ times more innovations than large businesses.[4] The National Science Board then examined its figures on research and development expenditures and concluded that small businesses generate many more innovations per dollar of research and development expense than large businesses.[5] Later, in a follow-up study, Gellman Research Associates found that small businesses create more innovations per employee than large businesses.[6]

Since the publication of David Birch's findings in 1979, the SBA has systematically assembled a data base on small and large businesses similar to that used by Birch. Analysis of this data base has resulted in estimates of the percentage of net new jobs generated in the United States by businesses with fewer than 100 employees. This percentage ranges from a low of 51 percent in the period 1976-80 to a high of 100 percent from 1980 to 1984.[7] Clearly, since 1969, small businesses have been the source of job growth.

This combination of findings began to suggest an economic growth phenomenon most unlike Galbraith's hypothesized new industrial state. Instead, it identified economic growth patterns that resembled those described by Joseph Schumpeter.

Schumpeter's Entrepreneurial Economy

Schumpeter perceived the economic structure of our society as being dominated by large businesses that find some form of mutually agreeable price, product, and quality relationship within their common markets.[8] These implicit agreements constrain the degree of competition in the marketplace.[9]

Price leadership is a commonly observed example of such constrained competition. General Motors (GM), for example, traditionally is the first U.S. automaker to announce price changes (or interest rate changes). The other automakers copy whatever GM announces. Schumpeter believed that large businesses would become satisfied with their relative market shares in such markets and seek to acquire profits without upsetting the agreeable competitive situation.

True capitalistic competition, Schumpeter noted, emerges when entrepreneurs discover innovations which can be used to enter markets that are dominated by large businesses and to destroy the competitive agreements. In so doing, entrepreneurs create profits for themselves, expand overall economic activity, and create increased wealth for society as a whole. Entrepreneurial growth occurs both by eroding market shares from existing large businesses and by expanding markets into new areas. This is Schumpeter's theory of creative destruction, that is, creating wealth by destroying current market structures.

A good example of creative destruction is the start up and success of Godfather's Pizza, Inc. Willie Theisen developed a combination of innovations—pizza recipe, self-serve restaurant, pricing, restaurant motif, and advertising and promotion themes. This combination allowed Godfather's to enter the restaurant franchise business in 1976 and become the fastest growing restaurant franchise in the United States by 1982. At the same time, large pizza chains, such as Shakey's Pizza and Pizza Inn, suffered considerable loss of market share while Pizza Hut was forced to reorganize. In the meantime, the entire pizza restaurant industry experienced a spurt in growth. Thus, Godfather's entered the market with successful innovations, significantly changed the market structure by eroding the market share of several established large businesses and expanded the pizza restaurant market by appealing to a broader segment of the population.[10]

The Godfather's example and many like it make Schumpeter's theory fit the research findings on job generation and innovation. Small innovative businesses then are the source of economic growth; they form and grow by creatively destroying existing market structures and so produce new wealth and new jobs.

Why do innovative entrepreneurs choose Nebraska as a place to start businesses? Entrepreneurs start businesses where they live, and they keep their businesses located where they live. This is logical and many research studies have confirmed it. Godfather's was started in Omaha because Willie Theisen lived there; in fact, it was started only a few blocks from where he lived.

Still, not all small businesses are, nor should they be, creative destroyers of the scale of Godfather's. Clearly, some small businesses in Nebraska can and do become Schumpeter type entrepreneurships; others do not. However, examples of successful Schumpeter-type businesses abound in Nebraska: Pamida, Valmont Industries, Iowa Beef Processors, and Lindsay Sprinkler. But, where are the creative destroyers of tomorrow? How can they be identified? How can Nebraska establish policies that facilitate formation and growth of these businesses? How can Nebraska take advantage of this new view of small business?

Identifying Small Businesses with Growth Potential

There are 7-17 million small businesses in the United States, depending on how you count them. It is impossible to focus economic development efforts on all of these businesses. But, how do economic development specialists identify which small businesses are potentially high-growth businesses?

Policymakers have long known that small businesses were the backbone of Nebraska's agricultural economy. It is obvious, however, that these agriculturally related small businesses are not the entrepreneurs on which the popular press focuses national attention. Newspapers and magazines glamorize hi-tech entrepreneurial firms, such as Apple Computer Company, Atari, and Compaq Computer. Are there such glamorous firms in Nebraska? Where are they? How can they be identified?

Smallness by itself does not identify those businesses which have high-growth potential. Instead, smallness identifies a hodgepodge of disparate businesses characterized more by differences than by similarities. These businesses range from family owned, neighborhood retail stores to venture capital owned, innovative computer software firms. Identifying which among such a variety of businesses offers growth potential is difficult. A new, more useful segmentation of the small business sector which identifies business growth is necessary.

Classifying Small Businesses for Economic Development

Schumpeter's theories provide a base which can be used to create a classification of small businesses for economic development analysis. Schumpeter noted that creative destruction resulted in growth of the firm's and the economy's wealth. Schumpeter implicitly assumed that growth and innovation were synonymous; innovation produced growth, and growth emerged naturally from innovation. But, experience tells us otherwise. Entrepreneurs can innovate without success, and, therefore, experience no growth. Alternatively, a business can grow, even without innovation, on the strength of an initial successful innovation. For example, Godfather's initial innovations provided it with growth for 7 years.

If we recognize that innovation and growth are two separate phenomena, we can then classify small businesses by their innovation rates and growth rates. Such a classification can reveal business characteristics that are particularly relevant to economic development.

Four Segments of the Small Business Sector

Using the two dimensions of innovation and growth, we can draw a matrix that can be divided into four segments (figure 1). The first segment is one in which firms experience low growth and low innovation rates. This segment contains the largest number of small business firms and is called the economic core. Next is the group of businesses that have high rates of growth but low rates of innovation. These ambitious businesses are truly Schumpeter types in the extent to which they creatively destroy markets, but they grow on the basis of their initial innovations. The third group of businesses has a high rate of innovation but these businesses have not achieved growth, that is these businesses have constrained growth due to a lack of success in penetrating their intended markets. Fourth are the firms that have high rates of innovation and high rates of growth; these are the glamorous firms upon which the popular press thrives.

Economic Core Firms

By far the greatest number of small business firms are in this category, defined as low growth and low innovation. At the time of formation these firms innovate enough to destroy a small portion of market structure, such as a local market or a specialized part of a national market, in an effort to carve out a market position that will establish and maintain the firm. But, the innovation is not sufficiently powerful to

Ambitious Firms

Ambitious firms are often mixed into discussions of the highly innovative high-growth firms. The assumption is that all high-growth firms are highly innovative. But, ambitious firms are not highly innovative. They are high-growth, and their growth is derived from one, or a few, highly successful innovations.

Ambitious entrepreneurs consider growth to be their primary objective and concentrate their resources on the growth process. They avoid diluting their growth by allocating scarce resources to the creation of additional innovations. This can be demonstrated from Godfather's experience.

Once Godfather's Pizza identified its potential for growth, it focused its resources on growth. Early in its development, it identified an innovative combination of product, price, decor, and advertising that suited consumers' tastes and produced outstanding profits for the franchise owner. It left this combination relatively unchanged while it used its resources to market franchises and to guide the development of new restaurants nationwide. Within 6 years, this combination of innovations had rocketed Godfather's into the highest rate of growth among food franchise operators in the United States. But, Godfather's did not attempt to create any new innovations of the magnitude of its original combination, so as it gradually achieved geographic saturation with its franchises, its creative destruction impact became less and its rate of growth declined. This cycle is typical of ambitious businesses.

Another example of an ambitious Nebraska firm is Iowa Beef Processors, Inc. IBP was founded in the early 1960s with the innovative idea of slaughtering, breaking, and butchering beef all under one roof. By the early 1970s, it had changed the entire wholesale beef business by marketing boxed beef nationally and offering high-quality beef at a lower per unit processing cost. And, while the large traditional beef processors suffered decline, U.S. per capita beef consumption rose in conjunction with declining constant dollar retail prices for beef.

IBP became a member of Fortune magazine's 500 largest industrial companies. But, in the 1970s, new competitors emerged while the remaining untapped markets proved harder to penetrate. And, changing consumer tastes combined with major innovations in the production, pricing, and marketing of chicken (a substitute product) reduced per capita beef consumption.[15] IBP's rate of growth declined with the changing industry and increased competition.

Ambitious entrepreneurs bring their innovations into a market structure dominated by large firms. Both Godfather's and IBP entered markets which most experts perceived as saturated and stable. Experts said that the pizza restaurant business would not support another pizza chain; they also said that the wholesale and retail beef business was locked up by Wilson and Swift. The experts were wrong; such is the stuff of innovative entrepreneurs.

In each of these examples, the desire of the entrepreneur to achieve growth through exploitation of an initial innovation led to increased competition, increased consumer variety, and increased overall consumption, that is, to new and expanded markets. But, in both examples, growth eventually declined as the innovation achieved geographic coverage, new competitors emerged, and market changes became incremental. Simultaneously, the entrepreneurial firms became part of the big business economic structure and experienced declining growth. The only mechanism available for continuous high rates of growth is continuous entrepreneurial innovation.

Constrained Growth Firms

Entrepreneurial innovativeness, in Schumpeter's definition, leads to creative destruction of current market structure. But, in reality, some highly innovative firms fail to destroy market structure; in such cases, something must be constraining the firm's ability to penetrate its chosen market.

Constrained growth firms are those highly innovative firms that should be high-growth firms but something constrains the entrepreneurs' efforts to enter and change markets. These constraints fall into two classes: internal constraints and external constraints.

Internally Constrained Firms. Internal constraints are imposed by the entrepreneur upon the firm's activities. Some entrepreneurs are unwilling or unable to grow for reasons within their control. These entrepreneurs accept lower levels of market penetration as necessary conditions to achieve their other objectives, which may or may not be conscious objectives. In other words, some of their objectives differ from Schumpeter's theoretical entrepreneurial objectives. These other objectives may be maintenance of individual or family control, avoidance of high rates of internal change (and the strife and trauma associated with such change), fear of failure, or simply satisfaction with establishing and maintaining a secure, adequate, personal income flow.

Maintenance of control is the most common constraint. Entrepreneurs recognize that achieving high rates of growth requires large sums of capital, sums that exceed the firms' internal cash generating and borrowing capabilities. Thus, they need to constrain the growth of their firms or seek outside sources of equity capital, that is, share ownership. They choose to constrain growth because they fear loss of control if they share ownership with outsiders.

Another common reason for constraining growth is income targeting. The entrepreneur seeks to achieve a level of income which satisfies personal or family needs. Once this level of income is achieved, the entrepreneur's need to commercialize inventions and expand applications declines and growth slows. Although the entrepreneur may continue innovating, the innovations are not commercialized as quickly, or they are not commercialized at all. Income maintenance dominates decisionmaking and risk of failure makes investment in innovation and growth appear as a threat rather than an opportunity.

Growth in sales and employment of internally constrained firms lags far behind potential. If the innovations are attractive enough, competitors eventually copy them, enter the market, and carry out the creative destruction. Inventors who start firms based on a patented invention are often surprised to discover that competitive entry is not prohibited by patents. Unless the patent holder aggressively commercializes and exploits the market potential of the invention, competitors will willfully violate the patent simply because the potential profits more than justify patent infringement penalties.

For example, a major innovation in pocket pager technology in the early 1970s occurred in the design of a battery power-conserving circuit. This circuit was invented and patented by the principal owner of Reach Electronics Corporation in Lexington, Nebraska. The patented circuit extended the life of the battery from 30 days to over 1 year and made the pocket pager a truly reliable device. But, Reach constrained its growth and moved slowly into the market. Meanwhile, Motorola copied the circuit and aggressively moved into the market. The owner sued Motorola and eventually won the patent suit. But, by the time the suit was settled, Motorola had 95 percent of the U.S. pager market, and had increased employment in Illinois by thousands.

Large competitors fill the gap created by self-constrained entrepreneurs by licensing patents or by buying out the firms. But, until ownership of internally constrained firms changes, rates of growth remain low. Such firms meet their owners' needs but fall short of fulfilling their potential for economic growth. The greatest economic growth impact occurs when a firm grows rapidly.

Externally Constrained Firms. Some entrepreneurs are unable to obtain the resources they need to exploit their innovations. These tend to be new, early developing, innovative firms. The cost of innovation is so high that firms either overcome their constraints or fail within a few years. Their products or services have not yet demonstrated market worthiness or management has not yet proven itself capable of performing. Thus, suppliers restrict or withhold credit, banks limit their lending, and venture capitalists hesitate to invest, asking instead for proof of ability to succeed.

Furthermore, suppliers of special resources, parts, or subassemblies hesitate to supply small quantities because of high start-up costs and credit risk. At the same time, distributors are reluctant to stock the firm's product or even actively sell it until the market is defined or the firm shows itself to be a survivor. This is the small business Catch 22. Showing proof of success as required by potential investors is not possible until after the investors invest and the markets develop.

If an externally constrained firm survives and demonstrates market potential for its product or service, resource constraints will disappear. In the meantime, the firm struggles for survival and remains resource starved with an economic growth potential unfulfilled.

Another possibility is that the externally constrained firm can be bought out by a large firm before its potential is realized. If this happens, it is probable that the firm's potential for destroying market structure will never be realized, because market turmoil is resisted by the large firm. It will prefer to exploit the innovations in an orderly way that does not radically upset the current competitive agreements in the market. This may benefit the exploiting firm, but it results in reduced economic growth for society as a whole.

Examples of externally constrained firms abound in the consulting studies done by the Nebraska Business Development Center. Few of these are known because they are not the focus of public attention or press reports. For example, Goldenrod Research Inc., of Spalding, Nebraska, is a struggling computer manufacturer that is trying to raise sufficient capital to initiate marketing. Whimseys of Omaha manufactures unique Christmas tree ornaments for which there is a substantial market, a long list of new products, and a need for an investor who can also serve as a business manager. Which of these might be Nebraska's high-growth firm of the 1990s?

Overview of Constrained Growth Firms. Constrained growth entrepreneurs are, in fact, small firms whose contributions to economic growth remain unrealized. Highly innovative, they possess the capability to become high-growth firms.

Constrained growth firms deserve special attention by policymakers because their economic growth potential is so great. Externally constrained firms are of particular interest to economic policymakers; such firms have considerable potential for economic growth but teeter on the brink of failure. The extent to which they overcome their constraints will determine whether they do or do not contribute to economic growth. Capital, especially start-up capital to turn inventions into innovations, is the most frequent growth constraining resource for such firms.

Venture capital firms see many such firms but turn away most because they lack defined markets and management expertise. Research funded by the National Science Foundation suggests that venture capitalists rarely invest in externally constrained firms. An analysis of the average value of venture capital investments and the number of investments in technologically innovative firms during the early and seed stages of development reveals significantly lower investment than at later stages of the firm's development.[16] Venture capital firms prefer less risky investments.

On the other hand, research for the U.S. Small Business Administration suggests that informal investors appear to be the predominant investors in externally constrained firms. Such informal investors, however, usually invest only an average of $25,000.[17]

Furthermore, such firms are among the highest risk category of investment ventures and, therefore, have little luck at borrowing from financial institutions. I have demonstrated that financial institutions will refuse to lend to such firms rather than lend at interest rates adjusted for risk.[18] Thus, while ambitious firms usually encounter capital problems associated with their growth, constrained growth firms encounter capital problems before growth can be realized.

Glamorous Firms

Of all the small business segments, glamorous firms demonstrate the greatest economic development deriving from sustained high growth. These firms have high rates of innovation and achieve high rates of growth from successful exploitation of their many innovations. Growth continues as long as the firms develop innovations and successfully use them to destroy economic structure.

These are called glamorous firms because they receive so much publicity for their contribution to economic growth. Such firms start small but are rarely small for long. Once such a firm passes the period of constrained growth, it catapults into the large firm sector. The founding entrepreneurs become locally (or nationally) renowned, and the press extols the virtues of successful entrepreneurship. Only the founders understand the agony of the start up and the initial struggle to survive.

Such entrepreneurs place priority on innovation and growth. They believe that growth is the outcome of innovation, and, therefore, they pursue innovation. Alternatively, they may simply prefer innovation as a way of life. Growth is sustainable as long as the firm creates innovations that attack current markets.

Many of today's large firms began as glamorous small firms. For example, Control Data Corporation was started by several scientists who wanted to innovate outside the constraints of their previous employer. Their commitment to innovation carried them into a long series of new computers and applications and into a large corporation. Wang Laboratories and Digital Equipment Company have similar stories. And, Apple Computer is in the throes of proving its ability to sustain innovative growth.

But, even highly innovative firms eventually experience declining rates of innovation and subsequently declining growth. Once the entrepreneurial spirit of innovation wanes, bureaucratic behaviors emerge and entrepreneurship vanishes. Instead, large firms begin to focus on lower risk strategies and defense of current market shares, thereby becoming the target of new entrepreneurs.

Nebraska has examples of glamorous firms; Norden Laboratories of Lincoln, First Data Resources of Omaha, and, most recently, Applied Communications of Omaha. Valmont Industries, Inc., has a history that may typify these firms. Valmont began in 1946 when Robert Daugherty and his uncle purchased Platte Valley Manufacturing, a firm that manufactured farm elevators for Sears, Roebuck and Company. Although successful, the firm recognized the mechanical irrigation equipment of Frank Zybach as an important innovation and bought him out in 1953. Platte Valley Manufactauring worked on the development of irrigation equipment for 8 years before its market penetration became significant. In 1960, Platte Valley Manufacturing recognized that its manufacturing ability with steel tapered pipe could be used to innovate in the market for electrical utility poles. Market penetration was slow here as well.

By 1963, Platte Valley Manufacturing had only 180 employees and $6.2 million in sales. But, demand for irrigation equipment began to grow. In 1967, the firm was renamed Valmont and then a public issue of stock was made in 1968, a year in which its annual sales reached $22.3 million. By 1976, mechanical irrigation equipment sales peaked and the firm had sales of $105 million. Then, electrical product sales began to grow faster than irrigation equipment. In 1980, total sales reached $152 million. In 1982, Valmont innovated again by forming a retail computer sales business, Valcom. By 1985, Valmont's sales reached $313 million with 1,960 employees. Irrigation equipment, electrical products, and computers—three major innovations to achieve more than a tenfold increase in sales and employment in 20 years.[19]

Glamorous firms probably represent the smallest percentage of small firms. Twelve to 15 percent of small firms create most new jobs,[20] and glamorous and ambitious firms constitute no more than 12-15 percent of that number of small firms. Venture capital data suggest that ambitious firms dominate within this group.[21]

Focus of Economic Development

Ideally, economic development efforts should identify ambitious and glamorous firms as they are formed and provide support for them as they grow and create increased wealth for the state. But, glamorous firms usually start as constrained growth firms and ambitious firms typically have roots as economic core firms.

Neither glamorous nor ambitious firms are amenable to typical government policy prescriptions. For example, I have shown that federal tax policies, enacted on the basis that they would be good for small businesses, had little impact on ambitious or glamorous firms and possibly negative effects on constrained growth firms.[22] Simply stated, once a firm enters the ambitious and glamorous categories the ability of any public policy to affect its growth is questionable.

Thus, the greatest effect economic development policies can have and should have is on the constrained growth and economic core sectors. These sectors are characterized by formation activity and limited growth. Economic core firms do not aspire to growth. Constrained growth firms are constrained in their growth ambitions. Thus, policy prescriptions should address two principal characteristics of small businesses:

Formation	What can be done to increase the rate of business formations? Unless new businesses are formed, opportunities for economic growth eventually wane as the economic structure becomes dominated by large firms that are intent on defending their current markets.
Growth	What can be done to increase the rate of growth of businesses? Unless economic conditions facilitate new business growth, new business formations will stagnate as either economic core or constrained growth businesses. Either way, the largest part of their contribution to economic growth will not be realized.

Effective encouragement of entrepreneurial activities in Nebraska requires that economic development policies address business formation and growth needs.

Encouraging Formation and Growth of Small Businesses

Resources are the essential elements of formation and growth of businesses. To form a business, an entrepreneur needs to perceive that the resources necessary for success are available. To make a business grow the entrepreneur must convert perceptions of resources into actual resources.

All small businesses need four categories of resources.

- Managerial knowledge and ability in diverse areas such as personnel, marketing, accounting, finance, law, and production.
- Scientific knowledge and ability in areas such as product design, engineering, manufacturing systems, and materials testing.
- Debt capital. This is money which must be repaid along with interest to a lender at some defined future date.
- Equity capital. This is money which may (or may not) be repaid at an undefined future date if the firm achieves adequate earnings.

Others may suggest a different list of resource categories; for example, classical economics uses three classes of resources, land, labor, and capital. Land seems of little importance because it is easily interchangeable with capital in today's American economy. Labor remains an important variable and is incorporated in the list by referencing the critical elements of labor in an advanced technological economy, that is, specialized knowledge and ability. These are the constraining characteristics of labor resources.

The list somewhat artificially separates knowledge into business related subjects and scientific and engineering subjects. Managerial knowledge is defined as business know-how. Scientific knowledge is defined as science and engineering know-how. This distinction is not as obvious to the practicing entrepreneur as it is to policy analysts, but it remains an important designation for policy development because the subjects are clearly separated within the state's educational system and have been conventionally treated as separate subjects in the literature on entrepreneurship.

For policy purposes, there are substantial differences between debt and equity sources of capital. For example, debt repayment is made from earnings before taxes with interest, a tax-deductible expense, whereas equity repayment must be made with after tax earnings. This makes capital acquisition sensitive to tax policy. Again, entrepreneurs will not often see the difference between these two as relevant to their operations, but the differences are important to policy formation. These four categories capture the essential nature of business resources for policy development.

The Motive to be Entrepreneurial

Another aspect of entrepreneurship not mentioned in the list of resources is motivation, that spirit of human beings which fosters and promotes the vision of business formation and growth in the minds of men and women. No one fully understands why or where this spirit originates, but there is no reason to believe that Nebraskans are any less endowed with this spirit than other Americans.

Some very useful research has been conducted on the motivation of entrepreneurs by David McClelland and others. McClelland has defined a human characteristic called achievement motivation that is related to entrepreneurial behavior. Several major behavioral change programs have been developed and tested in the United States and other nations. Generally, these programs have been successful, especially in the formation of economic core businesses in less developed nations.[23]

However, it is generally believed that middle class persons in the United States are imbued with a significant natural tendency toward entrepreneurial behavior and, therefore, behavioral change programs are not used widely in our nation. Whether they should be more widely used in the United States is an interesting question, but a question outside the range of this chapter.

Managerial Knowledge and Ability

As soon as a business is formed it becomes a taxable entity. Thus, the need for business knowledge suddenly burdens the entrepreneur with recordkeeping. And, forever thereafter there are demands for specific types of technical knowledge on business topics.

It is rare to find anyone in any business organization, no matter how large, who has enough knowledge about all aspects of running a business that advice from technical consultants is not needed. Large businesses meet this need by hiring a bevy of experts—personnel specialists to interview and hire, financial wizards to manipulate cash balances, and accountants to record every action the firm takes. But, small business owners or managers do not have access to these experts, and lack of such expertise can lead to constraints upon formation and growth.

Such lack of expertise is very specific and unique to each business and market situation. General education programs, either credit or noncredit, rarely address the individual manager's knowledge needs at the level of specificity required. Delivery of managerial assistance to small businesses requires individualized instruction; such individualized instruction is conventionally called consulting, that is, a knowledgeable expert communicating with a small business manager one on one.

The U.S. Small Business Administration's (SBA) accumulated experience of over 30 years of management assistance to small businesses clearly indicates that effective management assistance for small businesses requires individualized consultation. It is for this reason that the U.S. Congress authorized the SBA to implement the Small Business Development Centers (SBDCs) in seven states in 1976. The SBDCs were designed to provide management assistance to small businesses by using the faculty of university business schools to provide consulting and training.

The SBDCs' principal program is providing individualized consulting to small businesses. The success of this program is evident by SBA's gradual phase out of many of its Management Assistance Programs, while increasingly relying on the SBDCs and the Service Core of Retired Executives (SCORE) Program, wherein retired executives consult with small business owners individually.

No small business possesses all of the managerial expertise necessary to cover its business needs. To facilitate business formation and growth, individualized consulting services must be provided to small businesses, especially externally constrained growth businesses whose constraint may be business knowledge rather than capital.

Technical Assistance

Those who specialize in the sciences and engineering will recognize the similarity between the comment about specialized knowledge and the need for individualized consulting rather than broad-brush educational programs. Each small business with a technical problem needs specialized one-of-a-kind assistance.

Again, such consultation is needed on an individual basis. And, the lack of such technical assistance could limit the formation and growth of small businesses, especially the externally constrained growth businesses whose constraining resource may be scientific knowledge rather than financing.

But, the differences between management assistance and technical assistance are not as clear to working entrepreneurs as they are to policymakers. Many business problems can be recast easily as scientific problems. For example, selling a high-priced product may be perceived as a marketing problem. On the other hand, the same problem could be perceived as a technical problem of finding a cheaper raw material for producing the product, thereby permitting reduction of its price. This blend of business and scientific knowledge is understood by those who routinely perform such problem analyses, that is, entrepreneurs. But, every technical expert typically brings bias to problems so that the definition of the problem reflects scientific or business specialty. Thus, entrepreneurs are required to define their problems before they select consultants.

This is a dilemma policymakers must face if they are to promote the formation and growth of businesses. How can the government facilitate problem definition so that entrepreneurs can obtain assistance, either business or technical?

Debt Capital

Debt capital is not as readily available as economists generally theorize. The reason is that financial institutions do not vary interest rates to adjust for variations in risk on small business loans. Instead, lenders tend to either lend or not lend, that is, they ration funds. And, the lenders' assessment of risk is heavily dependent upon a firm's history of financial performance.[24] Furthermore, when they do lend, financial institutions charge small businesses an interest premium disproportionately large relative to the risk involved.[25]

Most small businesses, especially economic core businesses, have limited access to markets for loan funds compared with large businesses, and, therefore, depend almost entirely upon financial institutions for their debt capital. Under these conditions, many small businesses simply have no access to loan funds. This is especially true for newly formed businesses because they lack financial histories and are assessed as high risks.

Economists often note that debt to asset levels among small businesses, especially economic core businesses, are typically higher than those of large businesses in the same industries. However, economic core businesses are usually closely held and the personal assets of the owners are pledged as collateral for debt; because personal assets are not reported as part of the businesses' assets, the debt to asset ratio is overstated. Thus, apparent high-debt levels are probably not out of line with conservative institutional lending practices. Furthermore, recent research has shown that smaller economic core businesses are more profitable and demonstrate less risk as measured by their profits relative to their debt obligations than larger businesses in the same industries.[26]

Contrary to popular opinion, small businesses are not high-risk borrowers. Thus, economic core businesses are capable of handling fairly large amounts of debt relative to their larger counterparts. So the cost and availability of loan funds from institutional lenders is an issue of importance to policymakers who are committed to encouraging the formation of new businesses, especially among economic core firms which, among other things, regularly spawn ambitious firms.

Equity Capital

New businesses, especially those with considerable growth potential, need patient money. Patient investors understand that such businesses typically do not earn profits in excess of their internal cash needs for 7-10 years. Although the returns the investor eventually reaps may more than justify the wait, the investor must be patient.

Typically, these patient investors are not venture capital firms but individuals who invest $25,000 to $50,000 and patiently wait for the long-term payback. Such individuals play a vital role in the formation and early stage development of glamorous and ambitious small businesses. It is essential that entrepreneurs have access to patient investors, investors who have been characterized as informal investors.[27]

There are good reasons why patient investors are needed for firms that pursue high-growth objectives. Growth, especially high growth, consumes much capital. Thus, ambitious and glamorous firms rarely generate cash equal to their internal needs. They have little or no ability to repay investors for many years even when profit margins are high. This means that ambitious and glamorous firms cannot depend on debt as a major source of financing because debt to financial institutions brings an obligation to repay within 5 years or less.[28] Typically, principal and interest payments begin in the first period after the loan is made. Debt repayment is a cash outflow that can constrain the firm's rate of growth, thereby decreasing the ability to produce economic growth.

Too often entrepreneurs seek and obtain debt capital only to discover that debt repayment exhausts their initial success and drains their firms' ability to grow. Thus, an economic core firm is formed, grows to a limited size, and then stabilizes as it services its debt. The constrained growth firm is formed and then exhausts its capital in debt repayment while it is still in the early innovation stage of development. It then struggles to obtain more debt, never realizing that it is the debt capital that is constraining its rate of growth.

Exceptions to these general observations exist but there are many reasons why informal investors are often referred to as investor angels. A viable economic development policy should address the informal investor issue. Without patient money, many potentially ambitious businesses will remain in the economic core and many potential glamorous businesses will never break free of constrained growth.

Eventually, as the entrepreneur begins to reap profits, the firm develops the need for large sums of capital (millions of dollars). With good planning (and a little luck), the firm will become sufficiently attractive so that it can obtain financing from venture capital firms. Venture capital is widely available in the United States and, although only two somewhat limited venture capital firms operate in Nebraska today, there are several regional firms that are constantly searching the Midlands for potential investments.

Another opportunity for capital acquisition is the public issue of stock. Although somewhat more expensive, a public issue can raise large sums of capital while avoiding taking on a significant single owner who may attempt to control the firm.

Anecdotal evidence suggests that Nebraska has not provided adequate venture capital for its growing firms. Many Nebraska growth firms have found it desirable or necessary to sell themselves to large corporations to meet their growth needs. First Data Resources sold itself to American Express. Behlen Manufacturing of Columbus sold itself to Wickes.[29] Swanson Foods sold itself to Campbell Soup after many years of success. Norton Laboratories, Skinner Macaroni Company, the list goes on and on. One cannot help wondering if these sales resulted in more economic growth in the home state of the acquiring firm rather than in Nebraska.

Public policy needs to address the issues of informal venture capital for economic core and constrained growth firms and venture capital for ambitious and glamorous firms.

Summary of Resource Needs

This review of the character of the required resources and the limitations on these resources shows how the formation and growth of small businesses can be constrained and makes it evident that the primary assistance needs lie among the economic core and constrained growth firms. Firms from these sectors that aspire to enter the glamorous and ambitious sectors are faced with major inefficiencies in availability of resources through the private sector. Information and capital are not readily available. The business and scientific knowledge needed may be prohibitively expensive if it is purchased from private consultants. While debt capital is expensive and difficult to obtain for most small firms, debt capital is not available from lending institutions at any cost for newly formed firms, unless the entrepreneurs have personal assets to pledge.

Many business formations fail at the outset for lack of capital and knowledge. If formation is succesful, debt capital eventually becomes available, but then the small business must seriously question whether debt is appropriate for the firm's growth objectives. Private sector business and scientific assistance continue to be expensive relative to the firm's revenues, and the entrepreneurs somehow must possess the knowledge necessary to define what assistance they need before an expert consultant can be requested. Growth requires patient investment capital. Yet, finding an investing angel is far from easy in Nebraska.

Once firms grow into ambitious or glamorous status, their technical assistance and debt capital needs are addressed adequately within the private sector. They are capable of purchasing both business and scientific expertise, either by hiring employees or by paying consultants. And, they have greater access to debt capital markets simply because they have histories of strong financial performance. However, acquisition of large sums of venture capital may be constrained in Nebraska, so many firms have sought and obtained acquisition by wealthier firms headquartered outside of Nebraska.

These are the issues which Nebraska policymakers need to address to promote economic development. The formation and growth of small businesses will contribute greatly to economic development within the state.

Public Policies to Address Small Businesses' Needs

Before describing policies which will address the problems of formation and growth of small businesses, there are several caveats about popular economic development myths which must be addressed. Numerous, simple broad-brush policies are frequently mentioned in the popular press, political campaign rhetoric, and even among economic development specialists. Recruiting new plants with tax reductions, employee training programs, and tax-free property remain popular. Assisting high-technology start-ups with state equity investment capital, technology incubators, and innovation centers are equally newsworthy. But, caution must be exercised before leaping into popular programs without carefully assessing Nebraska's unique business environment.

Problems with Recruiting Big Businesses' Plants

There are no quick and easy solutions to Nebraska's problems. Emphasizing publicly visible, front-page newsworthy, flashy solutions to economic development is a futile exercise, perhaps even publicly irresponsible. Spending large sums of money to recruit a major manufacturing plant from a large corporation is a high-risk adventure. If one wins, it can be politically rewarding, but a loss may exhaust the limited resources of the state.

Even if a new plant comes to Nebraska, it may take years for the plant to generate spin-off businesses, that is, new small firms formed from the technology base of the large firm, either as suppliers or competitors of the large firm. Or spin-offs may never occur. Where are the spin-offs from New Holland's combine plant in Lexington? There are none because New Holland did not bring any technology base with this plant. This is not uncommon with large corporation assembly plants.[30] Not surprisingly, there are no spin-offs from Kawasaki's motorcycle plant in Lincoln. There are assembly jobs in Lincoln but the technology base is in Japan.

Unless an expansion or relocated plant brings a complete core of technology and business experts with it, spin-offs are unlikely. An environment conducive to new technology-based business formations requires a core, a critical mass of technology. Such a core of technology fueled Silicon Valley around San Jose, California.

Technologically Based Economic Development Experiences

It is doubtful that any state can duplicate the exact experience of Silicon Valley, or Route 128 around Boston, or Bionic Valley in Salt Lake City. A look at the reality of these examples may help explain why.

Every state wants its own Silicon Valley like California. But, reality is somewhat different. Researchers at Stanford Research International found that Silicon Valley had its roots in the founding of Hewlett-Packard Corporation in a garage in San Mateo during the late 1930s. Later, Stanford University was pressed for money to modernize its research laboratories, so it began cooperative research with Hewlett-Packard in the 1950's. Attracted by these researchers, the developer of the transistor left Bell Laboratories, moved to Silicon Valley and started a new transistor manufacturing operation. Growth was slow but continuous as new electronics firms began as spin-offs from Hewlett-Packard and Stanford University. Silicon Valley, as we know it today, took 30 to 40 years to develop.[31]

Route 128 in Boston is another model often recommended in Nebraska. Published research by Bennett Harrison documents the decline of the New England textile and shoe industries beginning around the turn of the century and culminating in high rates of unemployment during the 1960s and early 1970s. This high unemployment laid the foundation for Boston's rejuvenation by preparing workers for radical changes in careers, from stitching shoes to programming computers. Even as late as 1973-75, Boston had one of the highest unemployment rates in the nation. The Boston area's economy became really bad before it began to get better.[32]

Utah's Bionic Valley, teamed the University of Utah with entrepreneurs and a federally funded innovation center. This spawned a bevy of high-tech medical companies that are producing mechanical hearts, artificial kidneys, and bionic human arms. Again, careful research shows that Bionic Valley has its roots in a major commitment to science made by the President of the University of Utah 20 years ago. And, Bionic Valley is only now beginning to pay off for Utah.[33] Just as Utah's economic development had a long-term horizon, it also had an arduous journey. The University of Utah maintained its commitment to medical research in spite of the state legislature's reduction of its budget during the 1970s (measured in deflated dollars) and the cancellation of federal funding for its innovation center after only 4 years.

These stories show the special nature of economic development. There are few, if any, commonalities to the way economic success came to these three areas. Each state must carve its own story, its own special way of achieving growth.

Nebraska's Limited Resources

Nebraska has special problems, not the least of which is severe limits on public revenues. The people of Nebraska have decided to reduce proportionally the property tax on agriculture, and, by computing income tax as a percentage of the federal income tax, Nebraska has decided to draw proportionately smaller income taxes from agricultural operations. Essentially, Nebraska has decided to reduce taxes on its largest industry, thereby reducing its revenue generating capacity. Although Nebraska has high tax rates, the base is narrow, so it collects relatively low revenues.

Furthermore, in Nebraska the major business and population center (Omaha) and the university's technology center (Lincoln) are geographically separated. The three examples cited above had universities located within their geographic areas, and they were part of the economic development stories. The Board of Regents of the University of Nebraska merged the University of Nebraska at Omaha engineering school into the University of Nebraska-Lincoln to avoid program duplication and to conserve scarce financial resources. But, the long-term result was a geographical barrier to building a technology core in Omaha.

Policy Recommendations

Given these caveats, there are some specific policy recommendations which are essential to the economic development of Nebraska. Each of the following requires action by Nebraska's state government so that the four needs of economic core and constrained growth businesses can be better met, thereby fostering increased formation and growth of businesses.

Two areas cry out for immediate short-run attention: assistance with business knowledge and availability of informal venture capital. In the longer run, assistance with scientific knowledge is also needed.

Maintain and Improve Business Assistance

There are three reasons why the state should target business assistance above all other policies. First, most economic core and constrained growth businesses in the state are not users of high technology and, therefore, they are unlikely to spawn science-based ambitious or glamorous businesses. Most are service businesses; those that are in manufacturing use relatively little advanced technology. Thus, knowledge constraints on these businesses are likely to be business knowledge.

Second, Nebraska's post-secondary educational system does not have a reputation for state-of-the-art technology in any applied high-technology field. Simply stated, currently the critical mass technology does not exist in this state's higher education system.[34] Thus, building a state-of-the-art technical base will require a long-term commitment, such as the University of Utah's 20-year commitment to bionic medical research. Little can be done in the short run.

Third, the technology base in Nebraska resides among private sector businesses and, as such, is amenable to business knowledge assistance rather than technical assistance. For example, computer software for financial transactions has become a major business in Omaha. First Data Resources, Inc., and Applied Communications, Inc., serve as the core of a growing field in which many small firms now operate. Another example exists in central Nebraska where many electronics manufacturing firms are located, for example, Reach Electronics in Lexington and Dale Electronics in Columbus. Facilitating technology transfer among similar firms requires business assistance rather than scientific consulting. Thus, business assistance is the major priority in Nebraska for encouraging increased formation and growth of small businesses.

Maintain the Current Level of Business Assistance

Maintenance of business assistance programs is first among policy prescriptions because the federal government is reducing its commitment to funding such assistance in Nebraska. The state must act to replace this funding or the level of business assistance will decline. For example, the Nebraska Business Development Center (NBDC) is about to lose half of its federal funds. NBDC provided consultations to 1,165

Nebraska businesses in 1985. This activity will be cut in half in 1987 unless the federal funding is properly replaced and matched, a decision the Legislature must make in early 1987.

Expand Business Consulting Activities

Because no one can predict which economic core or constrained growth businesses will succeed, the proper policy is to help all small businesses. However, those that appear to have the potential for high growth should be identified during the consulting process and moved into a more intensive assistance program.

Nebraska should develop a two-tiered business assistance program. The first tier should be designed to provide consulting to all economic core and constrained growth businesses. Additionally, business consultants should be trained to screen these businesses to identify those with high-growth potential. Businesses with high-growth potential should be passed on to a second-tier business assistance program.

This second tier of management assistance should reduce significantly the resource constraints these businesses experience. The second tier of consulting programs should contain science and technology consultants as well as more specialized business consultants. For example, businesses should be able to obtain technical advice on designing plants and procuring scientific materials. Management assistance should include specialized knowledge, such as legal assistance on franchising, accounting assistance on financing schemes, broker advice on stock issues, and introductions to informal venture capitalists.

This program could be designed so that each firm in the assistance program would be assigned to a lead consultant. The lead consultant would follow the monthly progress of the firm and direct technical specialists to consult with the firm as needs develop. Such an arrangement would ensure the firm of technical assistance and also assistance in identifying problems. The lead consultant could match the state sponsored assistance resources to the client's needs.

This second tier of intensive consulting is very important to removing constraints on potential ambitious and glamorous businessses. Yet, it is very risky because useful guidelines for identifying successful businesses have not been developed. Many of the assisted firms will fail, others will struggle along with little or no growth, but, a few will succeed. The few will have to be the total measure of success of the effort and expense expended.

The two-tier system of consulting allows for some reduction in the number of clients served by the more intensive and expensive second tier. The first tier could use NBDC's faculty and student consultants. These consultants could weed out the many entrepreneurs with underdeveloped plans and those with fantasies, not dreams. Most venture capitalists yearn for such a screening system and acknowledge that they typically read a lot of fantasy business plans before they see a realistic dream.

A separate organization for the second tier of consulting is not necessary; it is only necessary to organize and operate the consulting service differently. It may be desirable to house the second-tier lead consultants in the NBDC because it currently has the broadest geographic coverage of the state. However, under its current federally funded programs, NBDC cannot provide more than three consultancies to a firm within a 2-year period. Thus, state funding would be required to fund this second-tier consulting program.

Promote Networks Among Technologically Based Firms

Substantial technical assistance is available through networking among technologically based firms. For example, a recently started computer manufacturing firm in Spalding, Goldenrod Research, Inc., interacts with Farrall Electronics, Inc., in Grand Island to exchange information. Such networking should become more organized for the benefit of more electronics firms, especially the newly formed and developing firms.

Other technologically based businesses should have Nebraska networks. Formal network linkages should be created among such firms. For example, a network of interaction and communication among the electronic manufacturing firms in central Nebraska may reduce constraints on growth and allow the firms to grow more rapidly, thereby creating more jobs.

Such networks could be developed by the second-tier consultants suggested in the first policy recommendation. The lead consultants could be assigned by industry so that they could organize and facilitate these networks.

Provide Informal Venture Capital

As noted earlier, the informal investor is needed to provide equity capital to economic core and constrained growth firms that are struggling to grow. But, informal investors are few and far between. They are in Nebraska, but they are not organized into an accessible group.

Other states have formed venture capital clubs to serve as focal points for developing a network of informal investors. Such a club has been formed in Omaha and now has 38 full-time members. Efforts to form a club in Grand Island have begun with some success. However, the State Banking Department believes that these venture capital clubs violate Nebraska's securities laws. Their view is that presentation of an investment plan at a venture capital club meeting is equivalent to offering to sell stock to everyone in attendance. Using this interpretation, the presentation at Grand Island's first venture capital club meeting, attended by 200 to 300 individuals, was a gross violation of Nebraska's securities laws which limit unregistered stock offerings to a maximum of 35 persons.

The State Banking Department should be requested to draw up appropriate legislation to allow entrepreneurs to make presentations at venture capital club meetings without violating securities laws. Thus, venture capital clubs could be organized statewide to facilitate economic development throughout the state. Funds should be appropriated to promote and advise communities in the formation of venture capital clubs. Coordination among these clubs should be a necessity as well. Again, these assistance and coordination activities should be assumed by existing state organizations.

Develop Business and Scientific Assistance and an Innovation Center

Entrepreneurs seldom perceive the clear separation between business and scientific assistance. They have an innovation and want it to become a business. Thus, entrepreneurs need assistance in separating problems into business and scientific categories. Nebraska should establish an innovation center with the primary purpose of consulting with entrepreneurs to define their problems and to guide them into proper consulting relationships.

The innovation center should be a joint effort combining management and scientific assistance. It should function as a clearinghouse for entrepreneurs with innovative ideas. The ideas should be presented to a panel of technical and business experts for evaluation and recommendations. In this way, entrepreneurs would receive an overall evaluation of their businesses and the requirements for development and growth.

This innovation center need only have a small staff because it could draw its business and scientific experts from the universities and business communities of Nebraska. But, it needs a large budget for consulting expenses and promotion expenses, unless the state implements the two-tier management assistance (consulting) program recommended earlier. The two-tier management assistance program would screen businesses; move them up to the second tier, as dictated by an assessment of their potential for growth; and, once in the second tier, direct them to the innovation center for assessment. The innovation center should be publicized within Nebraska so that budding entrepreneurs know where to obtain help.

The two-tiered management assistance system, combined with the innovation center, could provide a coordinated assistance program that would serve all of Nebraska's small businesses that seek assistance. It could also identify those firms that have significant economic development potential and provide high-potential firms with specialized management and scientific assistance designed to release them from their constraints.

Build a Long-range Technology Base

Most areas of the United States have drawn their economic development from a few related industries. In the late nineteenth century, New England grew through the development and expansion of textile and shoe industries. In the first half of this century, Detroit, Pittsburgh, and Cleveland grew with the steel and automobile industries. After World War II, Houston grew with oil and natural gas. Even Nebraska grew, slowly but steadily, throughout the post-World War II period with agriculture and food products. Now, like Detroit, Cleveland, and Houston, Nebraska is looking for a new economic base.

It is difficult to have the technological foresight to identify the growth technology of the 1990s. Such foresight is the focus of thousands of financial analysts who study industry after industry and product after product trying to identify the best investment opportunities. Among the three economic success stories described earlier, only one resulted from an overt decision by a public official to choose a specific technology; the President of the University of Utah chose biotechnology. However, assuming that Nebraska's government can somehow match the value of this guess is foolhardy.

A scatter-gun approach to research and develoment may yield some results, but Nebraska does not have enough resources to shoot at the problem. The $2 million authorized by the last legislature for the Research and Development Authority is miniscule compared with spending by major corporations to find new industries and products.

For Nebraska, the proper policy is to ask the university to pick a few scientifically talented individuals who possess the characteristics of entrepreneurship. The legislature should provide special appropriations to the university to fund research professorships for scientists who have the ability to create innovations and the potential to commercialize their innovations. These people should be supported for at least 10 years before any core of new firms can be expected in Nebraska's high-technology center, *Cornhusker Plain.*

After 10 years, another long-term investment in the future must be made; several more people with various technological specialties should be brought into the university so that when the new technology of *Cornhusker Plain* runs its course and begins to fade another core of technology will emerge to vitalize the state. The Boston experience of 30 to 50 years of decline prior to renewed economic growth need not be repeated in Nebraska.

Recommendations on the Research and Development Authority

The 89th Legislature gave Nebraska the ubiquitous Nebraska Research and Development Authority (NRDA). NRDA has been assigned the responsibility of resolving the legislature's indecision about what is best for Nebraska's economic development. The legislature assigned all activities to NRDA: for example, identify technological problems, provide financial investment, advise universities, recommend legislation, coordinate efforts to attract new technology businesses, establish research and development centers, establish incubator facilities, coordinate information development, and distribute and develop a communications network.

Advantages of NRDA. The advantages of NRDA are many. First, it places money in the hands of an appointed group of professionals who are partially shielded from the day-to-day pressures of politics. Second, NRDA has few legal constraints on how it can allocate its resources. Third, NRDA has no tradition, no established pattern of procedures and expenditures which it must defend as it tries to develop a new approach to economic development. Fourth, and most important, it provides a program that could take the form of the innovation center recommended above, that is, a program to review business and innovative ideas of entrepreneurs, to provide definitions of the kind of assistance required, and to direct the entrepreneurs to the assistance. In this way, NRDA could significantly improve the chances for an early flowering of entrepreneurship in Nebraska.

There does not seem to be any reason why the NRDA could not support the second tier of management assistance programs recommended above. So, perhaps with an administrative decision, the NRDA could resolve the current weaknesses of management and scientific assistance within the state. Given the impending decline in federal funding, NRDA should act quickly to replenish the supply of funds needed to maintain the current management assistance programs.

Weaknesses of NRDA. NRDA has several significant weaknesses. First, and foremost, the legislation does not target formation and growth of small businesses. Thus, NRDA's resources can be sought actively by large businesses. And, large businesses will be more effective in acquiring such resources.

Experience with federal agencies shows that there is a big business bias in federal procurement of research and development, although procurement policies are supposed to treat all suppliers equally. Congress specifically identified and countered this bias in 1982 by passing The Small Business Innovation Development Act (SBIDA). This act requires most federal agencies to spend a prescribed percentage of their extramural research and development funds with small businesses.[35]

Unless the Nebraska Legislature amends Bill 850 (the NRDA authorizing legislation) large businesses will exert their economic influence to usurp the resources that should be dedicated for small businesses. The 90th Legislature should make it a priority to amend Legislative Bill 850 to specify that NRDA's purpose is to assist small businesses primarily. Without this change, even the managerial and scientific assistance that is possible through NRDA's funding activities may be misdirected to large businesses. If this happens, Nebraska's entrepreneurial development will be delayed and perhaps seriously threatened.

Second, NRDA's investment and lending role draws on public funds and is, therefore, legitimately subject to public scrutiny. Such public scrutiny assures that NRDA's expectations for risk and timeliness of return will be similar to those of a bank, not an informal venture investor. But, informal investment funds and patient investment funds are what Nebraska's constrained growth businesses need most.

NRDA will behave conservatively for simple reasons. NRDA will realize that it cannot justify (to the taxpayers) investment decisions which provide patient money to risky, innovative small businesses. If such businesses fail to repay or delay repayment for long periods of time, criticism by taxpayers will be vigorous. Informal investment cannot be made with public funds. The directors will risk the existence of the NRDA if they make the kind of patient equity investments that Nebraska's small business communities need. Other states have established publicly funded venture capital organizations, but no state has successfully installed a publicly funded patient investment organization.

The 90th Legislature should amend the NRDA Act to exclude equity financing from NRDA's charter. The resources will be used more effectively if, instead, NRDA encourages the formation of venture capital clubs and pushes for the legalization of their activities. Furthermore, NRDA can encourage the formation of private venture capital firms. This effort could be part of the innovation center or the second-tier management assistance program recommended earlier.

NRDA's mandate is sufficiently broad to provide opportunities for developing technical assistance for the long-term technology base recommended. However, it will be better if the legislature deals directly with the University of Nebraska in establishing funding for research professorships to develop a core of science and technology.

On balance, NRDA can be a significant factor in establishing an environment for the promotion of small businesses in Nebraska. But, the legislature must amend its authorization to focus its activities on small businesses.

Business Recruitment Versus Business Development

Throughout this chapter I have argued that Nebraska should invest in developing businesses and encourage formation and growth of small businesses. The argument has been advanced that recruiting branch plants of big businesses is not cost effective in establishing economic development. Both the theory of Schumpeter and the economic research findings of the last 10 years support this view.

Yet, the question arises persistently whether the state should divide its efforts between recruiting big businesses and developing small businesses. The question arises because it is difficult to break with tradition. Furthermore, although big business plant expansions are insignificant contributors to national growth, they can contribute significantly to local or regional growth.

The reality remains, however, that Nebraska is one of 50 states that advertise, promote, and beg for plants from large firms. Nebraska has a high tax rate and no outstanding physical or population characteristics. Every advantage that Nebraska cites in its advertising and promotional literature is claimed by at least ten other states.

But, Nebraska cannot turn its back on firms that are locating new plants or offices. Instead, it must provide information that will allow them to assess Nebraska along with their other alternatives. It probably also needs to continue offering tax incentives, such as reduced property taxes, to meet the competitive pressures of other states.

The governor should direct the Department of Economic Development to maintain an information center that will promote the virtues of various communities throughout the state to large corporations that are considering new plant locations in Nebraska. This information should be supplied to every business that requests it. However, the aggressive activities of recruitment, such as advertising, promotional visits to large businesses, and gubernatorial visits to corporate executive suites, should be discontinued. Such activities are very expensive and the money can be better invested in Nebraska's small businesses. A passive program of responding to firms' requests for information about Nebraska is recommended. Substantial money can be saved by assuming a cooperative but passive approach to business recruitment.

Conclusions

Nebraska should recognize that Schumpeter described the future as an entrepreneurial economy. Given this model, I recommend a grass roots effort to coax Nebraska's current entrepreneurial potential into flowering to produce new firms and new jobs in the next 10 years. The core of this grass roots effort is creating an economic environment that is conducive to providing assistance to help new businesses overcome their constraints so that they can grow and prosper. Their successes will, in turn, create more new firms from spin-offs.

Pooling the state's resources to provide management assistance to each economic core and constrained growth business will stimulate economic activity. Facilitating capital acquisition through venture capital clubs in all major cities will assure patient capital for the stimulated entrepreneurial activity. Establishing a small business innovation center through NRDA will help entrepreneurs define their opportunities and needs. And, developing several core technologies through selected university professorships will assure a revitalization of economic growth in future generations.

Although all of these actions seem expensive in a state with severely limited resources, some of the costs have already been allocated to economic development through the NRDA. And, some costs can be paid by transferring funds from business recruitment activities.

Endnotes

1. These numbers are taken from Table A120 in *The State of Small Business: A Report of the President*, Washington, DC: U.S. Government Printing Office, 1985.

2. John Kenneth Galbraith, *The New Industrial State*, New York: Mentor Books, 1972.

3. David Birch, *The Job Generation Process*. A research report prepared for the Economic Development Administration, U.S. Department of Commerce by the Massachusetts Institute of Technology Program on Neighborhood and Regional Change, 1979.

4. Gellman Research Associates, Inc., *Indicators of International Trends in Technological Innovation*. A report prepared for the National Science Foundation, 1976.

5. National Science Board, *Science Indicators, 1976, Report of the National Science Board*, Washington, DC: U.S. Government Printing Office, 1977.

6. Gellman Research Associates, Inc., *The Relationship Between Industrial Concentration, Firm Size, and Technological Innovation*. A research report prepared for the U.S. Small Business Administration, Washington, DC, 1982.

7. These numbers are taken from Bruce D. Phillips' "Job Generation," an unpublished paper prepared for and presented at the Small Business Administration's Economic Policy Seminar, Washington, DC, June 1984. Also, from discussions with Bruce Phillips in May 1986.

8. The discussion of Schumpeter contained herein draws almost entirely from his last book: Joseph A. Schumpeter, *Capitalism, Socialism and Democracy,* New York: Harper and Row, 1942 (1976 edition).

9. Antitrust legislation and court actions make overt price agreements illegal. However, implicit and, therefore, legal price agreements are the rule among large businesses in many U.S. industries.

10. For documentation of this analysis, see: "Godfather's Pizza: A Case Analysis," an unpublished case history written by Bruce A. Kirchhoff and Leticia Villaneuava, 1985.

11. *The State of Small Business: A Report of the President,* Washington, DC: U.S. Government Printing Office, May 1985, p. 46.

12.Roger Z. Riefler, and F. Charles Lamphear, "Small Business: Vital Foundation of the Rural Economy," *The Environment for Entrepreneurship and Small Business in Region VII, U.S.* Small Business Administration, Washington, DC, 1980.

13. Several Hinky Dinky stores remain in Omaha, but these stores are independently owned and operated. Hinky Dinky Corporation agreed to allow these stores to use its name.

14. Office of the Chief Counsel for Advocacy, *Job Generation,* Washington, DC: U.S. Small Business Administration, June 1984, p. 7.

15. Interestingly, another Nebraska firm, ConAgra, has benefited from innovations in chicken production and marketing.

16. Jeffrey A. Timmons, Norman D. Fast, and William D. Bygrave, "The Flow of Venture Capital To Highly Innovative Technological Ventures," *Frontiers of Entrepreneurship Research-1983,* Wellesley, MA: Babson College, 1983, pp. 316-34.

17. W. E. Wetzel, Jr., and C. R. Seymour, *Informal Risk Capital in New England.* A report prepared for the U.S. Small Business Administration, Washington, DC, 1981.

18. Bruce A. Kirchhoff, "Analyzing the Cost of Debt for Small Business," *Policy Studies Journal* 13(1985):735-46.

19. I am grateful to Warren McCoy of Valmont Industries, Inc., for providing the information needed to prepare this brief summary of Valmont's history.

20. *The State of Small Business 1983: A Report of the President,* Washington, DC, U.S. Government Printing Office, 1983, p. 67.

21. Op. cit., Timmons, Fast, and Bygrave, 1983.

22. Richard Judd, and Fred W. Becker, "A Multi-Sector Approach to Small Business Policy Development," *Small Business and Public Policy,* Connecticut: Greenwood Press, in press.

23. Most notably: David McClelland, *The Achieving Society,* New York: The Free Press, 1967; and, David McClelland, and David G. Winter, *Motivating Economic Achievement,* New York: The Free Press, 1969.

24. Op. cit., Kirchhoff, *Policy Studies Journal.*

25. Neil C. Churchill, and Virginia L. Lewis, "Bank Lending to New and Growing Enterprises," *Journal of Business Venturing* 1(1986):193-206.

26. Bruce A. Kirchhoff, and Judith J. Kirchhoff, *Productivity and Profitability Among Small Family Businesses.* A research report prepared for the Office of Economic Research, U.S. Small Business Administration, February, 1984.

27. Op. cit., Wetzel and Seymore.

28. As noted earlier, small firms do not have access to bond markets wherein principal repayment can be postponed for 20 years or more. Op. cit., Kirchhoff, *Policy Studies Journal.*

29. In 1985, Behlen's managers found it advantageous to buy Behlen back from Wickes because Wickes fell into financial difficulty.

30. Orthman Manufacturing Company was making farm equipment in Lexington before New Holland came to town and it is still there.

31. Richard Carlson, and Theodore Lyman, *Silicon Valley: Some Success Factors in The Success Story,* Menlo Park, CA: Stanford Research International, Inc., May 1985.

32. Bennett Harrison, "Regional Restructuring and 'Good Business Climates': The Economic Transformation of New England Since World War II," *Sunbelt/Snowbelt: Urban Development and Regional Restructuring,* New York: Oxford University Press, 1984.

33. "Meet the Campus Capitalists of Bionic Valley," Business Week, May 5, 1986, pp. 114-115.

34. Agriculture is an exception, of course. Because I have excluded agriculture from this discussion, I have not included it here.

35. The act was passed not as a subsidy to small firms but because Congress realized that small firms create more jobs and are more innovative than large firms.

Aging and Long-Term Care in Nebraska

James A. Thorson and Bruce J. Horacek

5

A high proportion of Nebraska's population is age 65 or older and this is the fastest growing segment of the population. The population aged 85 years and older, which is the population most in need of long-term care, grew by over 45 percent between 1970 and 1980, and is expected to increase by 202 percent by the year 2000. This group includes individuals who are likely to require public assistance to help meet their medical and long-term health care needs. We estimate that the cost to the state to provide Medicaid assistance will increase from $60.4 million to $164.5 million over the next 15 years.

Issues of increasing importance and complexity revolve around the aging population. This is especially true in Nebraska, one of the "oldest" states. A brief overview of some of the most relevant issues are presented; then, we focus on an issue of immediate and long-term concern to Nebraska's policymakers—institutional care of the aged.

Overview

The number of older people in the state and the nation has increased tremendously during this century, and it will continue to increase, along with the percentage of our population that is older than 65. U.S. Bureau of the Census (1984) figures indicate that in 1900, there were about 3 million Americans over the age of 65, about 4 percent of the U.S. population. In 1985, there were more than 28 million individuals in this group, making up almost 12 percent of the U.S. population. Projections are that by the year 2000, there will be 35 million older persons living in the United States. These individuals will certainly have a great impact on economic, social, and health programs, such as Social Security, Medicare, and Medicaid.

Social and Economic Well-being

Perhaps the most dramatic increase is projected to occur in the 75 year old and older age group. During the next 50 years, the portion of the population that is 75 years old or older is projected to increase by more than 300 percent, and will represent 10 percent of the total population. These projections cause speculation about the future course of events in the United States.

Neugarten and Havighurst (1979) suggest that we will see a two-tier group of the aged. The first group, ages 55-74 years, they call the young-old, and the second group, 75 years and older, they call the old-old. These two groups will not only be separated chronologically, but their needs and characteristics will be quite different. Namely, the old-old group could be in far greater need of intervention programs to maintain economic, social, and physical well-being. In Nebraska, we will not see a great increase in the portion of the population that is 65 or older until the next century, but a proportionate increase in the old-old population will affect the state, both in the short-term and the long-term.

Our shifting population patterns pose difficult policy options for public decisionmakers, service agencies, researchers, educators, and others who are interested in the social, economic, and health needs of the elderly. The growth of the older population has prompted policymakers to regard the elderly as primary recipients of government attention. Since the passage of the Social Security Act of 1935, the federal government has become increasingly involved in the development and implementation of programs that affect the elderly. We now find governmental intervention programs in diverse areas, such as income maintenance, health care, housing, transportation, nutrition, and various social services. These intervention policies for the elderly have proliferated to the point that in fiscal year 1985, benefits and services for the aged accounted for 27 percent of all federal outlays (Storey, 1986).

How can we gauge the social and economic well-being of the elderly? One approach is to examine issues of concern or problems identified by older people. In a study commissioned by the National Council on Aging, Louis Harris (1981) identified many concerns. Over 42 percent of the individuals aged 65 and over identified "the high cost of energy," including gas, electricity, and oil, as being a serious problem. While this seems like a high percentage, 43 percent of those aged 18-64 years, also put the high cost of energy at the top of their list of problems. Consequently, concerns about high energy costs are shared by all Americans.

Second on the list of serious problems in the Harris poll was the "fear of crime." This concern was mentioned by 25 percent of those who were

65 years old and older as being a very serious problem. Twenty percent of the group aged 18-64 years mentioned fear of crime as being a serious concern.

"Poor health" was identified as a very serious issue by 8 percent of those who were 18-54 years old, 16 percent of those who were 55-64 years old, and 21 percent of those who were 65 and older. Furthermore, it was a greater concern for those with lower incomes; 31 percent of older Americans who had annual incomes under $5,000 identified poor health as a very serious problem. Among older minorities, 35 percent of blacks and 48 percent of Hispanics listed poor health as a very serious problem.

Older Americans were also concerned about not receiving "enough medical care." About 9 percent of older Americans listed this as a very serious problem, whereas 16 percent of older Americans with incomes under $5,000, 17 percent of older blacks, and 33 percent of older Hispanics considered this to be a very serious problem. Similarly, 18 percent of older Americans listed the cost of doctors' visits, 19 percent mentioned the generally high cost of medical services, and 18 percent listed transportation to and from medical facilities as being serious problems.

In the Harris study, two other issues were identified by older persons as being very serious problems by more than 10 percent of the sample. "Not having enough money to live on" was listed by 17 percent of those who were 65 and older, and "loneliness" was mentioned by 13 percent of older Americans. Loneliness tended to be more of a problem for older persons, whereas not having enough money to live on was more of a concern for younger adults.

How well-off are the elderly? While older persons identified many serious concerns in the Harris poll, most older people, especially the young-old, have a reasonable level of economic and social well-being. According to the U.S. Bureau of the Census, about 3.3 million elderly persons were living below the poverty level in 1984. This translates to a 12.4 percent poverty rate for older persons, however, this rate is lower than the poverty rate for persons under age 65 (14.7 percent). Adding in the near poor (those with incomes between the poverty level and 125 percent of the poverty level), an additional 2.4 million individuals, about 21 percent of the older population, were poor or near-poor in 1984. The rates in Nebraska tend to be close to the national average.

Older persons who live alone or with nonrelatives are more likely to have low incomes, with about half reporting annual incomes of $7,000 or less. Older women had a higher poverty rate (15 percent) than older men (9 percent). The major source of income for older families and individuals (noninstitutionalized population only) was Social Security (37 percent), followed by earnings and asset incomes (23 percent each), public and private pensions (15 percent), and payments, such as supplemental security income, unemployment, and veterans' payments.

As the 1981 Harris study pointed out, older Americans are no more likely than younger Americans to feel pinched financially. There are several reasons for this, including the fact that the elderly often have paid off their mortgages. Over 60 percent of older Americans own their homes and usually have relatively low monthly housing expenses. On the other hand, only 12 percent of those aged 18-54 have bought and fully paid for their homes (Harris, 1981). In addition, usually older individuals have fewer expenses connected with educating their offspring and fewer job-related expenses. Consequently, while about 21 percent of older persons can be categorized as poor or near-poor, most have much more discretionary income than younger families. According to one estimate (Petre, 1986), households headed by individuals who are 50 years old or older control half of the discretionary dollars in the United States.

Health Status and Needs of the Elderly

The health of older people is determined by medical, social, financial, and behavioral factors. Health policy in this country has stressed medical care and played down other factors. All of these factors are important when dealing with the health status of the elderly.

Older people have fewer acute conditions than do younger people, but far more chronic long-term illnesses, such as arthritis, hypertension, cardiovascular problems, diabetes, and cancer (Hickey, 1980). Estimates are that over 75 percent of the individuals who are over the age of 65 have one or more chronic illness. However, most of these individuals are able to continue living without major limitations in their daily activities. Health status varies widely in old age as at any other time in the life cycle. Good health does not necessarily imply the total absence of disease, but rather that medical conditions do not significantly interfere with physical and social functioning (Kermis, 1986).

The number of days in which ordinary daily activities are restricted because of injuries or illnesses increases with age (American Association of Retired Persons, 1985). In 1982, older people averaged 32 days of restricted activity, as opposed to 12 such days for younger persons. Approximately half of these restricted days were spent in bed. In addition, the need for functional assistance increases sharply with age. Excluding the institutionalized elderly, about 5 million older persons needed the assistance of another person to perform one or more daily activities involving personal care or home management. This represents almost 20 percent of the noninstitutionalized elderly. These figures increase dramatically between the young-old and the old-old. In 1982, the percentages ranged from 13 percent for those aged 65-74; 25 percent for those aged 75-84; and 46 percent for persons who were 85 and older. Personal care activities include bathing, dressing, eating, and walking. Home management activities include shopping, preparing meals, taking medications, performing routine chores, and using the telephone.

About one in five older people are hospitalized each year, as compared with about 9 percent of people under age 65 (American Association of Retired Persons, 1985). The elderly also have a greater chance than younger people of being hospitalized each year, and they tend to have longer hospital stays (10 days versus 7 days). In 1982, the elderly averaged eight visits to a physician, as opposed to five visits for younger persons.

In 1984, older persons represented 12 percent of the population but expended 31 percent of the health care dollars in the United States. This totaled $120 billion, with an average expenditure of over $4,000 per older person. This is more than three times the average amount spent for health care by those who are under age 65 ($1,300). About two-thirds of the health care expenditures for the elderly came from government programs, including Medicare and Medicaid. Beyond government payments and private health insurance, older persons average about $1,000 in out-of-pocket costs each year. Cost increases for health care, combined with the growing number of elderly persons, are causing severe strain on federal and state budgets.

Service Needs and Alternatives

Although more than 20 percent of the elderly are limited in their daily activities and need some kind of assistance on a regular basis, only about 4.8 percent are in old-age institutions or hospitals at any time. Over 1 million of these persons reside in nursing homes (Eustis, Greenberg, and Patten, 1984). Consequently, while the percentage of individuals who are 65 and older and who reside in nursing homes is small compared with the entire elderly population, the numbers are significant. Also, while less than 5 percent of the elderly reside in old-age institutions at any time, indications are that an older person has about a 50 percent chance of being institutionalized at some time.

Chances of institutionalization increase with advancing age. About 1 percent of the young-old (65-74 years old) are in nursing homes. About 7 percent of individuals in the 75-84 age group reside in these institutions, and, among those 85 and older, 20 percent reside in nursing homes. Over 70 percent of nursing home residents are women, with the proportion of women increasing with age (Eustis, et al., 1984).

While long-term care is usually associated with a formal network of institutions and agencies, such as nursing homes, hospitals, and adult day centers, evidence suggests that a growing informal support network is providing substantial long-term care services to more than 3 million elderly individuals (Eustis, et al., 1984). The existence of this informal support network, which usually consists of family members, argues against the conclusion that American families dump their elderly members into nursing homes (Brody, 1979). In fact, most families will run out of options before considering institutional placement.

Ultimately, many older persons require some form of institutional care. On the other hand, many of the aged could avoid or delay being institutionalized if alternative services were available. One factor that contributes to institutionalization is the lack of health care and other social service assistance. Conversely, many institutionalized persons could probably be maintained at home with help from the following types of home-based and community-based assistance programs.

Physician and Physicians' Assistant Services. Most physicians argue that most house calls are unneeded and that better treatment and evaluation are provided in the physician's office or at a hospital. However, many older people, especially those in rural areas and small towns without physicians, find it difficult to get to a physician and may have to travel long distances to get service. Another problem in the delivery of health care to the elderly is that physicians' training in geriatric medicine is still in its infancy.

There are two bright spots in the availability of medical services to older people. The physicians' assistant (PA) program is one example of a new type of health care delivery. Currently, almost 100 programs throughout the United States train prospective PAs in general medicine, anesthesiology, cardiology, ophthalmology, orthopedics, pathology, radiology, general surgery, and urology. One of these programs is at the University of Nebraska Medical Center in Omaha. Many opportunities exist for PAs in geriatrics, especially in rural areas where they can help fill the gap in care for older persons.

Another bright spot in the delivery of medical services to the elderly has been the development of geriatric assessment centers, most of which are associated with teaching hospitals in urban areas. These centers use physicians, nurses, social workers, and others who have been trained in geriatrics to diagnose and treat older persons and to refer them to appropriate medical and social services. Nebraska has two geriatric assessment centers in Omaha: one is connected with Creighton University (St. Joseph's Hospital) and the other is at the University of Nebraska Medical Center.

Nursing Services. Nursing continues to be one of the very few professions that routinely offers care in homes, hospitals, and other health care centers. Nurses can provide a variety of services to older persons, including visiting families in their homes, informing people about community health resources, providing nursing care for individuals with acute and chronic illnesses, gathering information regarding nursing homes and other institutions, and staffing public health clinics (Butler and Lewis, 1982). One organization of nurses that provides home care for the elderly is the Visiting Nurse Association (VNA). The VNA also operates clinics in most urban areas.

Homemaker and Home Health Services. Homemaker services describe a range of homemaking activities, such as shopping, laundering, and preparing meals. A home health aide is a person who can perform a variety of functions, including taking vital signs, assisting with various therapies, and giving baths. Often the homemaker and health aide are the same person. The goal of this practitioner is to assist the person in performing activities of daily living.

Friendly Visitor and Telephone Reassurance. Friendly visitor services have been available in many communities for decades. Visitors are often trained volunteers who provide many services to the elderly in their homes. One of the most important services they provide is companionship, but they also are trained to recognize health, nutritional, and other problems and to alert others to these developing problems. Friendly visitors are sometimes connected with public welfare agencies, but they are often associated with churches and other organizations.

One variation of the friendly visitor service is the Senior Companion Program, a federal program administered by ACTION, that employs low-income persons over the age of 60 and pays them a small hourly stipend. This is an excellent example of older persons helping other older persons to maintain themselves in their homes. Several Senior Companion Programs operate in Nebraska. Telephone reassurance programs use the telephone to offer services that are similar to those delivered by friendly visitors. More often than not, these programs are run by volunteers who are connected with churches and service organizations.

Nutritional Services. Nutritional services for the elderly were developed because evidence showed that many older people were at risk and suffering from malnutrition and dehydration. Two federal programs have had a great impact on funding nutritional services for the aged. In 1964, Congress passed the Food Stamp Act which allowed eligible needy people to use food stamps to purchase food at neighborhood stores. In 1972, Congress passed an amendment to the Older Americans Act which established a national program for providing one nutritionally planned hot meal a day, usually 5 days a week, for people who are 60 years old and older. The focus of this act was to develop congregate meal sites to serve needy and isolated older persons, although no income criteria were established for using such a service. Partial funding for transportation to and from such sites was also provided.

Besides providing nutritional services to older Americans, this program also tried to provide opportunities for socialization among older people by focusing on congregate meal sites. The Meals-on-Wheels Program allows meals to be delivered to persons who are unable to attend congregate sites. Presently, Meals-on-Wheels provides over 1 million meals daily to older persons in all 50 states. In Nebraska, every Area Agency on Aging operates or contracts meal sites and Meals-on-Wheels Programs.

Legal Services. The legal needs of older persons include a variety of issues, such as income; taxes; federal, state, and local governmental benefits; and housing. In addition, assistance is often needed in the areas of guardianship, conservatorship, and protective services. Income tax preparation assistance is often provided by the Area Agency on Aging.

Eight years ago, the National Junior League of Women developed and started sponsoring Volunteers Intervening for Equity (VIE). These locally based programs use trained older persons to provide many paralegal and advocacy services for the elderly. VIE programs operate in Lincoln and Omaha. Other legal assistance programs have been offered by local community organizations, including legal aid societies.

Information and Referral Services. Often, older persons with the greatest need for services are the least likely to know how to obtain them. Many community service agencies have attempted to inform the elderly of the various services that are available to them, such as income tax assistance, nutritional services, home handyman assistance, senior companion programs, and transportation. Telephone assistance, booklets, and outreach programs provide information for the elderly. Assistance is also available through the national network of area agencies on aging, many state and county welfare agencies, church organizations, and U.S. congressmen and senators. Each year the latter group publishes an *Older Americans Handbook* which offers basic information about local, state, and federal services for the elderly.

Day-care Services. The last decade has seen the development of geriatric day-care centers in the United States. The first day-care centers for the elderly were developed and operated in Europe in the 1940s. In the United States, day care is available to older persons who have some physical or mental impairments but who can remain in the community if various support services are provided. These centers offer ambulatory care to adults who do not require 24-hour institutional care. In most cases, this allows family members to work during the day and to keep parents in their homes. Clients are referred to such programs by attending physicians or by social service agencies. Care is often provided 8 hours a day, 5 days a week. Depending on the center, meals, transportation, medical and therapeutic services, and social activities are offered. Most day-care centers focus on psychosocial services, but some offer medical services as well. Some centers focus on a particular clientele, such as the chronically mentally ill or persons with Alzheimer's disease. Day-care centers are funded through various federal social service programs, such as Title XX, grants, donations, and private pay.

Nebraska has many day-care centers for the elderly, including four in the Omaha area: The Friendship Program Day Service Center, McAuley Bergan Center, Immanuel-Fontenelle Adult Day Services, and the New

Long-term care of patients in our society usually means entry into a nursing home. There are more than 19,000 nursing homes in the United States and over 200 in Nebraska. Most provide nursing care and rehabilitation services on a for-profit basis; most (85 percent) in Nebraska are intermediate care facilities (ICFs). The remaining 15 percent operate at the skilled level, a higher and more expensive level of care. Excluding costs for physicians' services and medications, the cost of nursing home care in Nebraska currently ranges from about $30 to $60 per day.

The expenses of about half of the patients in nursing homes in Nebraska are paid by the state's Medicaid Program, with a 60:40 federal-state split. Medicare will pay for up to 100 days of long-term care per individual. Private health insurance pays a comparatively small amount of the cost of nursing home care.

Medicaid pays the expenses of nursing home patients who have exhausted their personal resources. Some nursing homes in Nebraska have discharged patients to other facilities when they switched from private pay to Medicaid. Because of the passage of LB 782 in the 1986 session of the Nebraska General Assembly, this practice is now forbidden. Unfortunately, this will probably result in an increase in the number of nursing homes that refuse to admit Medicaid patients initially.

Entry into a nursing home is by no means inevitable. Some individuals never need long-term nursing care; they remain relatively healthy until they develop a fatal illness, and then they die at home or in a hospital. And, others are cared for at home by family members or other caregivers. Because most families consider institutionalization only as a final alternative, families typically exhaust all other options before they consider nursing home care. Because families make heroic efforts to keep older members out of nursing homes, those older people who have no family caregivers are over-represented in long-term care institutions. About 20 percent of the aged have no living children, but 40 percent of nursing home residents are isolates. Thus, older persons who have no children are twice as likely to be institutionalized.

Nebraska is one of the states with a high proportion of citizens aged 65 or older (13.4 percent in 1984), compared with the national average of 11.9 percent. And, this group is the fastest growing portion of Nebraska's population.

Table 1 shows that from 1970 to 1980 the population of Nebraska increased by 5.8 percent, the group aged 65 and older increased by 12.1 percent, and the group aged 85 and older increased by 45.3 percent. While still relatively small in terms of absolute numbers, the group aged 85 and older is significant in its need for services, with over 20 percent being institutionalized and over 40 percent needing personal care or assistance in the home. Because poverty increases with age, these are the people who are most likely to require public assistance for their medical and long-term care needs.

Table 1 also includes a projection of the portion of the population that will be 85 years old or older in the year 2000. Projections can be made with a fair amount of accuracy because we are dealing with living persons. But, two factors that may influence the actual outcome were not accounted for in our projection: out-migration, usually a phenomenon among younger adults, and mortality rates, assumed to remain constant at 1980 levels. The number of individuals 85 years old and older in the year 2000 is, thus, assumed to be 34.9 percent of those aged 65 and older in 1980. Should survival rates improve (which is likely), the projected number of individuals who are 85 years old or older will be higher than we have projected.

As can be seen, the projected increase in the number of individuals who are 85 years old or older for the state is 202 percent from 1980 to 2000. This phenomenal rate of growth will be exceeded in urban counties, such as Douglas (247 percent), Lancaster (209 percent), Sarpy (236 percent), Lincoln (247 percent), Platte (239 percent), and Scotts Bluff (269 percent). Towns that serve as service centers for farming areas will have a particularly high rate of growth in the 85 year old and older group. Traditionally, they serve as retirement areas and they are also the locations of hospitals and nursing homes. Thus, they may be areas of in-migration for the very old from surrounding counties.

By the year 2000, the 85 year old and older population in every county in Nebraska will at least double. The percentages for very small counties, however, are not especially meaningful. Tiny Blaine County, for example, had only nine residents who were 85 years old or older in 1980; thus, one death could have a dramatic effect upon the percentage. Overall, however, these figures are conservative. Nebraska will experience a population explosion among the very old into the next century.

Table 2 provides information about older persons who were living in poverty and receiving Medicaid assistance for long-term care in

Table 1 — Population gain or loss of the counties of Nebraska, 1970 and 1980

County	Total population			Population aged 65 and older			Population aged 85 and older			Projected population aged 85 and older in 2000	
	1970	1980	Change[1]	1970	1980	Change[1]	1970	1980	Change[1]	Change	
	— — Number —		— Percent	— — Number —		— Percent	— — Number —		— Percent	Number	Percent
Adams	30,553	30,656	0.3	4,648	4,790	3.0	454	649	42.9	1,672	158
Antelope	9,047	8,675	(4.2)	1,604	1,578	(1.0)	144	166	15.3	554	234
Arthur	606	513	(18.1)	55	76	38.2	4	10	150.0	27	165
Banner	1,034	918	(12.6)	89	101	13.5	1	7	600.0	35	400
Blaine	847	867	2.3	146	140	(4.3)	7	9	28.5	49	443
Boone	8,190	7,391	(10.8)	1,278	1,343	5.1	122	157	28.7	469	199
Box Butte	10,049	13,696	35.6	1,534	1,717	11.9	128	211	64.8	599	184
Boyd	3,752	3,331	(12.6)	711	737	3.6	46	66	43.5	257	289
Brown	4,021	4,377	8.8	683	796	16.5	79	95	20.3	278	193
Buffalo	31,222	34,797	11.5	3,816	4,162	9.0	410	494	20.4	1,453	194
Burt	9,247	8,813	(4.9)	1,713	1,849	6.8	155	235	51.6	645	174
Butler	9,461	9,330	1.4	1,649	1,792	8.7	145	209	44.1	625	199
Cass	18,076	20,297	12.3	2,308	2,601	12.7	257	319	24.1	908	185
Cedar	12,192	11,375	(7.2)	1,784	1,980	10.9	159	234	47.2	691	195
Chase	4,129	4,758	15.2	700	759	8.4	67	96	43.3	265	176
Cherry	6,846	6,758	(1.3)	882	997	13.0	60	117	95.0	348	197
Cheyenne	10,778	10,057	(7.2)	1,406	1,567	11.5	111	176	58.6	547	211
Clay	8,266	8,106	(1.9)	1,360	1,437	5.7	132	214	62.1	502	135
Colfax	9,498	9,890	4.1	1,811	2,030	12.1	155	239	54.2	708	196
Cuming	12,034	11,664	(3.2)	1,783	1,986	11.4	156	217	39.1	693	219

Table 1 — Population gain or loss of the counties of Nebraska, 1970 and 1980 (continued)

County	Total population			Population aged 65 and older			Population aged 85 and older			Projected population aged 85 and older in 2000	
	1970	1980	Change[1]	1970	1980	Change[1]	1970	1980	Change[1]	Change	
	— — Number	— —	Percent	— — Number	— —	Percent	— — Number	— —	Percent	Number	Percent
Custer	14,092	13,877	(1.5)	2,508	2,725	8.7	254	328	29.1	951	190
Dakota	13,137	16,573	26.1	1,333	1,171	28.4	119	173	45.4	597	245
Dawes	9,693	9,609	(0.8)	1,294	1,404	8.5	118	183	55.1	490	168
Dawson	19,467	22,304	14.6	2,725	3,116	14.3	228	400	75.4	1,087	172
Deuel	2,717	2,462	(10.4)	477	530	11.1	42	69	64.3	185	168
Dixon	7,453	7,137	(4.4)	1,274	1,327	4.2	85	162	90.6	463	186
Dodge	34,782	35,847	3.1	4,572	5,418	18.5	414	666	60.8	1,890	184
Douglas	389,455	397,038	1.9	36,851	41,483	12.6	2,987	4,165	39.4	14,477	247
Dundy	2,926	2,861	(2.3)	572	593	3.7	68	69	1.4	207	200
Fillmore	8,137	7,920	(2.7)	1,519	1,573	3.5	176	256	45.4	549	114
Franklin	4,566	4,377	(4.3)	1,010	1,054	4.3	88	129	46.5	368	185
Frontier	3,982	3,647	(9.1)	639	620	(3.0)	58	69	18.9	216	214
Furnas	6,897	6,486	(6.3)	1,599	1,627	1.8	207	241	16.4	568	136
Gage	25,719	24,256	5.2	3,946	4,432	12.3	365	517	41.6	1,547	199
Garden	2,929	2,802	(4.5)	509	619	21.6	48	79	64.6	216	173
Garfield	2,411	2,363	(2.0)	482	533	10.6	53	39	(35.8)	186	377
Gosper	2,178	2,140	(1.8)	284	347	22.2	14	51	264.2	121	137
Grant	1,019	877	(16.2)	106	119	12.3	7	7	0	42	500
Greeley	4,000	3,462	(15.5)	636	673	5.8	38	84	121.0	235	179
Hall	42,851	47,690	11.3	5,106	5,964	16.8	401	700	74.6	2,081	197

Table 1 — Population gain or loss of the counties of Nebraska, 1970 and 1980 (continued)

County	Total population			Population aged 65 and older			Population aged 85 and older			Projected population aged 85 and older in 2000	
	1970	1980	Change[1]	1970	1980	Change[1]	1970	1980	Change[1]	Change	
	— — Number — —		Percent	— — Number — —		Percent	— — Number — —		Percent	Number	Percent
Hamilton	8,897	9,301	4.9	1,238	1,299	4.9	148	177	19.6	453	156
Harlan	4,357	4,292	(1.5)	850	920	8.2	63	98	55.5	321	228
Hayes	1,530	1,356	(12.8)	191	178	(7.3)	8	7	(14.3)	62	787
Hitchcock	4,051	4,079	.7	697	752	7.9	51	86	68.6	262	205
Holt	12,933	13,552	4.8	1,924	2,083	8.3	183	250	36.6	727	191
Hooker	939	990	5.4	174	190	9.2	27	31	14.8	66	114
Howard	6,807	6,773	(.5)	1,008	1,123	11.4	73	129	76.7	392	204
Jefferson	10,436	9,817	(6.3)	1,970	2,025	2.8	178	236	32.6	707	199
Johnson	5,743	5,285	(8.7)	1,034	1,152	11.4	91	142	56.0	402	183
Kearney	6,707	6,053	(10.8)	1,078	1,179	9.3	94	164	74.5	411	151
Keith	8,487	9,364	10.3	1,055	1,275	20.9	90	118	31.1	445	277
Keya Paha	1,340	1,301	(2.9)	168	205	22.0	11	19	72.7	72	279
Kimball	6,009	4,882	23.1	511	677	32.4	58	88	51.7	236	168
Knox	11,723	11,457	(2.3)	1,930	2,196	13.8	151	263	74.2	766	191
Lancaster	167,972	192,884	14.8	16,737	19,572	16.9	1,152	2,212	92.0	6,831	209
Lincoln	29,538	36,455	23.4	3,381	4,342	28.4	266	437	64.3	1,515	247
Logan	991	983	(.8)	129	145	12.4	6	13	116.7	51	292
Loup	854	859	.5	111	144	29.7	8	12	50.0	50	317
McPherson	623	593	(5.0)	74	105	41.9	5	3	(66.7)	37	1,133
Madison	27,402	31,382	14.5	4,074	4,580	12.4	335	552	64.8	1,598	189

Table 1 — Population gain or loss of the counties of Nebraska, 1970 and 1980 (continued)

County	Total population			Population aged 65 and older			Population aged 85 and older			Projected population aged 85 and older in 2000	
	1970	1980	Change[1]	1970	1980	Change[1]	1970	1980	Change[1]	Change	
	— — Number — —		Percent	— — Number — —		Percent	— — Number — —		Percent	Number	Percent
Merrick	8,751	8,945	2.2	1,255	1,406	12.0	125	156	24.8	491	215
Morrill	5,813	6,085	4.7	890	1,037	16.5	93	112	20.4	362	223
Nance	5,142	4,740	(8.5)	1,003	886	(13.2)	101	84	(20.2)	309	268
Nemaha	8,976	8,367	(7.3)	1,446	1,539	6.4	172	198	15.1	537	171
Nuckolls	7,404	6,726	(10.0)	1,361	1,335	(1.9)	115	177	53.9	466	163
Otoe	15,576	15,183	(2.6)	2,737	2,943	7.5	270	411	52.2	1,027	149
Pawnee	4,473	3,937	(13.6)	1,014	977	(3.8)	98	126	28.6	341	171
Perkins	3,423	3,637	6.3	548	638	16.4	39	84	115.4	223	165
Phelps	9,553	9,769	2.3	1,604	1,744	8.7	183	291	59.0	609	109
Pierce	8,493	8,481	(.1)	1,303	1,452	11.4	98	158	61.2	507	221
Platte	26,508	28,852	8.8	2,878	3,529	22.6	209	363	73.7	1,232	239
Polk	6,468	6,320	(2.3)	1,245	1,265	1.6	151	157	3.9	441	181
Red Willow	12,191	12,615	3.5	1,817	1,954	7.5	138	213	54.3	682	220
Richardson	12,277	11,315	(8.0)	2,459	2,536	3.1	237	365	54.0	885	142
Rock	2,231	2,383	6.8	385	396	2.8	30	39	30.0	138	254
Saline	12,809	13,131	2.5	2,485	2,612	5.1	226	386	70.8	912	136
Sarpy	63,696	86,015	35.0	1,824	2,909	59.5	163	302	85.2	1,015	236
Saunders	17,018	18,716	9.9	2,665	2,949	10.6	212	347	63.7	1,029	197
Scotts Bluff	36,432	38,344	5.2	3,760	4,989	32.7	364	471	29.4	1,741	269
Seward	14,460	15,789	9.2	1,935	2,215	14.5	189	269	42.3	773	187

Table 1 — Population gain or loss of the counties of Nebraska, 1970 and 1980 (continued)

County	Total population			Population aged 65 and older			Population aged 85 and older			Projected population aged 85 and older in 2000	
	1970	1980	Change[1]	1970	1980	Change[1]	1970	1980	Change[1]	Change	
	— — Number — —		Percent	— — Number — —		Percent	— — Number — —		Percent	Number	Percent
Sheridan	7,285	7,544	3.9	1,220	1,290	5.7	138	199	44.2	450	126
Sherman	4,725	4,226	(11.8)	736	875	18.8	52	112	115.4	305	173
Sioux	2,034	1,845	(10.2)	212	254	19.8	18	9	(100.0)	89	884
Stanton	5,758	6,549	13.7	799	799	0	65	104	60.0	279	168
Thayer	7,779	7,582	(2.6)	1,545	1,665	7.8	137	202	47.4	581	188
Thomas	954	973	1.9	129	119	(8.4)	10	6	(66.7)	42	600
Thurton	6,942	7,186	3.5	860	965	12.2	54	114	111.1	337	196
Valley	5,783	5,633	(2.7)	1,096	1,158	5.6	101	142	40.6	404	185
Washington	13,310	15,508	16.5	1,751	1,916	9.4	191	231	20.9	669	189
Wayne	10,400	9,858	(5.5)	1,264	1,366	8.0	85	128	50.6	477	273
Webster	6,477	4,858	(33.3)	1,455	1,131	(27.7)	132	178	34.8	395	122
Wheeler	1,054	1,060	.5	117	136	16.2	9	6	(50.0)	48	700
York	13,685	14,798	8.1	1,984	2,241	12.9	170	266	56.5	782	194
Total	1,483,493	1,569,825	5.8	183,526	205,684	12.1	16,341	23,744	45.3	71,784	202

[1]Values reported in parentheses are losses.

Source: Characteristics of the Population, General Population Characteristics, Nebraska, Census of the Population. U.S. Bureau of the Census. Washington, D.C.: Government Printing Office. PC80-1-B29, Pt. 29, June 1982, pp. 129-34.

Table 2 — Medicaid expenditures for long-term care of individuals who are aged 65 and older, by county, Nebraska, 1984 and 1985

County	Population aged 65 and older			Medicaid expenditures for long-term care[2]						Change[3]
				1984			1985			
	Quantity	Percentage of total	Percentage living in poverty	Intermediate care facilities	Skilled nursing	Total	Intermediate care facilities	Skilled nursing	Total	
	Number	— — Percent — —		— — — — Dollars — — — —			— — — — Dollars — — — —			Percent
Adams	4,790	15.6	14.9	947,038	15,837	989,875	1,044,306	148,341	1,192,345	20.4
Antelope	1,587	18.3	26.7	386,642	1,863	388,505	383,188	—	388,188	(1.4)
Arthur	76	14.8	17.1	11,924	—	11,924	11,528	—	11,528	(3.4)
Banner	101	11.0	2.0	6,673	7,157	13,830	2,043	1,320	3,363	(311.0)
Blaine	140	16.2	15.7	44,803	—	44,803	49,316	—	49,316	10.0
Boone	1,343	18.2	20.8	387,711	—	387,711	370,160	463	370,623	(4.6)
Box Butte	1,717	12.5	15.0	389,569	34,536	424,105	430,452	30,660	461,112	8.7
Boyd	737	22.1	21.7	166,813	—	166,813	196,376	16,011	212,387	27.3
Brown	796	18.2	26.9	177,163	7,705	184,868	205,183	100	205,283	11.0
Buffalo	4,162	12.0	14.2	991,513	6,210	997,723	991,065	5,684	996,749	(.1)
Burt	1,849	21.0	14.4	367,918	10	367,928	376,988	4,467	381,455	3.7
Butler	1,792	19.2	19.1	390,081	53,729	443,810	378,149	100,811	478,960	7.9
Cass	2,601	12.8	12.3	593,748	12,169	605,917	640,533	16,846	657,379	8.5
Cedar	1,980	17.4	19.4	485,164	—	485,164	510,853	—	510,853	5.3
Chase	759	16.0	20.9	151,293	—	151,293	190,110	—	190,110	25.6
Cherry	997	14.8	10.8	216,614	—	216,614	171,927	—	171,927	(25.9)
Cheyenne	1,567	15.6	13.0	224,445	33,124	257,569	225,387	40,954	266,341	3.4
Clay	1,437	17.7	17.0	513,665	—	513,665	470,025	22,055	492,080	(4.4)
Colfax	2,030	20.5	16.3	410,575	22,847	433,422	456,327	9,142	465,469	7.4
Cuming	1,986	17.0	14.2	359,313	—	359,313	382,553	534	383,087	6.6
Custer	2,725	19.6	19.1	819,996	419	820,415	792,738	6,409	799,147	(2.6)
Dakota	1,712	10.3	12.6	433,517	17,183	450,700	422,437	17,274	439,711	(2.5)
Dawes	1,404	13.3	18.0	267,553	105,333	372,886	343,660	9,296	352,956	(5.6)
Dawson	3,116	14.0	12.7	773,009	11,706	784,715	761,987	19,144	781,131	(.4)
Deuel	530	21.5	8.5	75,482	—	75,482	72,895	—	72,895	(3.5)

Table 2 — Medicaid expenditures for long-term care of individuals who are aged 65 and older, by county, Nebraska, 1984 and 1985 (continued)

County	Population aged 65 and older			Medicaid expenditures for long-term care[2]						
				1984			1985			
	Quantity	Percentage of total	Percentage living in poverty	Intermediate care facilities	Skilled nursing	Total	Intermediate care facilities	Skilled nursing	Total	Change[3]
	Number	— — Percent — —		— — — — Dollars — — — —			— — — — Dollars — — — —			Percent
Dixon	1,327	18.6	20.3	296,249		296,249	307,562	—	307,562	3.8
Dodge	5,418	15.1	12.0	1,130,526	390,698	1,521,224	1,157,964	294,160	1,452,124	(4.7)
Douglas	41,483	10.4	12.0	10,308,041	4,528,886	14,836,927	10,488,947	4,869,538	15,358,485	3.5
Dundy	593	20.7	19.0	95,540	.	95,540	119,062	—	119,062	24.6
Fillmore	1,573	19.9	14.6	316,242	5,705	321,947	326,889	21,816	348,705	8.3
Franklin	1,054	24.1	17.6	296,574	3,746	300,320	286,224	13,732	299,956	(.1)
Frontier	620	17.0	15.5	119,799	1,477	121,276	145,688	1,477	147,165	21.3
Furnas	1,627	25.1	16.6	346,213	—	346,213	386,821	2,432	389,253	12.4
Gage	4,432	18.1	14.1	1,071,746	74,036	1,145,782	1,129,988	107,467	1,237,455	8.0
Garden	619	22.1	10.0	173,234	2,861	176,095	187,894	440	188,334	6.9
Garfield	533	22.6	24.8	87,802	7,205	95,007	105,993	11,791	117,784	23.9
Gosper	347	16.2	18.7	82,800	—	82,800	98,982	—	98,982	19.5
Grant	119	13.6	11.8	6,314	4,797	11,111	6,715	—	6,715	(65.5)
Greeley	673	19.4	24.5	159,513	516	160,029	177,015	1,312	178,327	11.4
Hall	5,964	12.5	13.2	1,196,184	35,177	1,231,361	1,330,642	51,602	1,382,244	12.3
Hamilton	1,299	13.5	11.7	325,100	3,846	328,946	319,047	499	319,546	(2.9)
Harlan	920	21.4	17.6	246,532	20,534	267,066	282,325	34,154	316,479	18.5
Hayes	178	13.1	16.3	13,556	—	13,556	14,313	—	14,313	5.6
Hitchcock	752	18.4	13.3	169,083	—	169,083	175,814	—	175,814	3.9
Holt	2,083	15.4	21.5	630,898	—	630,898	666,399	1,629	668,028	5.9
Hooker	190	19.2	17.9	40,400	—	40,400	33,660	—	33,660	(20.0)
Howard	1,123	16.6	16.5	308,081	13,831	321,912	271,783	—	271,783	(18.4)
Jefferson	2,025	20.6	15.7	507,673	19,140	526,813	512,744	11,314	524,058	(.5)
Johnson	1,152	21.8	16.0	158,721	1,368	160,089	175,593	41,757	217,350	35.7
Kearney	1,179	19.5	12.0	225,363	10,962	236,325	220,680	35,326	256,006	8.3

Table 2 — Medicaid expenditures for long-term care of individuals who are aged 65 and older, by county, Nebraska, 1984 and 1985 (continued)

County	Population aged 65 and older[1]			Medicaid expenditures for long-term care[2]						Change[3]
				1984			1985			
	Quantity	Percentage of total	Percentage living in poverty	Intermediate care facilities	Skilled nursing	Total	Intermediate care facilities	Skilled nursing	Total	
	Number	— — Percent — —		— — — — Dollars — — — —			— — — — Dollars — — — —			Percent
Keith	1,275	13.6	16.0	303,909	12,212	316,121	292,961	4,054	297,015	(6.4)
Keya Paha	205	15.8	15.6	27,654	—	27,654	40,396	—	40,396	46.1
Kimball	677	13.9	9.6	148,784	6,907	155,691	145,870	1,440	147,310	(5.7)
Knox	2,196	19.2	19.6	541,369	3,002	544,371	585,480	1,350	586,830	7.8
Lancaster	19,572	10.2	9.1	4,079,490	882,943	4,962,433	4,217,800	1,548,725	5,766,525	16.2
Lincoln	4,342	11.9	13.9	794,073	23,291	817,364	877,092	19,269	896,361	9.7
Logan	145	14.8	15.9	14,395	—	14,395	11,926	—	11,926	(20.7)
Loup	144	16.8	16.0	23,081	—	23,081	8,296	—	8,296	(178.2)
Madison	4,580	15.0	16.0	1,029,584	17,638	1,047,222	1,026,055	20,204	1,046,259	(.01)
McPherson	105	17.7	3.8	11,689	—	11,689	10,357	—	10,357	(12.9)
Merrick	1,406	16.1	12.1	404,424	1,045	405,469	402,485	52	402,537	(.7)
Morrill	1,037	17.0	17.5	291,359	—	291,359	283,459	—	283,459	(2.8)
Nance	886	18.7	23.4	191,363	—	191,363	184,714	—	184,714	(3.6)
Nemaha	1,539	18.4	19.7	411,687	16,690	428,377	461,624	8,435	470,059	9.7
Nuckolls	1,335	19.8	21.8	374,210	959	375,169	417,348	4,959	422,307	12.6
Otoe	2,943	19.4	13.3	748,063	67,756	815,819	852,086	100,460	952,546	16.8
Pawnee	977	24.8	20.8	220,785	8,471	229,256	248,199	16,190	264,309	15.3
Perkins	638	17.5	14.0	126,822	—	126,822	170,559	—	170,559	34.5
Phelps	1,744	17.9	13.6	268,983	—	268,983	279,558	—	279,558	3.9
Pierce	1,452	17.1	17.5	310,697	—	310,697	283,035	1,053	284,088	(8.6)
Platte	3,529	12.2	15.5	508,317	22,947	531,264	617,099	35,056	652,155	228.7
Polk	1,265	20.0	14.7	332,696	23,552	356,248	340,545	34,714	375,259	5.3
Red Willow	1,954	15.5	14.5	305,307	5,377	310,684	337,183	—	337,183	8.5
Richardson	2,536	22.4	18.5	638,639	31,418	670,057	701,831	51,646	753,477	12.4
Rock	396	16.6	11.1	74,069	15,103	89,172	98,631	16,477	115,108	29.1

Table 2 — Medicaid expenditures for long-term care of individuals who are aged 65 and older, by county, Nebraska, 1984 and 1985 (continued)

	Population aged 65 and older[1]			Medicaid expenditures for long-term care[2]						
				1984			1985			
County	Quantity	Percentage of total	Percentage living in poverty	Intermediate care facilities	Skilled nursing	Total	Intermediate care facilities	Skilled nursing	Total	Change[3]
	Number	— — Percent — —		— — — — Dollars — — — —			— — — — Dollars — — — —			Percent
Saline	2,612	19.9	13.3	584,591	13,236	597,827	624,408	10,915	635,323	6.3
Sarpy	2,909	3.3	6.3	627,113	227,309	854,422	662,154	256,884	919,038	7.6
Saunders	2,949	15.8	12.7	607,476	64,399	671,875	647,258	114,609	761,867	13.4
Scotts Bluff	4,989	13.0	14.8	1,056,893	92,074	1,148,967	1,102,714	63,673	1,166,387	1.5
Seward	2,215	14.0	13.4	493,985	31,026	525,011	562,894	50,581	613,475	16.8
Sheridan	1,290	17.1	19.5	297,126	2,601	299,727	307,311	—	307,311	2.5
Sherman	875	20.7	22.2	227,798	—	227,798	244,050	1,196	245,246	7.6
Sioux	254	13.8	14.6	29,212	8,326	37,538	30,154	662	30,816	(21.8)
Stanton	799	12.2	20.8	166,852	—	166,852	156,139	—	156,139	(6.9)
Thayer	1,665	22.0	15.4	499,358	706	500,064	515,044	5,886	520,930	4.2
Thomas	119	12.2	22.7	51,399	—	51,399	46,216	—	46,216	(11.2)
Thurston	965	13.4	22.6	221,152	—	221,152	194,766	4,292	199,058	(11.1)
Valley	1,158	21.0	20.4	205,910	—	205,910	198,105	15,001	213,106	3.5
Washington	1,366	13.9	12.1	326,480	43,264	369,744	407,962	42,972	45,934	21.9
Wayne	1,366	13.9	15.6	264,577	—	264,577	264,174	1,283	265,457	.3
Webster	1,131	23.3	24.2	329,681	15,470	345,151	388,015	29,860	417,875	21.1
Wheeler	136	12.8	14.0	24,453	—	24,453	23,298	—	23,298	(4.9)
York	2,241	15.1	12.7	458,941	11,543	470,484	495,291	12,578	507,869	7.9
Total	205,684	13.1	15.5	48,944,915	7,629,263	56,574,178	51,364,379	9,097,655	60,462,034	6.9

— = not available

[1]Population aged 65 and above by County, percentage of total population aged 65 and above, and percentage of those aged 65 and above whose income falls below the proverty line. Source: U.S. Census Data, 1980.

[2]Includes expenditures for intermediate care facilities for aged and disabled adults who are not mentally retarded and expenditures for skilled nursing facilities; does not include Medicaid expenditures on behalf of the aged for hospital, physician, dental, or prescription drug charges. Source: Statistical Section, Nebraska Department of Social Services.

[3]Values in parentheses indicate reduction in percentage change.

Nebraska in 1984 and 1985. Percentage increases and decreases from 1984 to 1985 include costs for skilled nursing and intermediate care facilities that were paid through the Medicaid Program for adults who were not mentally retarded.

Presumably, there is a close relationship between poverty rate and Medicaid expenditures. It is difficult to project future expenditures for long-term care, lacking an accurate way to predict poverty, morbidity, and long-term care costs. Given these qualifications, however, Medicaid expenditures for long-term care in Nebraska increased by almost 7 percent in just 1 year, about twice the rate of inflation. Table 2 provides costs for long-term care only and excludes costs for physicians, hospitals, and medications.

The cost of institutional care will skyrocket during the forseeable future as the number of older persons increases. If the rate of growth of Medicaid expenditures for long-term care remains constant (6.9 percent for 1984-85), by the year 2000, the cost will be $164.5 million. Because the rate of growth of the older population is accelerating, this is probably an underestimate. So, a projection of growth over 15 years from $60.4 million to $164.5 million is most likely a conservative estimate. Hospital, physician, and medication costs will also increase proportionately.

Policy Choices

Seeing public expenditures for long-term care for the elderly triple over 15 years should give any policymaker pause, and it would be tempting to say that there are a number of easy solutions to this problem. However, several factors beyond the raw numbers make this issue even more complex.

First, out-migrants among the aged tend to be the most prosperous. The people who can afford to pay for long-term care can also afford to move to Sun City or Santa Barbara. So, in many Nebraska counties, there is some erosion among the well-to-do elderly. Obviously, this increases the proportion in poverty, not in numbers but in percentages.

Second, while cost-containment efforts for Medicaid expenditures within the state and the nation have been somewhat successful, there is a practical limit to such efforts. Many nursing homes are caught in a cost squeeze. Simply limiting the number of dollars per day that the state will pay for long-term care may contain expenditures, but it does not contain costs. As the operators' costs for food, utilities, labor, and fringe benefits increase, the quality of care at some point must decrease, given a fixed level of resources. Most facilities now receive less per day for a Medicaid patient than for a private-pay resident, who then pays a hidden subsidy for those whose care is being paid for by the state. The goal in most nursing homes is to maximize the proportion of private-pay patients or at least to maintain a careful balance of public versus private-pay patients.

Too many Medicaid patients means red ink at the end of the year for long-term care facilities. As a result, Medicaid patients become increasingly difficult to place. Social workers at hospitals who try to place Medicaid patients tell us that in a city the size of Omaha there may be only one or two beds available to Medicaid patients on a given day. So, simply slapping a lid on what the state will pay, the traditional solution up to this point, will only work so long before the available facilities dry up. And, if the figures in tables 1 and 2 tell us anything, it is that Nebraska will have a shortage of beds in nursing homes during the next several decades.

Third, nursing home patients are sicker and, thus, more costly to care for than they used to be. Twenty years ago, it was not uncommon to find ICF patients who were not really in need of nursing care living in nursing homes, they just had a hard time making it at home. Regulation of the industry has all but eliminated this kind of patient, the inexpensive patient. Also, home health care and social service programs for the homebound elderly have been so effective that by the time service alternatives are exhausted, the frail older patient is generally very sick and care is expensive. Further, the effect of diagnostic-related groups (DRGs) and prospective-payment plans on hospitals is to move more patients from short hospital stays into nursing homes, rather than from longer hospital stays back to their homes. This also increases the case complexity and the cost of care in long-term care facilities.

One final wild card is the level of prosperity versus the level of poverty among the aged. The economic status of the elderly has improved yearly since 1949, to the point where the poverty rate for the aged is now lower than that of the general population nationally. Presumably, prosperous elderly individuals are better able to pay for their health care. However, the poverty rate in Nebraska for individuals who are 65 years old or older has not gone down as quickly as the national rate—it remains at 15.5

percent. And, because of the crisis in agriculture and declining land values, we must project an increase, not a decrease, in poverty among Nebraska's aged population, at least for the short run.

Taking these factors into account, and given the fact that there will be a major problem in financing long-term health care in the future, we see choices for the state's policymakers from among seven alternatives.

Pay the Price. Given the increasing level of need among the fastest growing group of citizens, Nebraska's leaders may inevitably have to dig deeper into the state's fiscal pocket and pay the price for more long-term care. Since 1984-85, the state has paid the counties' share of Medicaid payments (it had been a 60:20:20 division of costs among federal, state, and county dollars), so the state now pays 40 cents of each Medicaid dollar. Because the care of the frail aged will require a bigger slice of the pie, either the pie must be enlarged or someone else's share of the pie must be whittled down. In the long run, making no decision will result in the choice of this decision.

Lower the Level of Quality. It may be possible to squeeze the nursing home industry a little harder. Keeping the reimbursement rate constant and allowing no new construction lets inflation eat away at the provider's share year-by-year. Keep the lid on and see what happens. The net effect of this option is to increase the subsidy that private-pay nursing home patients already pay for their less prosperous companions. Eventually, it will also squeeze the better nursing homes out of the Medicaid market.

Increase Home Services. The kinds of services that are provided by the Nebraska Department on Aging, through its network of Area Agencies on Aging, are designed to provide alternatives to institutionalization and to keep older people independent and out of nursing homes as long as possible. To a certain point, it is cheaper to care for people in their homes than in institutions. Currently, the best coverage is provided for the services that are cheapest to deliver, for example, meal sites, information, and referrals. Homemaker and home health aide services, day care, and visiting nurses are more expensive. A major investment in such health services to keep older people at home, however, might pay genuine dividends in the future.

Allow Partial Medicaid Payments. Presently, older persons must become paupers to receive Medicaid. They must spend down to $1,500 in personal assets, plus burial insurance, and then Medicaid will pay 100 percent of their long-term care costs. Many older people pay for their aging of the population as a catastrophe. We have met the aging, and they are us.

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Child Poverty and Child Welfare in Nebraska

Ann Coyne and Herb Grandbois

6

Children represent the fastest growing group of poor people in the United States today. An increase in the number of children living with one parent, an increase in unwed teenage pregnancy, a lack of child support, lower wages and benefits for women than for men, the cost of child care, and unemployment and underemployment in two-parent families contribute to child poverty. Policy options ranging from changing eligibility requirements for assistance programs to establishing state funded health insurance programs are presented. Methods of responding to abused and neglected children have changed dramatically. The effect of Pl 96-272 on the child welfare system is analyzed, and the unique problems of Indian children are also discussed.

Children are the fastest growing group of poor people in the United States today. They are much poorer than individuals in other age groups, and have the highest rate of poverty. While the poverty rate among adults has remained relatively stable over the past 15 years, the poverty rate among children, especially very young children (age 0-5), has risen dramatically. According to Senator Daniel P. Moynihan of New York, "The United States in the 1980s may be the first society in history in which children are distinctly worse off than adults" (Children's Defense Fund, 1986).

Child Poverty

Nationally, 24 percent of children younger than age 6 were poor in 1985, compared with 20.2 percent of those aged 6-17. In contrast, only 11.6 percent of adults aged 18 and older were poor (Children's Defense Fund, 1986). (National data came from a national random sample, not a state-by-state count.) In Nebraska, according to the 1980 census, 13.4 percent of children younger than 5 and 11.6 percent of those aged 5-17 were poor, while only 10.2 percent of adults aged 18 and older were poor. Current figures on poverty in Nebraska are unavailable. However, because of the farm crisis, it is expected that poverty levels in Nebraska in 1986 are much higher than the 1980 census data indicate.

The Poverty Index

Poverty is a difficult concept to define. However, in 1964, the Social Security Administration developed a poverty index that has gained wide acceptance. The index is based on the cost of a minimum diet (Economy Food Plan) for a four-member family with two schoolage children (about $2.32 per person per day using 1984 prices). Because families of three or more persons were found to spend one-third of their income on food, the poverty level for these families was set at three times the cost of the Economy Food Plan.

Each year the thresholds are adjusted to reflect changes in consumer prices. The poverty thresholds are weighted according to family size and age of the householder, with individuals over age 65 presumed to need 10 percent less than individuals under age 65. Table 1 shows poverty levels for 1985.

Table 1 — Poverty levels by family size, 1985[1]

Size of family	Poverty level
	Dollars
1	5,061
2	6,483
3	7,938
4	10,178
5	12,049
6	13,630
7	15,500
8	17,170
9+	20,310

[1]The median income for a four-person household in Nebraska in 1985 was $25,372.
Source: Sar A. Levitan, *Programs in Aid for the Poor, Fifth Edition,* The Johns Hopkins University Press, Baltimore, MD, 1985.

Current Statistics

Between 1979 and 1982, about 3.1 million additional American children fell below the poverty level. During the economic recovery of 1983 and 1984, only 210,000 of the 13 million poor children in the United States escaped poverty (1.6 percent). Clearly, the economic recovery was not very effective in improving the economic condition of children (Children's Defense Fund, 1986).

Poor children are also getting poorer. In 1983 (the last year for which data are available), 5.6 million children, or 42.2 percent of all poor children, lived in families with incomes lower than half of the poverty level. Half of the poverty level for a family of three in 1983 was $3,969. For a family of four it was $5,089. In 1979, only 34.9 percent of all poor children lived in families with incomes below half of the poverty level (Children's Defense Fund, 1986).

Reasons for Child Poverty

Why are so many children slipping into such dire poverty? What are the implications of this dramatic social change?

Children are more apt to be poor today for several reasons. Chief among them is the likelihood that for at least some time during their childhood over 37 percent of American children will live with only one parent. Most will live with their mothers, and children living with single-parent mothers are very likely to be poor (54 percent compared with 12.5 percent of other children) (Children's Defense Fund, 1986). In Nebraska, according to the 1980 census, 49,758 children under age 18 were living in families with a female head of household, and 40.2 percent of these children were living in poverty. Of the 5,786 children under age 3 who lived in a female-headed family, 61.5 percent lived in poverty (Peterson, 1985). This feminization of poverty is related to a number of social changes that have occurred in the past 30-50 years.

The divorce rate in the United States has climbed so that now nearly half of all recent first marriages end in divorce. At the same time, the economic situation has changed so that most families need a second wage earner. When divorce occurs, typically, women are left with full support of the children and smaller salaries. In 1979, the median annual income in Nebraska of a two-parent family with children under age 18 was $21,421. In contrast, mothers of children under age 18 with no husband present had a median income of only $8,582 (Nebraska Department of Labor, 1985).

Teenage Pregnancy

Although the birthrate among teenage mothers has decreased over the past 45 years, the birthrate among unmarried teenagers has

United States is insured for only a portion of a year or is uninsured (Children's Defense Fund, 1986).

In Nebraska, many working women have jobs that do not provide health insurance as a benefit. Only some of the employers that provide health insurance make dependent coverage available. Because 41.3 percent of the 340,000 working women in Nebraska have children, many children are not covered by basic health insurance, unless they are covered by their fathers' policies.

Child Care

Single-parent working mothers have great difficulty finding adequate child care. It is estimated that as many as 6-7 million children may be left alone while their parents work. Nationwide, many women must depend on welfare because affordable child care is unavailable (Children's Defense Fund, 1986).

Of 121,631 preschoolage children in Nebraska in 1979, 10,736 lived in single-parent households, and most mothers worked. There were 50,622 mothers of preschoolage children in the labor force in 1979 (Nebraska Department of Labor, 1985). Undoubtedly, some of these children were cared for by relatives, but many may have been left alone. Today, there are 2,346 day-care homes and centers licensed to care for 29,629 preschoolage and schoolage children in Nebraska (Nebraska Department of Social Services, 1986).

Child care is expensive. In 1985, Title XX paid $120 per month per child for care in a day-care home and $150 per month per child for care in a day-care center (Nebraska Department of Social Services, 1986). A mother of two preschool age children who has a job paying minimum wage (many female jobs are low-paying service jobs) would have to spend about half of her earnings for day care if she could not receive subsidized day care. Most low-income single mothers cannot afford this, so they are faced with the choice of leaving their children unattended while they work or quitting work and going on ADC if subsidized day care is not available.

Nebraska provides some subsidized day care. In FY 1985-86, Title XX paid day-care expenses for 11,340 children. However, many of these children were not in day care all year (Nebraska Department of Social Services, 1986). Some received just a few days or a few months of subsidized day care. Nebraska has 16,343 preschoolage children who live below the poverty level. Clearly, their economic situation would improve if subsidized day care were provided because their mothers would be able to work.

Unemployment and Underemployment

Children in two-parent families can face poverty too. Unemployment and underemployment of adults frequently leads to poverty for children in these families. Despite economic recovery, there are 5.4 million children in the United States with at least one parent unemployed and another 5.4 million children with no parent in the labor force (Children's Defense Fund, 1986).

Most families headed by a worker who has just lost a job expect to rely on the Unemployment Insurance System (UIS), which covers 86 percent of all unemployed persons. Until the early 1980s, the UIS provided an effective buffer for most unemployed workers in the United States. In May 1975, more than two-thirds of all unemployed persons received unemployment insurance benefits. Since 1981, however, the protection this system provides for workers and their families has been eroded. In October 1985, the share of all unemployed workers receiving unemployment insurance benefits hit a historic low of 25.8 percent.

Because eligibility for unemployment benefits is based on work experience and wages during the previous year, the UIS is ineffective in reaching the most vulnerable jobless Americans—young parents, women, and minorities who lack steady work histories. The UIS is ill-equipped to cope with the many young women workers who hold less stable and poorer paying jobs in the service sector. Many of these jobs are not covered by the UIS. The UIS is designed to respond to temporary periods of joblessness in manufacturing industries. But, the U.S. economy is shifting more to a service economy, and the Unemployment Insurance System has not kept pace.

Additionally, states have trimmed unemployment insurance expenditures by tightening eligibility standards, reducing benefits for individuals who receive social security or private pensions, and imposing a 1-week waiting period before any benefits can be received (Children's Defense Fund, 1986).

Children in families with one or both parents unemployed are very apt to find themselves living in poverty because of the unavailability of unemployment insurance. In Nebraska, in June 1986, only 27 percent of unemployed workers received unemployment insurance (Nebraska Department of Labor, 1986).

Low Wages

Many families with more than one or two children and parents with marginal skills who earn low minimum wages live in poverty, even if one parent works full time (tables 2 and 3). In 1984, more than 11.4 million Americans receiving hourly wages were paid at such low rates ($4.00 per hour or less) that income from a full-time job would not bring a family of three out of poverty. In 1979, the number of workers with inadequate wages was 2.8 million, a fourfold increase in only 5 years (Children's Defense Fund,1986). Today, if both parents work at minimum wage, one full-time and one half-time, their combined wages would not lift a family of four or more out of poverty (Children's Defense Fund, 1986).

Table 2 — Comparison of minimum wage earnings and the federal poverty level for a family of three[1]

Year	Hourly minimum wage	Annual earnings[2]	Federal poverty level (annual)	Full-time minimum wage earnings as a percentage of the poverty level
	— — — — —	Dollars — — — —	—	Percent
1964	1.25	2,500	2,413	103.6
1969	1.60	3,200	2,924	109.4
1974	2.00	4,000	3,936	101.6
1979	2.90	5,800	5,784	100.3
1980	3.10	6,200	6,565	94.4
1981	3.35	6,700	7,250	92.4
1982	3.35	6,700	7,693	87.1
1983	3.35	6,700	7,938	84.4
1984	3.35	6,700	8,277	80.9
1985	3.35	6,700	8,589[3]	78.0
1986	3.35	6,700	8,934[3]	75.0

[1]A family of three consists of one adult and two children.
[2]Based on 2,000 hours of work per year (40 hours per week for 50 weeks).
[3]Estimated.
Source: Adapted from *A Children's Defense Budget: An Analysis of the FY 1987 Federal Budget and Children,* Children's Defense Fund, Washington, DC, 1986.

Table 3 — Comparison of public assistance and the federal poverty level for a Nebraska family of three with no other income

Year	Monthly aid to dependent children	Food stamps for ADC recipients	Energy assistance for ADC recipients	Poverty level (monthly)	ADC, food stamps, and energy assistance as a percentage of the poverty level
	Dollars				Percent
1974	210	N/A	N/E	328	N/A
1979	310	N/A	N/E	482	N/A
1980	335	135	27.28	547	90.9
1981	350	138	22.85	604	84.6
1982	350	138	26.09	641	80.2
1983	350	154	27.74	661	80.4
1984	350	158	29.29	690	77.9
1985	350	167	35.58	716	77.2
1986	350	179	35.58	744	75.8

N/A = figures not available.
N/E = program not in existence.
[1]A family of three consists of one adult and two children.
Source: Nebraska Department of Social Services, unpublished data, 1986.

Tax Increases

The change in federal tax laws in 1981 subjected poor families to increased taxes. Additionally, the number of poor households paying federal income tax tripled between 1979 and 1983. For example, a traditional two-parent family of four with poverty-level earnings of $7,412 paid $134 in combined federal taxes in 1979, or 1.8 percent of its income. In 1986, the same family with poverty-level earnings of $11,508 will pay $1,223 in combined federal taxes or about 10.6 percent of its income.

A single-parent family of four with the same poverty-level earnings has been subjected to an equally harsh federal tax hike from $288 in combined taxes in 1979 (3.9 percent of its income) to $1,369 or 11.9 percent of its income this year. Large families also have been affected. A poverty-level family of six paid 6.7 percent of its income in federal taxes in 1979, while it must pay 11.2 percent of its income in 1986.

This increase in federal income taxes on working families living in poverty occurred because federal policymakers failed to increase the personal exemption, the standard deduction, and the earned income confront the problems of child poverty. Federal policies relating to unemployment insurance, minimum wage, federal taxes, agriculture, and human services have all affected the ability of Nebraskans to support themselves and their children.

Implications of Child Poverty

The implications of a rapidly increasing number of poor children are many. Because poverty appears to be associated with poor nutrition, accidents, increased illnesses, mental retardation, poor school performance, increased drop out rates, and some forms of child abuse, this rapid increase is a serious social problem. It appears that a large subclass of individuals who are educationally unprepared to function in a technological society may be forming in Nebraska and other more industrialized states.

The rate of divorce in the United States is beginning to stabilize at about 50 percent. However, this means that many children will live in a single-parent family during part of their childhood. Whether they live in poverty during this period depends on policy choices regarding things such as enforcement of child support, availability of child care, comparable pay for working mothers for jobs of comparable worth, and increases or cuts in federal and state funds for children's programs.

The agricultural crisis appears to be worsening and unemployment in Nebraska will probably increase, at least in the next several years. Children in two-parent as well as single-parent families facing these economic hardships are at great risk for living in poverty. It also appears that the proposed federal cuts in children's programs may be disproportionately large, compared with other domestic and military program cuts.

Policy Options

Nebraska policymakers are faced with several choices for addressing the problems of child poverty. The options range from changing eligibility requirements so that more children would qualify for assistance to establishing state funded health insurance programs for unemployed or underemployed parents.

Increased Standard of Need

Nebraska's standard of need for ADC has not increased recently, despite severe inflation. Since 1981, it has been $210 for the first family member and $70 for each additional family member. The standard of need affects both the maximum amount of public assistance an eligible family receives each month and the number of families eligible for ADC. As the standard of need increases, more families become eligible. By increasing the standard of need, more children living in poverty in Nebraska would become eligible for federally funded public assistance (ADC). Additionally, children receiving ADC would receive an amount closer to their actual need.

If the standard of need were increased to $260 for the first family member and $86 for each additional family member, a figure corrected for inflation, a family of three would be at the same ADC benefit level they were at in 1981. Recipients would not receive a net increase of $82, however.

For every $3 of ADC increase, $1 is lost in food stamps. Using this proposal, a family of three (mother and two children) would receive $432 monthly in ADC benefits (an increase of $82), $152 in food stamps (a decrease of $27), and $35.58 in energy assistance (unchanged), for a total of $619.58. This income represents 83.2 percent of the poverty level. To reach the $744.50 per month poverty level for a mother and two children, ADC would have to be raised to approximately $375 for the first person and $125 for each additional family member.

The fiscal impact on the state of the more modest proposal ($260 for the first member plus $86 for each additional family member) would be considerable. The number of families on ADC would increase by about 430. The increase in expenditures for ADC would be about $19.3 million, which would require an increased appropriation of about $8.2 million in state funds. This represents a 32.3 percent increase in state funds for ADC over FY 1985-86 levels.

Because of the decrease in food stamp benefits, the state would lose about $5.3 million in federal funds for food stamps. However, because the federal government pays 57.8 percent of ADC, there would be an increase of about $11 million in federal ADC funds, for a net gain to the state of about $5.8 million in federal funds. Thus, for an investment of $8.2 million in state funds, Nebraska could increase by $5.8 million the federal funds coming into the state for poor children (Nebraska Department of Social Services, 1986).

Because the agricultural crisis affects two-parent families as well as single-parent female-headed families, a continuing increase in the number of ADC-Unemployed Parent recipients is expected (note the 22.6 percent increase in just 2 months shown in table 4). The number of poor children living in two-parent marginally employed families not eligible for ADC also will increase in rural areas. Their medical needs will be covered by the Ribicoff amendment to Medicaid. Both ADC-Unemployed Parent and the Ribicoff Medicaid Programs are state options. Nebraska has chosen to protect poor children in two-parent families as well as the traditional ADC recipients, poor children in single-parent families.

Food Programs

Food programs, such as the Food Stamp and the Women, Infants, and Children's (WIC) Supplementary Food Programs, are important for children. In Nebraska, 101,329 people received food stamps in January 1986. While 39,864 food stamp recipients also received public assistance (such as ADC), 61,465 recipients did not. Unlike ADC, food stamps are available to two-parent, poor working families. For children in families where both parents are employed marginally or part-time, food stamps and free or reduced school lunches may be the only help they receive.

The WIC Program is targeted to the special nutritional needs of poor infants, children, and pregnant women who also exhibit measurable nutritional deficiencies. However, in Nebraska only 33 percent of those eligible for WIC assistance receive it because of the way the program is funded. Nebraska ranks 39th among states in this regard.

Because the cost-benefit tests for WIC have consistently shown that $3 is saved (generally on neonatal intensive care expenses for premature infants) for every $1 spent on food for poor pregnant women (Select Committee on Children, Youth, and Families, 1985), an option for the state would be to increase funding for WIC by using state funds. An immediate savings in state matching funds for Medicaid (which pays for neonatal intensive care for poor infants) is apt to result. Because Nebraska uses state funds to pay 42.2 percent of the Medicaid costs, each $1 the state invests in WIC should result in a savings of $1.26 in state Medicaid funds. Additional savings in funds for Medicaid, disabled children, and special education services also should result in the long run, because premature infants are more likely to need these services than full-term infants.

Health Insurance

A state funded health insurance program should provide medical protection for poor children who live with parents who do not receive employer-provided health insurance. Such a progam would reduce the motivation to receive public assistance so as to be covered by Medicaid. Continuing state funded Medicaid coverage to public assistance recipients for 1 year after they become employed also would reduce their likelihood of remaining on ADC to keep their families covered by Medicaid. Currently, this is a major disincentive to work.

Federal Policy Changes

Poverty is largely a federal issue. Federal policies affect those who are poor and, to a great extent, those who will be eligible for assistance. Some policy options being discussed at the federal level would have a profound effect on poverty in Nebraska. Perhaps the most important is the recently passed Tax Reform Bill which will remove about 6 million poor people from the tax rolls.

A fundamental shift, from a means-tested eligibility program administered by the Department of Health and Human Services, to a negative income tax administered by the Internal Revenue Service, has been proposed several times since 1968 as welfare reform. Developing laws on comparable worth has been proposed also to prevent the clustering of female occupations at the bottom of the income scale, no matter what the level of education and skill required.

All other industrialized nations give a children's allowance to all families with children. All other industrialized nations also have a national health insurance system which covers all residents, not just the elderly and the poor. A new idea being implemented in several Western European nations is the provision of a child-support allowance for children living in one-parent families when the other parent cannot provide child support (Kahn and Kammerman, 1983).

Child Welfare

Today, the problems of children at risk for out-of-home care are viewed much differently than they were in the 1950s. In the past, it was believed that children should be removed from families that were abusing or neglecting them. Placement with good, caring foster families was considered the solution.

Now that more is known about the importance of early bonding and attchment on a child's ability to develop normally, it is recognized that children cannot be shifted from one family to another without disrupting their attachments and interrupting and frequently damaging their development. Permanent placement of children with a family, preferably with the family of origin, is recognized now as the central issue in dealing with families experiencing serious problems.

Child Abuse and Neglect

Many Nebraska families are experiencing serious problems in parenting their children. In 1985, 7,952 cases of child abuse or neglect were reported to the child abuse central registry and 4,818 of these cases were substantiated. This represents a 180 percent increase in substantiated child abuse cases since 1982 (table 6).

It is difficult to know if the increase in reporting represents a true increase in the incidence of child abuse or simply the public's greater willingness to report it. Increased reports during periods of economic recession probably represent an actual increase in incidence, whereas the dramatic increase in reports of incest and other forms of sexual abuse probably are due to greater public awareness. With prevention

Table 6 — Nebraska child abuse statistics, 1982-85

Year	Reports of child abuse	Substantiated cases	Percentage of cases substantiated
	— — — Number	— — —	Percent
1982	3,934	1,715	43.6
1983	4,417	2,029	45.9
1984	6,249	3,331	53.3
1985	7,952	4,818	60.6

Source: Nebraska Department of Social Services, 1986.

programs in the schools (for example, Cat and Mouse, Bubbylonian Encounter, and Get Away Gang) children now are being taught to tell a responsible adult if inappropriate sexual advances are made toward them.

Child Protective Services

Nebraska, like all states, has a Child Protective Services (CPS) Program in the Department of Social Services to respond to reports of child abuse and neglect. An issue of concern is the extent of the state's response to these reports.

Because of increases in reports of child abuse and neglect and reductions in the number of CPS workers, especially in 1981-82, Nebraska now is in a situation where all reported cases cannot be investigated. Some cases are judged to be of a lower priority and investigations are either delayed or not performed.

In cases where abuse or neglect are documented, services needed to rehabilitate family members often are not provided because of a lack of resources. Child Protective Services workers barely have time to document the existence of abuse and neglect. Frequently, they have neither the time to provide indepth services nor the resources to purchase them for the child and family. This raises a philosophical question about the appropriateness of coercive state intervention into families when services are not going to be provided to protect children. Does simple documentation that abuse or neglect has occurred justify coercive intrusion in a family? Or, must the state guarantee treatment?

In addition to the philosophical question regarding the limits of family autonomy and state intervention, there is a practical question. Does identifying and labeling a family as abusive protect or in any way help the child? Or, is labeling counterproductive in the absence of state willingness to provide the needed protective services?

Nebraska policymakers are faced with several choices. First, to what extent can child abuse be prevented, and who is responsible for providing preventive services? Through LB 333 in 1986, the Nebraska Legislature created a trust fund for support of local prevention projects. Private community groups also have been funding projects aimed especially at preventing sexual misuse of children, primarily through educational programs in the schools.

Second, to what extent is the state responsible for providing the resources, either human or financial, to treat families caught in the cycle of child abuse? In the past, children were removed from abusive or neglectful homes and placed in foster care. For indefinite periods of time, these chidren went from foster home to foster home, drifting through the system without roots, frequently becoming alienated and developmentally delayed by the experience.

History of Advocacy Efforts

By the 1970s, advocates began to realize that children who were placed, with the best of intentions, in a series of foster homes, group homes, or institutions were not receiving the stability they needed to grow up normally. Inspired by the civil rights activities of the 1960s and the children's rights activities of the 1970s, advocates (for example, foster and adoptive parents, child welfare specialists, Junior League volunteers, lawyers, and others active in children's rights issues) began working with Congress toward the passage of legislation that would address the problems of foster children.

After 6 years of hard work, PL 96-272, the Adoption Assistance and Child Welfare Act of 1980, was passed. This legislation is truly revolutionary, and much of the change seen in the child welfare system today emanates from it.

States are now required to have a case plan for each child in out-of-home care and to have a case review system so that a child cannot simply be placed in foster care and forgotten. States are required to have a tracking system so that the whereabouts of each child in out-of-home care can be ascertained at any time. Certain due process provisions are required for the bioparents, as well as a dispositional hearing within 18 months of a child coming into care.

Foster Care Review Act

Nebraska, responding to the philosophy and requirements of PL 96-272, in 1982 passed LB 714, the Foster Care Review Act. This act established an autonomous citizen review system and a tracking system which covers all children in out-of-home care, not just wards of the Department of Social Services (DSS). It also requires a review of the disposition by the courts within 1 year of a child entering care and a court review every 6 months thereafter. These requirements are more stringent than those mandated by PL 96-272.

Within DSS and other agencies, the effect of PL 96-272 and earlier permanency planning initiatives can be seen clearly. The goal for children at risk is prevention of out-of-home placement through the provision of intensive home-based services. When children are already in out-of-home care, the goal is rehabilitating the family and returning the child to the home as soon as possible. For children who are unable to return home, the goal is adoption or other legally protected permanent arrangements, such as subsidized guardianship (a new progam passed by the 1986 legislature in LB 600). By definition, no child is too old or too handicapped to be adopted.

Yet, despite these goals, thousands of children in Nebraska remain in temporary, impermanent, out-of-home care. On any day in Nebraska, approximately 4,000-4,500 children are living in foster homes, group homes, and institutions. Since August 1983, over 11,000 children living in out-of-home placements have been reported to the Foster Care Review Board's tracking system by 40 agencies and over 80 courts. Many of these children have been in multiple placements; 3,371 have been in three or more placements and 683 have been in over six temporary homes (Foster Care Review Board, 1985).

Reasons for Out-of-home Placements

Why do so many children in Nebraska end up living in out-of-home placements, usually in a series of temporary placements? Family violence, poverty, drug and alcohol addiction, sexual exploitation, mental illness, and family instability are frequently the causes of problems which result in out-of-home placements. Children with learning disabilities or other problems, such as addictions, may exhibit behaviors such as truancy, minor in possession, uncontrollable behavior, running away, or delinquency. These behaviors may come to the attention of the court and result in a child being placed in out-of-home care.

A child with mental retardation or another developmental disability may be placed in out-of-home care if special education is not available locally or if the family has difficulty parenting the child at home. Children from very poor families may be placed in foster care if they are found living in inadequate housing, on the streets, or in shelters.

American Indian children are at great risk for out-of-home care. Historically, many Indian children have been removed from their parents. In the late 1970s, surveys showed that as many as 25-30 percent of all Indian children were living in non-Indian foster homes, adoptive homes, or institutions. Essentially, these children had been removed from their tribes and their cultures without the involvement of tribal courts.

In 1985, American Indians represented 0.5 percent of Nebraska's population. However, 5 percent of the children in foster care in Nebraska were Indian (10 times more than would be expected). Although there were 156 Indian children in foster care in 1985, there were only 27 Indian foster homes. Clearly, the majority of Nebraska's Indian children are still being placed outside their culture despite passage of the Indian Child Welfare Act in 1978.

Placement of children in out-of-home care is not a solution, and it often compounds the problem. Dealing with basic family problems is necessary if children are to remain in their homes or return home in safety. However, community-based family services are scarce. Therefore, children may be sent out of their communities to hospitals, institutions, or group homes in the hope that the problem resides with the child and that it can be changed by some type of child-centered intervention.

Need to Deal with Family Issues

If family issues are not addressed, it is very difficult for a child to return home. Mental health professionals and judges are reluctant to return a child to a family which has not received services and has not changed. Yet, the family situation may not be dysfunctional enough to meet the legal test for termination of parental rights, which would free the child for adoption by another family. So, the child remains stuck in foster care.

Children in poor families are in a particularly difficult situation. If a family is living in inadequate housing and the landlord, for example, neglects to fix a stopped-up toilet, the Department of Social Services could place the children in foster care to protect their health if alternative housing could not be found. DSS would find it difficult, however, to pay someone to fix the toilet, although fixing it would cost much less than 1 month of foster care for only one child. The fact that fixing the toilet would benefit the landlord, as well as the children, usually results in a decision to place the children in foster care rather than to assist the neglectful landlord.

Once children are removed from a very poor parent, the difficulties of returning them are enormous. The mother is no longer eligible for public assistance if the children are not living with her. Yet, without the money from public assistance, she is unable to afford adequate housing and may end up on the street or in a shelter. And, the children will not be returned to her if she does not have adequate housing. Children in Nebraska, then, are caught in a system that expends enormous amounts of money (about $20 million per year) for keeping them in out-of-home care, while not providing the resources to their communities to develop and maintain programs to assist their families.

While Nebraska has a six-city pilot program of home-based family services (funded by a $350,000 grant from the Edna McConnell Clark Foundation), the fiscal incentives in the child welfare system are still toward out-of-home care. It is simply easier for a caseworker to put a child in foster care than to garner the resources needed to rehabilitate the family, even if family services would cost less than foster care. For example, a caseworker could more easily place a child at the Youth Services System group home in Lincoln for $1,000 per month than pay the Youth Services System $1,000 for rehabilitation services for the family. In communities without family services, caseworkers are not in a position to fund the development of such services, so children are placed in foster care.

What we have in Nebraska, as in most other states, is a system organized to remove children from their homes. It was developed during the era of saving children, before we understood the negative effects of removing children from their families. We need a system in which fiscal policies are in line with the stated program policies. Only when it is easier for a caseworker to authorize payment for community-based family services and harder to authorize payment for out-of-home care will the number of children caught in the foster care system begin to decrease.

Community-based Family Services

After 3 years of work which built on studies conducted during the 1970s, the Study Commission on Programs and Services for Dependent Youth and Youth Offenders in Nebraska recommended fiscal incentives by the state to local communities to encourage them to develop services for families. The commission suggested the development of preventive, treatment, and rehabilitative services.

"The goals of the Study Commission's proposals are to increase the likelihood that children and youth will be treated according to their best interests for care, protection, and adequate development, that they and their families will have access to helping services at the community level, and that decision-makers of both public and private agencies will form new partnerships for planning and delivering a coordinated, integrated continuum of prevention, early intervention, diagnosis, treatment, and after care programs, unencumbered by bureaucratic, funding, or procedural barriers" (The Lincoln Foundation, 1984).

To implement these goals the commission recommended a three-level system of coordination. It recommended an executive-level office capable of directing and controlling coordinated planning and budgeting of all resources for children, youth, and families in the state. Some responsibilities of the executive office would be coordinating service agencies and juvenile courts; acting as liaison among state agencies serving children to require the pooling of fiscal, human, and program resources; planning; resolving interagency disputes; and establishing in each community a networking authority.

The commission recommended establishing an authority capable of networking public and private resources in about 25 communities. These Offices of Children, Youth, and Families would conduct periodic needs assessments, assure that all mandated core services are established and functioning, provide support for a system which emphasizes in-home services, and provide input to state agencies planning services for these communities. The commission recommended a service coordination mechanism for clients that provides investigative, protective, intake, and case management services for children, youths, and their families, without the need for a court order. This service coordination mechanism could use public and private community resources.

The family centered child/youth service system suggested by the Study Commission specifies local advisory councils; community coordination; and state administration of standards, evaluations, and fund allocations. Local planning is emphasized and core services needed by all communities would be identified by the state and developed through fiscal incentives.

The proposed plan calls for coordination authorities at the state and community levels, administration by the Department of Social Services of a case management system that integrates juvenile justice and social services, and a state grant-in-aid incentive process to help communities develop and operate core services and other needed services (The Lincoln Foundation, 1984).

Case Review

States have several options to meet the review requirements of PL 96-272. Nebraska, with the passage of LB 714 in 1982, elected to have a three-level review procedure. The Department of Social Services provides Permanency Planning Reviews every 6 months for each child under its care who is in out-of-home care. The reviews allow discussion among biofamilies, the child, and others who are involved in the case. The plan can be developed or modified during these sessions as situations change.

All children who have been placed in out-of-home care by a court must have their cases reviewed by a judge after 1 year in care and every 6 months thereafter. This assures that the due process rights of all parties are protected and that the child's case is monitored to ensure that the child receives needed services.

Nebraska has a system of autonomous citizen reviewers who are charged with the responsibility of reviewing all children placed in out-of-home care for more than 6 months, regardless of the agency involved. Five-member boards exist in 17 locations around the state, and these community volunteers meet monthly to review specific cases.

Board members possess a variety of backgrounds, such as law, education, medicine, nursing, business, and advocacy. Board members discuss specific questions about each case and make suggestions to the guardian ad litem, , the judge, and the agency involved. No employee of a child-placing or child-caring agency can be a member of a local review board because of the potential conflict of interest.

As citizens of local communities, these Foster Care Review Board members also identify service gaps and attempt to secure services locally for children.

The value of a citizen review process to children in the child welfare system was shown by an evaluation conducted in November 1985. The evaluation showed that cases reviewed by a local Foster Care Review

Board and the Department of Social Services' internal Permanency Planning Review (PPR) System, were twice as likely to result in adoption of children as those reviewed only by the internal PPR System. When children's cases were reviewed by citizen boards they were more likely to receive legal services to free children for adoption. For example, filing for termination of parental rights against the biomother was five times more likely to occur if the child's case was reviewed by the Foster Care Review Board (Foster Care Review Board, 1985).

Special Focus on Indian Children

Nebraska has 9,146 Indians living in approximately 1,877 households. The three Indian reservations in northeast Nebraska are home for most of Nebraska's Indians. In addition to the Santee, Winnebago, and Omaha reservations, however, there are substantial Indian populations in Omaha, Lincoln, Scotts Bluff, Chadron, Gordon, and Rushville.

PL 95-608, the Indian Child Welfare Act, was passed by Congress in 1978, because many Indian children were being removed from their families and subsequently placed in non-Indian homes. The act's intent is to prevent the unwarranted breakup of American Indian families and to protect the interests of Indian children. The act establishes tribal jurisdiction over child welfare matters and establishes specific procedures for the removal and placement of Indian children. In 1985, the Nebraska Unicameral passed the Nebraska Indian Child Welfare Act (LB 255) based on PL 95-608. The Department of Social Services assumed responsibility for writing the rules and regulations for the state.

Nebraska's legal status in relation to Indian matters is confusing because it is a "PL 280 State." In 1954, Congress passed PL 280, giving states the right to assume jurisdiction over certain areas once relegated to Indian tribes. Nebraska was one of the first states to assume jurisdiction; it elected to assume jurisdiction over the three reservations within its boundaries.

However, in 1968, Congress passed legislation that allowed Indian tribes, through the process of retrocession, to reassume the jurisdiction taken by states in 1954. The Omaha Tribe retroceded in October 1978, and maintains exclusive jurisdiction in all child custody proceedings. The Winnebago Tribe reassumed jurisdiction over child custody cases with the development of the Winnebago Children's Court in June 1982, but the state still has jurisdiction on the Santee Reservation.

This confusion affects individual cases, and Indian children can find themselves served neither by tribal nor state courts. One suggestion to assist Indian children at risk for out-of-home care is to create an Indian desk in the Department of Social Services and staff it with Indians who are knowledgeable about Indian culture and child welfare. These Indians could help train and recruit Indian foster parents, develop more appropriate licensing standards for Indian foster homes, and provide case advocacy for Indian children.

Structure of the Delivery System

The organization of supervision within the delivery system often constrains the delivery and the quality of services. Child welfare services are more labor-intensive than income maintenance services. They also require more professional training and judgment. For example, the process of determining eligibility for ADC, food stamps, or other income maintenance programs can be set forth in a manual. Income maintenance technicians can be trained to do eligibility determinations by the book. And, they can be supervised to see that they make determinations correctly, as outlined in the manual.

Child Protective Services workers, on the other hand, must exercise more judgment. All cases are different and it is not possible (or desirable) to create a manual which tells the worker what to do in every conceivable situation. Therefore, professional training, experience, and case supervision are necessary for the delivery of quality child welfare services.

Public welfare agencies in this country provide a variety of income maintenance and social services. Budgets for income maintenance programs, however, tend to dwarf the budgets for child welfare and other social services. For example, in Nebraska, child welfare and Title XX social services amount to about $30 million, compared with almost $300 million for income maintenance programs. Therefore, most attention is given to problems of income maintenance and most supervisory personnel are oriented toward income maintenance. Systems, therefore, are designed to deliver income maintenance services efficiently rather than to deliver child welfare services effectively.

Several states reorganized their systems to deal with the problem of income maintenance supervisors providing supervision to child welfare and other social service staff. Some provide separate supervison of child welfare personnel, so that the only common supervisor is the director or commissioner. Others, like Massachusetts, completely separate their income maintenance and social services personnel so that the Department of Social Services focuses on child welfare and social services, while another agency administers ADC, Medicaid, and Food Stamp Programs.

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Indigent Health Care in Nebraska

7

Keith K. Mueller

Issues concerning the problem of providing adequate medical care to Nebraska's medically indigent (individuals who are unable to pay for medical care) are discussed. Although the growth in medical indigence can be attributed to several factors, the recession of 1982-83 and the farm crisis are the primary causes. A framework for developing health care policies for the indigent is outlined. Policy options for financing hospital care and for providing services to the indigent are offered.

This chapter provides background information needed to formulate policy to improve access to health care among Nebraska's indigent. Policy choices and objectives are outlined which address the needs of the poor and health care providers.

We are unable to quantify exactly how many Nebraskans are doing without adequate health care because of the inability to pay, but estimates are provided. We also estimate how many citizens lack a regular source of health care, and provide anecdotal evidence which describes the consequences to individuals who delay seeking care because of financial barriers. These data are used to define the scope of the problem. Because this problem affects every state, several solutions are suggested, including policies adopted by other states.

A principal theme of this chapter is that adequate medical care should be provided to the indigent in Nebraska. While issues such as financing the current system are important, we focus on developing a system that will deliver quality medical care in the most appropriate setting to the citizens who need care.

The Issue Defined

Broadly conceived, the issue is one of guaranteeing access to adequate medical care for all Nebraskans, regardless of their ability to pay. This statement leaves us with the problem of defining adequate medical care and ability to pay. We also have the problem of determining the cost of providing charity care to guarantee providers a fair rate of return.

Philosophically, this problem should be approached as the social obligation to provide for the basic health needs of all citizens, including assisting citizens who are unable to pay for health care. The discussion also includes the issue of how much charity care should be provided by hospitals and how that care should be financed.

Policies should be targeted for the medically indigent, those whose incomes are insufficient to pay for health care and at the same time provide for the other necessities of life, for example, shelter, food, and clothing. The best means of quantifying the number of such persons in the state is to use the federal poverty guideline as an approximation of the income needed to pay for all basic necessities, including health care. Because health care is expensive and episodic, people are unable to prepare financially for treatment. Thus, it is appropriate to estabilish a cutoff above the poverty guideline for the medically indigent. Therefore, the empirical definition of indigence used herein shall be 150 percent of poverty.

Some individuals who live below the poverty level are able to obtain medical care because their expenses are paid by Medicare or Medicaid. On the other hand, some individuals who live above 150 percent of poverty level are not able to afford medical care because they are uninsured and their medical expenses are beyond their means (Butler, 1985). An alternative definition, although not quantified as easily, is that medical indigence is a function of not being insured. Using poverty guidelines in combination with insurance status (public and private) provides the best definiton: The medically indigent are those persons without health insurance whose incomes are below 150 percent of the federal poverty level.

Guarantees of access for the indigent should include the full range of medical services, with exceptions as explicitly determined by policy-makers, such as current Medicaid exceptions for cosmetic surgery. Policies should provide routine services as well as treatment for specific episodes of illness or injury, and care should be provided in a variety of environments, not merely in hospitals.

Those providing care to the indigent should be reimbursed, even if not at full cost. This becomes a special problem for providers who assume a disproportionate share of the charity care burden, that is, the percent of total expenses they devote to charity care far exceeds the norm in the area. Using this definition, charity care includes only the cost of providing care to the indigent. The cost of uncollectible debt for those who are unable to pay the difference between charges and payments made by public and private insurers are not included.

The National Problem

Since 1981, circumstances have increased the number of persons who are medically indigent. First, the recession of 1982-83 and the continuing farm crises have increased the number of persons who are unable to meet their medical expenses with their incomes. Although many who lost jobs during the recession are employed now, nearly half were forced to accept steep pay cuts and limited health insurance coverage (Mundinger, 1985). Second, new restrictions in Medicaid have forced many people off the rolls and kept others from becoming participants in the program. Third, increases in the amount of money required for cost sharing in Medicare, combined with a freeze in physicians payments, increased the out-of-pocket costs to the elderly.

Even before the recession the percentage of Americans without health insurance grew from 12.6 percent in 1978 to 13 percent in 1980 (Butler, 1985). A 1982 survey found only 9 percent of Americans to be uninsured, but this estimate was very conservative because it excluded 25 percent of the population, uninsured children who live with insured parents. The survey also showed that 20 percent of poor adults were uninsured, compared with 5 percent of higher income adults (Butler, 1985). In 1979, 28.7 million persons were uninsured, 32.7 million were uninsured in 1982, and an estimated 35 million were uninsured in 1985, increasing the percentage of uninsured to 15 percent (Mundinger, 1985). The following types of individuals are most likely to be uninsured: young (18-24 years old), poor, racial minorities, rural residents, and residents of the South and the West (Butler, 1985).

In 1985, the uninsured included 600,000 individuals who had been removed from Medicaid eligibility since 1981. Medicaid now covers only 52 percent of the poor, compared with 65 percent in 1976, and, in some states, coverage is provided for only 25 percent of the poor (Mundinger, 1985). An alternative source of care, community health centers, also has been reduced; 250 centers have closed since 1982, affecting more than 1 million people (Mundinger, 1985).

Contrary to some myths, most uninsured individuals are working (55 percent), half of them are over 30 years old, and many are married with dependents (Monheit, et al., 1985). They are concentrated in "industries characterized by seasonal employment patterns, self-employment, or a less technically skilled work force, such as agriculture, construction, sales, repair, and personal services, and entertainment and recreation..." (Monheit, et al., 1985).

If we assume that 3 percent of income is the upper limit of what insured families can afford for medical care, 5 percent have inadequate insurance (Farley, 1985). The major difficulty for the underinsured is financing catastrophic medical care, which is properly considered a separate policy issue from caring for the indigent.

Access to Care Among the Indigent

A 1982 survey found that 3.2 percent of poor Americans were denied medical care for financial reasons (Blendon, et al., 1986). Almost 20 percent did not see a physician during the previous year, including 36 percent who believed they were in poor health (Blendon, et al., 1986). By comparison, only 1.3 percent of the insured population is refused medical care for financial reasons (Robert Wood Johnson Foundation, 1983).

The uninsured are also at a disadvantage in accessing ambulatory care: "The most important finding is that there is a substantial difference in the use of ambulatory care between those who are always insured and those who are always uninsured, a ratio of almost 2:1" (Wilensky, Walden, and Kasper, 1981). Medicaid recipients have better access than the uninsured: 4.5 versus 2.4 doctor visits per year (Wilensky and Berk, 1982). Among individuals reporting themselves in fair or poor health, the insured have about two more physicians visits per year than the uninsured (Monheit, et al., 1985).

The uninsured enter the medical care delivery system differently than the insured. The physician is the regular source of care for 84 percent of the insured but for only 67 percent of the uninsured (Davis and Rowland, 1983). Many of the poor use hospital emergency rooms as primary care providers, but hospital emergency rooms have not been able to keep pace with the increased number of uninsured. In 1980, the number of uninsured persons increased 20.9 percent, while the amount of uncompensated care provided increased only 3.8 percent (Feder, et al., 1984).

Hospitals should not be primary care providers: "Our analysis suggests that in today's society, with many more single-parent families, working mothers, cities with urban sprawl, and difficult traffic patterns, the availability of uncompensated care at a small number of hospitals is not a substitute for some form of public insurance coverage of the majority of the poor or for access to community physicians"(Blendon, et al., 1986). By focusing on the needs of the indigent, the folly of approaching this problem as one of paying for hospital-based care is obvious: "In the future, if state and local governments want to monitor whether health care is available in their communities, they will have to look at the problems faced by people, not at the financial books of the hospitals in their area" (Blendon et al., 1984).

Health Status Differentials

Foremost among indicators of declining health status is the infant mortality rate, which has been shown to rise when there are barriers to prenatal care, high-quality obstetrical care, and pediatric follow-up care for sick infants (Blendon et al., 1984). In poor rural counties during 1980-83, the infant mortality rate was 16.29 per 1,000 live births, and the low birth weight rate was 8.66 per 100 live births, compared with 10.89 and 6.73, respectively, in the rest of the nation (Shaver, 1986). The difference between poor rural counties and the balance of the country grew by 39 percent between 1981 and 1983, and the margin in low birth weight grew by 38 percent between 1980 and 1982 (Shaver, 1986).

Inadequate health care can also be measured by the number of patient transfers among facilities, that is, patient dumping. Transfers in the District of Columbia rose from 169 to nearly 1,000 annually between 1982 and 1984, and in Chicago they increased from 1,295 in 1980 to 6,769 in 1983. In a Cook County study, lack of insurance was the explanation for 87 percent of the transfers. The fatality ratio among transfers was 7.5 percent for those in unstable condition at the time of transfer and 1.5 percent for those in stable condition; the average treatment delay was 5.1 hours from the time the need for hospitalization was confirmed to the time the patient arrived at the receiving hospital (Schiff, et al., 1986).

Loss of public assistance is associated with diminishing health status. In a recent study, a group of 109 persons who were taken off the Medi-Cal rolls were compared with those remaining on the rolls. After 1 year, 68 percent of the experimental groups reported being denied care when they felt they needed it, with 78 percent of them saying cost was the reason for denial (Lurie, et al., 1986). The consequences were dramatic: "... lack of access to care played a part in at least four of the deaths in the medically indigent group" (Lurie, et al., 1986). In 1984, 6.9 percent of Arizona households were refused care for financial reasons. The rate of refusal for the uninsured poor was 11.7 percent, and 4.4 percent of the poor households that tried to get care for a sick child were denied access. Even when limiting the cases to those with serious problems, one in twenty-five were denied access (Kirkman-Liff, 1985).

Summary

National data show a dramatic increase in the number of uninsured. National and local research demonstrates the consequences of not receiving adequate medical care. Yet, national policy since 1981 has increased the problem, through more restrictive Medicaid eligibility requirements. Policies, such as constraining reimbursement in the Medicare and Medicaid programs, have compounded the problem by limiting the revenue medical providers could receive from paying patients, forcing them to provide less charity care.

A review of the problem nationally helps put the problem in Nebraska in perspective. As a rural agricultural state with a sizable service industry, Nebraska is likely to have a comparatively high number of uninsured citizens. There is little reason to expect that access to care is not a problem for these people, although the problem may not be as dramatic as in Arizona and Cook County, Illinois.

The Problem in Nebraska

The percentage of Nebraskans reporting themselves to be uninsured has increased since 1981 (figure 1 and table 1). In 1981, only 5.8 percent

Table 1 — Percentage of Nebraskans without health insurance, by income, 1979-86

Year	0-$4,999	$5,000-$9,999	$10,000-$14,999	$15,000-$19,999	$20,000 and over	All incomes
			Percent			
1979	18.1	12.1	10.0	3.6	4.3	6.9
1980	24.4	14.8	12.4	10.7	4.4	7.3
1981	7.5	17.0	9.0	6.4	2.5	5.8
1983	16.0	20.2	8.3	7.3	3.4	6.7
1985	NA	NA	NA	NA	NA	7.6
1986	NA	NA	NA	NA	NA	9.7

NA = Not available.

persons living below the poverty level, and certainly most living just above poverty, are without any means of paying for medical expenses.

Similar to national patterns, 63.6 percent of uninsured persons in Nebraska are employed. Higher percentages of the young (18-24 years old) and nonwhites are uninsured (Statewide Health Coordinating Council, 1985). Uninsured persons receive less medical care. During the 12-month period preceding a 1985 survey, 35 percent of the uninsured had not seen a doctor (versus 23 percent of the insured); 38 percent had not seen a dentist or hygienist (versus 28 percent); and 70 percent had not had a physical examination (versus 60 percent) (University of Nebraska, 1985).

With poverty increasing from 10.7 to 14.6 percent in 1985 (estimates from the U.S. Department of Labor) and the economy of the state not yet joining the great economic recovery, the problem of medical indigence is expected to continue or worsen. Data collected during the past 2 years indicate that the problem is at least as bad in Nebraska as it is nationally. Based on these assumptions, the findings of national studies concerning problems with access to care and resulting deficiencies in health status can be assumed to be valid in Nebraska.

Health Care for the Uninsured in Nebraska

The poor in Nebraska use hospitals and clinics as their centers for care, particularly in urban areas. Among the poor in Omaha, for example, the regular sources of care are the hospital outpatient center (41.2 percent), the hospital emergency room (12.9 percent), a health clinic (28 percent), or, for a few, the private doctor (12.2 percent) (Luke, et al., 1985). Patterns of access in rural areas, as of 1983, were different; 90.4 percent of the poor had a regular physician (Statewide Health Coordinating Council, 1985). Statewide survey results show that 93 percent of the highest income category had a regular source of care, versus 86 percent of the poor (Statewide Health Coordinating Council, 1985). While detailed analyses of 1986 survey data are not available, preliminary results indicate a significant change in patterns of access throughout the state; only 83 percent of the sample had one physician as their source of care (University of Nebraska, 1986).

Patients have been refused care in Nebraska because of inability to pay. At least two clinics in Seward began refusing Medicaid patients in late 1985/early 1986 (Mulvey, 1986). There have also been instances of physicians in Scotts Bluff County refusing new Medicaid patients or indigent patients, particularly if the individuals had outstanding debts (personal interviews, 1986). No study similar to the one conducted in Arizona has been completed in Nebraska so these findings cannot be generalized statewide.

Statewide data on infant mortality indicate poor health status. During 1983-85, infant mortality in Nebraska was a constant 9.6 deaths per 1,000 births (actually a little higher in 1983). The percent of live births with birth weights of 5.5 pounds or less has also been constant during these years (5.4 percent in 1983-84 and 5.3 percent in 1985); there were 1,356 such births last year.

Another indicator of lower health status is delay of care for financial reasons. Dr. Keith Shuey of Johnson County reports that people are not seeking medical assistance for "very real physical ailments" (Young, 1986). They are postponing preventive medical care (for example, Pap tests for cervical cancer and breast examinations, not filling prescriptions, not monitoring long-term problems, and not getting regular check-ups) (Young, 1986). Similar patterns of delay and avoidance are occurring in Scotts Bluff County (personal interviews, 1986). Again, we lack general data for the entire state, but these findings are likely to be common.

Summary

The health status of the medically indigent is declining and prospects for the future are bleak. The number of medically indigent has been increasing, and the precarious nature of the state's economy implies that there is little hope for improvement. Both urban and rural populations have been affected. However, urban residents have access to care within the community, for example, teaching hospitals and urban health clinics. The problems are more severe for rural residents who have relied upon family physicians for care. The problem of access is greater for rural families because they assume that when they cannot pay for care they should not seek it. The citizens of Johnson County are symptomatic of what is likely to be a serious and growing problem in our state. The health care delivery system must be addressed as a whole; relying on refinancing hospital treatment, as is suggested by some for Omaha, will not meet this need.

Providers of Indigent Care

Because hospitals are often the primary source of care for the indigent, frequently these institutions are left with the burden of financing such care. The full extent of this burden is not always known because the cost of charity care must be separated from other uncollectibles. However, the distribution of charity care among hospitals is known.

United States

Government hospitals, particularly teaching institutions, provide a disproportionate share of uncompensated care (Wilensky, et al., 1984). In 1982, public hospitals provided 6.6 percent of total care as free care, compared with 3.9 percent of private hospitals (Feder, et al., 1984). The disparity was greater among hospitals in the nation's 100 largest cities, 19.8 percent versus 4.5 percent in other areas. In all metropolitan areas the spread was between 7.2 percent and 3.7 percent, while in nonmetropolitan areas it was between 5.3 percent and 3.7 percent.

Hospitals have financed uncompensated care by shifting the cost to paying patients. In 1982, commercial insurers paid 26.7 percent above costs, while Blue Cross paid 16.9 percent above costs (Hadley and Feder, 1985). Hospitals with the greatest need to shift costs have the least ability to do so. They provide a greater proportion of free care, thereby limiting the resources available for paying patients. The costs per day are higher, while the markup per commercially insured day is actually lower than in hospitals that provide less charity care (Hadley and Feder, 1985). For institutions with the mission of providing care to all, the burden of charity care appears to be reducing care rather than increasing fees. "When these institutions faced deficits, however, they reduced the share of their resources devoted to free care" (Hadley and Feder, 1985).

From the institution's perspective the problem is one of economic survival. The hospitals that are most likely to provide charity care are also those most likely to be under economic stress (Feder, et al., 1984). These public hospitals are not in a position to attract a large number of private pay patients. Nor can they expect to attract external investment, because their levels of uncompensated care lower their profit margins, which makes them unattractive to investors (Sloan, et al., 1986). These institutions are forced by economics to ration care by "directly prohibiting or discouraging hospital use by people unable to pay and reducing the availability of services heavily used by the uninsured poor" (Sloan, et al., 1986).

Hospitals are having even more difficulty generating revenue to finance charity care as private insurers and employers are making it very clear that they are unwilling to accept the burden of cost shifting. Only one-third of Blue Cross plans responding to a recent survey recognized free-care costs as reimbursable (Phelps, 1986). Because of preferred provider organizations (PPOs), businesses will go to hospitals that charge less than the large, public teaching hospitals. The margins for all hospitals to overcharge paying patients to compensate for free care are evaporating in today's marketplace of health care.

Current public programs designed to assure access to medical care are not much help. The Medicaid Program serves about half of those living below the poverty level, which means it misses about half of the population in need (those living within 150 percent of the poverty level). Another federal program designed to assure access requires that hospitals receiving federal funding for construction and expansion provide charity care, but this program is expiring. While this problem is on the agenda in the U.S. Congress, action is unlikely.

State and local governments are the primary source of assistance for the indigent. However, Medicaid is the principal program for providing medical assistance and its inadequacies have been described. County governments also provide general assistance, but relying on counties in most states to resolve this problem is to invite uneven approaches at best and no policy at worst (especially considering the precarious financial position of many county governments).

Nebraska

The problem of defining charity care plagues researchers who are trying to determine the burdens among providers in Nebraska. As is the case nationally, some information about the relative burdens is reliable. For example, while a recent estimate of $14,552,000 being spent by hospitals for charity care in Omaha (Luke, et al., 1985) was disputed (Carnazzo, 1986), the fact that most of the care was provided by two hospitals was not disputed. The cost of charity care adds to other charges at these hospitals, $40 to each inpatient day at St. Joseph Hospital and $55 at University Hospital (Luke, et al., 1985).

Hospitals in Lincoln report an ability to handle the patient load for indigent care, at least for the present. Precise figures are difficult to obtain but Saint Elizabeth Hospital reports spending about $1.2 million for charity care in 1984, approximately 3.5 percent of its expenditures. Bryan Memorial Hospital has a small load of charity care, $472,000 or 0.8 percent of its budget (Harrett, 1985). Lincoln General Hospital had been providing considerably more charity care because of an obligation under the Hill-Burton Program, but that obligation, including $1.4 million during the past 3 years, has expired (Miller, 1986). Now the hospital is expected to be more restrictive in its charity care policies.

At this time, no data are available concerning the charity care burden in other hospitals across the state, but some estimate that charity care averages 3-4 percent of their budgets. The cost is expected to be higher in some regional institutions, such as West Nebraska General Hospital in Scottsbluff. But, disparities among rural hospitals will not be the same as in Lincoln and Omaha because there will not be two or more hospitals in the same city.

Nebraska's Medicaid Program guidelines for eligibilty are not as liberal as those in many other states. The state's Aid for Dependent Children (ADC) payment standard, the criteria for Medicaid eligibility for most individuals, ranks 16th (with two other states) nationally. Using the medically needy level (133 percent of the ADC payment), Nebraska improves to 14th and has eligibility at 70 percent of poverty levels. According to national data from 1980, Nebraska's program covers 43 percent of those living in poverty, ranking it 36th nationally (Gornick, et al., 1985). However, changing income eligibility will not eliminate the problem of poor people being excluded from Medicaid benefits. Current categorical requirements concerning the presence of children or the elderly in households and minimum assets are more responsible for restricted eligibility than income levels.

County governments in Nebraska vary considerably in their financial commitment to providing charity care. Most counties are close to the Medicaid standards for determining income eligibility, with Douglas County recently increasing its income guidelines to that level. However, counties are still on their own to determine the justification for medical procedures before they provide reimbursement, which can lead to some dramatic variations.

Douglas County's newly implemented Primary Health Care Network served 507 patients in fiscal year 1984-85 (July 1, 1984 to June 30, 1985), at a cost of approximately $1.7 million (Luke, et al., 1985). Public health clinics in the county spent another $1.3 million (Luke, et al., 1985). The Primary Health Care Network is the principal service outlet provided by the county to care for the indigent.

Some counties in Nebraska provide care to the indigent through county-owned hospitals. There are 26 county-owned hospitals and 3 city-operated hospitals in the state (Statewide Health Coordinating Council, 1985). Beyond this information, little data are available concerning how the indigent are being served under current policies. Nebraska statutes make providing health care for the indigent a county responsibility. Section 68-104 of Nebraska Statutes states: "The county board of each county shall furnish such medical service as may be required for the poor of the county who are not eligible for other medical assistance programs..." The task of resolving the problem of health care for the indigent rests squarely on the shoulders of government.

Policy Choices: Other Experiences

Approaches to guaranteeing access to health care for the indigent range from expanding current programs to creating new programs. One state approach to resolving the problem is to delegate responsibility to county governments. A mandate can be effective if it defines the population to be served and provides the resources to administer the programs. A study of California's mandate to the counties is correct in concluding that "it is incumbent on the state to assure that local governments have the funds to support public health care services, and that those funds are spent consistent with legislative intent" (Brown and Cousineau, 1984).

States can also mandate that providers give care without receiving reimbursement. At a minimum, policies like the one adopted in Texas to make patient dumping illegal seem appropriate (Relman, 1986). Payment is not considered, but at least persons in dire need of treatment are not endangered by delays in sending them elsewhere. States can require charity commitments as conditions for approval of certificate-of-need (CON) applications. The state of Washington requires that charity care be considered when reviewing CON applications, and Georgia requires that at least 3 percent of gross revenues be devoted to charity care (Bartlett, 1985).

States can also require continuation of insurance for individuals who lose their jobs. Nineteen states require insurance carriers to extend group insurance benefits to laid-off workers for up to 1 year. Insurees retain the benefits of lower premiums (which they pay themselves) and extensive coverage that comes with group insurance (Desonia and King, 1985). A similar approach is to establish risk pools, insurance opportunities for individuals who are denied coverage because of poor health. Nine states (including Nebraska) have such programs; most are financed through supplements to individual payments from pools of funds the states collect from insurance carriers. Alaska and Rhode Island also have financed catastrophic health insurance policies (Desonia and King, 1985).

States can also help counties make general assistance programs more comprehensive and more available. South Dakota and Idaho have catastrophic relief funds to pay for high-cost cases; the former pays cash for costs over $20,000 for any case (Desonia and King, 1985). Other states offer optional care programs, through state government, which provide financial and administrative assistance to counties. The most liberal program is in New Jersey; the state offers a 75 percent match for counties that participate (Desonia and King, 1985).

Eighteen states use exclusively state funds to finance new programs, and 15 have joint state-county funding, with the county share never exceeding 50 percent (Desonia and King, 1985). Most states rely on general revenues to finance their obligations, while counties use a combination of sales and property taxes. Only a few states raise money by other means. South Carolina assesses counties and hospital net revenues to underwrite the costs of its program. Florida and West Virginia use an assessment on hospital revenues to generate their matching funds to expand Medicaid Programs (Desonia and King, 1985). States that share funding responsibilities with counties often authorize counties to use an earmarked tax, such as added mills to the property tax levy or added percentages to the sales tax.

Eligibility in new programs is determined by state governments in 26 states, and by counties in 8 states (Desonia and King, 1985). States willing to embark on new programs for indigent health care seem to want full control over the program. State control enables provisions such as requiring providers to participate in Medicaid to receive payment (Desonia and King, 1985).

County governments may adopt innovative policies. Maricopa County, Arizona, and Sacramento County, California, have programs that employ a case-management approach, with prepaid primary care being the focus of the effort. Three other counties (Palm Beach County, Florida; Ramsey County, Minnesota; and Milwaukee County, Wisconsin) have developed integrated delivery systems that coordinate many services. Milwaukee County uses a screening/triage clinic as the entry point for services, a primary care clinic for medical care, and a requirement of prior authorization for outpatient services and hospital admission (Curtis and White, 1985).

State programs, of course, can also be innovative. As mentioned earlier, Florida adopted a policy of assessing hospitals 1 percent of their net operating revenues in the first year and 1.5 percent thereafter to help build a trust fund to pay for expanding the Medicaid Program. The state contributes $20 million annually to the fund; this money is used to increase Medicaid coverage for outpatient hospital fees and to expand eligibility to include married pregnant women, children in intact families, and unemployed parents and their children. The program has been so successful in establishing a viable trust fund that the governor's FY 1986 budget proposes to discontinue the state's $20 million annual contribution (Howell, 1985).

Kansas has established a primary care case-management system for both Medicaid and general assistance recipients. Enrollees select their case managers from participating physicians; the case manager in turn directs all health care for the individual. Copayments are required for some services and some elective surgery benefits were eliminated from programs in three counties. The state is fully responsible for all Medicaid and General Assistance Programs which are combined in one MediKan Program (Hansen, 1985).

Maryland uses an extensive utilization review program to control its hospital expenses for the indigent. The program is designed to provide coverage for everyone who is uninsured. The program "limits pre-operative days to one, mandates that certain procedures be performed on an outpatient basis, omits payment for administrative days in general hospitals pending discharge home, applies preadmission review requirements to all selective admissions under the program, and concurrent review in all cases" (Gold, 1985).

Recommendations issued by various study commissions from states without programs for the medically indigent can be grouped into the following major categories; expand Medicaid eligibility, establish or expand state programs for individuals who are ineligible for current programs; establish methods to finance indigent health care; declare public responsibility for indigent care; define medical indigence; and "develop a major policy and program emphasis on services for children and pregnant women" (Luehrs and Desonia, 1984).

What can be concluded from this review of policies adopted elsewhere? First, it is common for states to assume the lion's share of the responsibility to satisfy the health care needs of the indigent. Second, states and counties have shown some willingness to experiment with different approaches to deliver health care. Efforts to use case management to coordinate Medicaid Programs for the indigent are especially impressive. Third, few states are searching for new sources of revenue. Instead, they are raising money through general revenues and combining efforts with counties to use property and sales taxes. Finally, while hospital-based care remains a focus of attention, there is a growing awareness that the delivery of health care to the indigent must focus on ambulatory care first and hospital care only as appropriate.

Policy Choices: Parameters for Nebraska to Consider

A range of policy options is available to the Nebraska legislature, ranging from doing nothing to totally revamping the health-care delivery for the poor. With the exception of doing nothing, all programs raise issues of defining target populations through eligibility criteria, determining the appropriate level of care, financing services, and developing reimbursement schemes for providers.

Is Action Needed?

The nation has been rebounding from the 1981-83 economic recession. One option is for policymakers to wait out the recovery and do nothing to expand access to health care for the indigent. However, the recovery is not yet evident in Nebraska, and even if it begins, the number of uninsured will remain high because of the structure of the state's economy.

The unemployment rate in Nebraska is high and prospects for short-term recovery are dim. In Nebraska in 1985, the rate was 6.2 percent, an increase of 2.5 percent from the previous year (U.S. Department of

Labor, 1986). By March 1986, the rate had increased to 6.6 percent before dipping to 5.7 percent in April 1986, the drop being due to seasonal employment (Nebraska Department of Labor, 1986). Seasonal employment is concentrated in industries such as recreation, food and beverage, and construction, and all of these jobs are unlikely to include extensive insurance benefits. Full-time employed Nebraskans are likely to be working in recreation and service jobs and in the agricultural sector. These jobs are also unlikely to provide comprehensive insurance benefits.

The agricultural sector offers additional pessimistic prospects for the state's population. One researcher believes that 10,000 farmers, 17 percent of the total, are in severe financial stress, meaning that their ratio of debt to assets is 70-100 percent (Dorr, 1985). Another researcher estimates that 2,300 farmers in the state are already insolvent (Warneke, 1985). The farm economy has been cited as the major reason for the record 3,000 bankruptcies in Nebraska in 1985 (Thompson, 1985). The ripple effects of a slumping farm economy also are evident in the 13 bank failures in 1985, the 38 percent increase in layoffs in manufacturing and food-processing industries, the slump in business activity in towns that rely on farmers spending, and the slowdown in activity in implement, auto, and truck dealer activity (Warneke, 1985).

Perhaps we can be optimistic about the future of people in the state. Perhaps our economy will become less dependent on agriculture and develop industries that will employ Nebraskans in permanent (not seasonal) jobs that provide health insurance benefits. But, while waiting for this to occur we have a serious problem to address; we must provide health care for about 150,000 Nebraskans who do not have adequate health insurance. The task facing the state is to bring these people under the umbrella of medical assistance programs.

Defining Eligibility

A question to ask during policy deliberations is should the state change its definition of the indigent? There are two sets of definitions, the statewide definition for the Medicaid Program, and the 93 county definitions applied to general assistance. The state Medicaid Program currently includes all possible categories allowed under federal regulations, including children in intact families, pregnant women, unemployed parents, and the medically needy. Eligibility can only be increased by raising the maximum income level. However, this will not increase appreciably the number of individuals being served because asset tests (no assets beyond the necessities) and other categorical requirements will still apply.

County general assistance programs have much more room for expansion than state programs. The state legislature could amend Nebraska statutes by defining the population to be served by counties according to eligibility requirements. Or, counties could increase the population they serve by loosening eligibility standards, for example, Douglas County increased the income level for its program.

In order to meet the need as identified in this chapter, definitions of indigence must include all individuals living up to 150 percent of the poverty level who lack private insurance. Changes could be made in Medicaid and General Assistance Programs to accomplish this task, or a new program could be designed to serve indigent persons who are presently excluded from programs.

Determining the Service to Be Provided

What services should be guaranteed to the indigent? The present approach is to guarantee service for emergency needs through hospital treatments and admissions. Consideration needs to be given to expanding the scope of services provided to the indigent to resemble more closely the approach of the statewide Medicaid Program. This means assuring access to a primary care provider for the indigent, that is, a regular source of care other than hospital emergency rooms and general clinics.

By expanding access to care outside hospitals, the quality of life of the clients should improve. A system of care which removes all financial barriers from regular access to primary care physicians (or at least the physicians' extenders, such as physicians' assistants) encourages people to seek care at the earliest possible time. An emphasis on preventive medicine is also part of this approach. Regular contact with health care providers will facilitate health education and other efforts to help the indigent avoid episodes of illness/injury.

In 1985, the Statewide Health Coordinating Council suggested that services "should be provided in the most appropriate and cost-effective setting: emergency medical care; emergency or necessary surgery; office visits and appropriate hospitalizations for acute illnesses; diagnostic X-rays, laboratory services, pharmacy services, physical therapy, and home health care when prescribed by the attending primary care physicians as part of above defined medical care; prenatal and obstetric care; and entry into a system for psychiatric, alcohol, and drug misuse services." They also suggested these additional services for children: newborn care, immunizations, preventive dental care, and preventive office visits. They suggest excluding these services: long-term nursing home care (more than 60 days), elective surgeries, chiropractic services, routine office visits, and routine dental visits.

There remains the question of whether or not the public should pay for the most dramatic life-sustaining care available for the indigent. This issue is a moral one of whether we can deny any care, even organ transplants, to the poor. However, financial and other resource concerns (such as availability of organs) are commanding the most attention in discussions. When a comprehensive policy is written to provide access for the indigent, a decison must be made to limit expenditures by not paying for services that are not medically necessary (for example, cosmetic surgery) and that are not contributions to quality of life (for example, intensive care to extend life without improving the health status of the individual). These are ethical/legal considerations, and the legislature is well-advised to consider the testimony of experts in these fields as policies are considered.

Financing Care for the Indigent

Several options to finance access can be considered. First, the pattern established in other states could be followed in Nebraska. This would mean using the state's general funds to finance most of the cost and county funds to augment costs. In Nebraska, possible general source funds include earmarking a sales tax increase, assuming current taxes can absorb the new program, or using an increase in excise taxes on alcohol and tobacco to finance the state's share. Revenues currently devoted to general assistance funds by county governments could be used, with an increase in property taxes as necessary. If necessary, the state could follow the pattern established elsewhere of permitting counties to increase property taxes to finance the program.

The state could be innovative in the fashion of South Carolina and Florida and establish a new source of revenue by taxing hospitals to finance the program. Money could be raised through an assessment, based on hospital revenues, hospital size, or some combination and contributed to a trust fund to finance care for the indigent. This source could be combined with a state contribution, as suggested in LB 916 in the 1986 session of the Nebraska Unicameral. Revenues of health insurance companies could be taxed to finance new programs too. This may be philosophically acceptable if the funds are used to expand the pool of insured persons in the state, similar to policies currently used to provide insurance coverage for individuals who are denied coverage for health reasons. Specifically, such a tax could be used to finance a statewide catastrophic health insurance policy.

Some consideration should be given to assessing the indigent themselves for a portion of the cost of treatment. The Statewide Health Coordinating Council, for example, recommended that they be required to pay back at least part of the cost of treatment if their income exceeds 100 percent of the poverty level. Individuals could also be assessed a minimum copayment at the time of service (as little as $1). This would serve several purposes. First, more funds would be raised to pay for indigent care. Second, utilization would be controlled somewhat by a minimum financial barrier that would not preclude necessary care. Third, for those who are in need but too proud to accept handouts, they would know that they are paying what they can afford for care.

Finally, charitable contributions should be considered as a possible source of funding. This is another recommendation of the Statewide Health Coordinating Council. If a trust fund is established from which the care will be financed, tax-deductible contributions could be solicited regularly.

Paying the Providers

How should the providers of care to the indigent be reimbursed for their services? This is an important question because inadequate reimbursement could restrict access and because providers could refuse to participate in the program, as the physicians in Seward have done with the Medicaid Program.

Inadequate reimbursement could influence participating physicians treatment of the indigent, thus reducing the level of care. Conversely, providers could not profit from public programs to expand access to care. Profit has never been the intent of such efforts.

Levels of reimbursement can be determined in many ways. Historically, the most common method has been a system of cost-plus reimbursement. In this system, the provider submits a bill to the payor who reimburses the provider as charged (including the provider's actual cost plus a profit). The method used by Medicaid allows the state to set a schedule of fees for each type of service rendered, and Medicaid pays accordingly, regardless of providers' fees. The state can set reimbursement rates based on cost and, at times, not charge the full cost. Philosophically, the state expects providers to share the cost as a public service (this can be justified because they practice under public licensing privileges).

A second option is to pay providers on a prospective basis, based on the number of clients they agree to serve. A monthly per capita allotment would be paid regardless of services rendered, similar to the way health maintenance organizations pay their enrollees. If such a system were adopted for providing care to the indigent, provisions would be needed to insure providers against severe economic losses should a high proportion of their clients develop expensive medical problems. Without such insurance, providers will probably not treat advanced cases.

A third option is to adopt the prospective payment system based on diagnosis-related groups as a classification scheme for determining what average charges are in hospitals and then pay hospitals according to those average charges, regardless of the hospital's actual bill. This scheme is projected to be extended to physicians' charges in the future. The advantage of this system is related to cost containment, payments are predetermined for particular treatments. No payment is made unless a service is provided, a possible advantage over capitated schedules. It should be noted, however, that many have questioned the incentives of the system to provide care of lesser quality than would be provided by a cost-based reimbursement scheme.

Policy Choices: Options for Nebraska

Nebraska can profit from the experiences of other states in forming policies to address the problem of access to care for the indigent. Options range from minimal actions to address financing care for those who use hospital emergency rooms to reshaping the provision of care for Medicaid patients and, at the same time, expanding the clients served to include the indigent who are ineligible for Medicaid.

Financing Hospital Care

Nebraska decisionmakers could elect to provide a means for financing hospital-based care, the primary mode for delivering care to the poor. The Medically Indigent Act introduced in the Unicameral on January 10, 1986, focused attention on paying for care provided in hospitals, although it left open the possibility of paying other providers if money were available after hospitals were paid. This same approach was taken in LB 1135, The Medical Care Trust Fund Act, which would finance care for the indigent provided by Douglas County hospitals. The Health Future Foundation in Omaha also favors this approach (McGrath, 1985).

Hospital care could be financed by a trust fund; which would be established, in part, by taxing hospitals. The Health Future Foundation proposed taxing hospitals a half-cent county sales tax, the Medically Indigent Act proposed a 1 percent tax on net patient revenues, and the Medical Care Trust Fund Act proposed a 1 percent tax of gross revenues. All three proposals also call for state appropriations to match the taxes on hospitals.

These proposals focus only on care provided by hospitals, not the full spectrum of care for the indigent. The proposals are not client oriented, although the Medically Indigent Act does pay counties to provide services to the medically indigent. The proposals are institution oriented and address the problem of uncompensated hospital care. The proposals do not consider all possible sources of financing; they focus attention on hospitals as a potential source of revenue. Nor do they address the issues of how to pay for services or how to involve clients in payment.

Creating a trust fund to pay for hospital-based care is a beneficial policy as a first step in guaranteeing the indigent access to medical care without creating an undue burden on a few providers. And, the indigent would be sure of at least one place where they could obtain treatment.

Expanding Counties General Assistance

A second policy option, advocated in LB 1009 in 1986 for Douglas County, is to expand the pool of indigents who are eligible for county general assistance. Nebraska legislators, who recently agreed to have the state assume the full state/local share of Medicaid expenses, might see this as a fair means of paying for care of the indigent.

Counties can be mandated, as they have been in some states, to provide care to the indigent, with the eligible population being defined in the mandating statute. The current approach in Nebraska requires counties to provide care for the poor, leaving the definitions of care and poor to the counties. The state could use the Statewide Health Coordinating Council's definition of care and the definition of poor used in this chapter.

Such a mandate should consider how the county would finance the care. The property tax is the principal source of revenue for counties, and the burden of that tax in Nebraska is already considered by many to be too high. A source of revenue other than the property tax should be provided, either by permitting the county to create a new source of revenue or by providing additional revenue in state aid to counties.

This option allows each county to select a method for delivering care. This has the advantage (although some say it is a disadvantage) of permitting each county to select the most cost-effective means of delivering care in its jurisdiction, permitting viability based on the availability of medical personnel and their willingness to participate in the program. The services to be provided, however, would be specified in the state statute. The method used to reimburse providers is again left to the counties.

Using a Case Manager for Primary Access

This is an innovative approach being used in a few locations, such as Milwaukee County, Wisconsin. The emphasis in this approach is on the first point of access for the indigent, which must be through a specified provider. Usually initial contact is in a clinic close to where the indigent population is concentrated. Only after seeing the initial provider can a patient be seen by other health care providers, such as hospitals or specialists. The case manager becomes responsible for all care given to the patient.

The initial visit of any client should include an examination by a physician, but subsequent visits may require only the services of a physicians' assistant located in the same office. This reduces the costs of the program, while at the same time maintaining access for all types of care, including preventive medicine. Any type of reimbursement scheme can be used in this approach, but a scheme based on capitation seems most logical. The difficulty with capitation is determining the number of clients who will be eligible for service. This problem can be overcome if providers are paid for each patient they see, regardless of the number of visits. Given the problems of determining the number of clients treated, should physicians be paid for patients who leave the county without informing anyone? A system of fee-for-service based on a fixed schedule of payments may be superior.

Financing for case management can come from many sources, including copayments by patients. The primary source of payment, however, is likely to be the state. Service areas should be defined by geographical access to the case manager, irrespective of county jurisdictions. Therefore, the state government is the best choice for administering the program, much as the state Department of Social Services already administers many of the county general assistance programs. The state can use any of the suggested options for raising the revenue needed to finance this program.

A variation of the case management approach is already being implemented in Douglas County through the Primary Health Care Network which was established in 1981. This program uses the county general hospital facility as an intake point for the indigent who are treated under the General Assistance Program. Persons eligible for county assistance are required, unless there is an emergency, to first present themselves at the hospital or at any one of six clinics planned for operation in the near future. In many instances, care can be rendered at the clinic at a minimal cost to the program. When hospitalization is necessary, the individual is referred by the clinic to one of the six community hospitals in Omaha on a rotation basis. These institutions have indicated their willingness to accept patients referred to them by the network. This system is still in its infancy and its effectiveness is difficult to assess. However, it is disturbing to note that only 507 persons received services in 1984-85 (Luke, et al., 1985), and the 1986 estimates of people served is only 700 (Johnson, 1986). For some reason, this system is still not reaching all the indigent estimated to be eligible for service.

Conceptually, the Douglas County approach is strong. First, it uses the gatekeeper concept in requiring patients to seek care through the clinics before going elsewhere. Second, in establishing a system of intake clinics the county is making the full range of medical services available to the poor. Third, by entering into agreements with area hospitals to share the burden of accepting patients who are referred by clinics, the plan minimizes the adverse financial consequence for any one hospital. The flaw of not incorporating a large number of the indigent must be overcome. As that happens, financing the program may become a problem. Currently, the funding source is the county and the prospective costs of a program that would serve all of the poor in need may exceed county resources.

Contracting with a Health Insurance Organization

Another option that can be considered, particularly in metropolitan areas, is contracting with a private organization to assure care for all of the indigent. This may lower the costs to the state and facilitate the transition from a nonsystem to a system of medical care delivery that uses the gatekeeper concept. This option was explored by the Department of Social Services as a means of serving Medicaid clients in Douglas and Lancaster Counties, but it was not adopted because of the difficulty of assessing cost savings at a time when costs were already declining because of reductions in hospitalization.

A health insurance organization (HIO) would contract with the state to provide the full range of medical services to a defined population, in this case the indigent. That contract would pay the HIO a predetermined monthly rate for each client enrolled in the program. The HIO, in turn, would contract with providers to care for the clients, using primary care physicians as gatekeepers. The state would establish a system of quality review to guarantee that needed services were provided. An HIO would be expected to take steps to control the use of medical services, similar to the operation of a Health Maintenance Organization (HMO), while at the same time expanding access to care by emphasizing early and preventive care versus expensive hospital-based care.

This option requires an accurate estimate of the number of indigent persons who would be enrolled in the program to set the terms of a contract with a HIO. Currently, such an estimate is not available in Nebraska. The HIO concept might also benefit from combining the Medicaid population with the indigent in the same contract. This is especially true in more sparsely populated areas of the state, where the number of persons without insurance may not be sufficiently high to take advantage of the economic incentives of an HIO-based approach.

The HIO approach offers the advantage of a case management approach because a primary care physician is responsible for all care rendered to a patient. It also has the advantage of guaranteeing care and specifying the extent of care that will be provided in a contractual agreement. The total cost of the program can be controlled through the contractual arrangement. The question of how the state will pay the provider is left unanswered, and the HIO has the option of including cost sharing with enrollees.

Conclusion: Framework for Policy

The first step in formulating a state policy to care for the indigent is to agree on the scope of the problem. Data provided earlier in this chapter help, but more precise estimates of the size of the indigent population and the problems they currently experience in obtaining health care would help persuade decisionmakers that action is needed. The population in need includes the uninsured, estimated from survey data to be over 150,000. This estimate could be more reliable if it were supplemented by a telephone survey of adults and field research that includes a sample of individuals who do not have telephones, those who are not the primary wage earners in the household, and children. The results of such an approach would likely increase the size of the indigent population.

Data are also needed concerning what the indigent do now for health care. We need to know the health consequences of losing insurance; anecdotal evidence presented earlier indicates a severe health problem, especially for certain conditions, such as high blood pressure. Aggregate data need to be collected through field interviews with the indigent and service agencies that are in regular contact with them, for example, food stamp program administrators, social service agencies, and head start programs). Data are also needed from health care providers about their experiences in treating patients who have delayed seeking care.

When care is sought by the indigent, someone obviously is either paying for the care or absorbing the cost of the treatment. More data are needed concerning the burden of charity care in health care institutions. Even the data from the study in Douglas County have been questioned, but at least the general distribution of charity care is known in that county. Similar information is needed throughout the state. We need data concerning the charity care provided in outpatient settings in rural areas of the state. The important question to ask is the following: Are providers at or near the limit of what they can economically absorb in charity care? If so, the indigent will lose existing channels to health care and the problem will worsen.

Even before all of the answers are available concerning the extent of the problem the state can consider appropriate policy actions. These considerations should be guided by a series of objectives which should be satisfied by any policy.

Objective One. Develop a policy that guarantees access to all necessary medical care for all medically indigent citizens in the state. A primary objective has to be access to the spectrum of medical services necessary for good health, including outpatient services, preventive medicine, regular sources of health care, and hospital services. The policy should not restrict care to that necessary in life-threatening situations. The program should benefit all those defined as indigent, that is, persons living below 150 percent of the poverty level without any form of insurance.

Objective Two. Use the most cost-effective form of medical treatment possible in designing a program of access to medical care for the indigent. The medical care delivery system has evolved during the past 20 years to include many alternative modes of delivery. Access to the system for the indigent should be accomplished in a cost-effective manner, avoiding expensive modes of treatment, such as hospital-based care, as much as possible. A case management approach deserves strong consideration, as does extensive use of physician extenders in an outpatient environment.

Objective Three. Use all possible sources of revenue to finance a program of access for the indigent. Potential sources of revenue include state and county taxes, special assessments on providers, copayments and deductibles paid by the users, and charitable contributions to a trust fund. As many sources of revenue as the decisionmakers find politically feasible should be included to minimize the burden for any one source. The responsibilities of all parties concerned should be recognized. The state government is the entity responsible for providing care for all, the patient is responsible for as much of the cost as possible, and society (through contributions) is responsible for the public's general welfare.

Objective Four. Establish a statewide data base for defining the problem and evaluating any policy adopted. Current data are inadequate to portray accurately the problem facing the state in providing access to care. Once a data base is available, data must be updated constantly to evaluate the efforts of the state in assuring access. This simple question has to be answered: Are the medically indigent gaining access to medical care when they need it and are they obtaining it in the most cost-effective environment?

Objective Five. Developing a program to educate the medically indigent to access the system at the most appropriate point and to share in the responsibility for their health status. Many instances of acute episodes of illness/injury can be avoided if more healthy lifestyles are adopted. Any program to improve access to medical care should include components to reduce the need for such access, so preventive health education is necessary. If the indigent are to participate in a cost-effective program, they need to be educated that the hospital emergency room is not the first point of access to the health care system.

Objective Six. As a long-range strategy, work toward combining all government administered programs into one health care program. The state already administers the Medicaid Program and its companion Ribicoff Program. Because eligibility for these programs will at times enable the indigent to enter them at least for some time, and because people will at times lose eligibility, considerations for continuity of care would favor combining Medicaid with any program designed to provide access for the indigent. The clients would continue to receive care through the same delivery system, changing only the source of payment.

The prerequisite in any discussion of the needs of the indigent for medical care is to recognize that an unmet need exists. The work of the Statewide Health Coordinating Council in Nebraska, combined with more recent survey results and evidence beginning to be available concerning the consequences of reduced access to care in Johnson County, make apparent the existence of the problem. While the full extent of the problem is not yet known, certainly the fact that over 150,000 people in the state lack health insurance should convince policymakers that this problem belongs on their agenda. Even as we work to improve the data available for analysis of the problem, discussions should begin to shape policies.

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Financing State Government in Nebraska

A.L. (Roy) Frederick

8

Expenditures for state government in Nebraska have grown rapidly since 1970. This growth in spending has been most directly associated with inflation and increased state aid to individuals and local governments. Rates for income (individual and corporate) and general sales taxes have been increased frequently to fund increased expenditures. Future state financing will depend on citizens' needs and their collective attitude toward taxing themselves to pay for public goods and services. The two most likely options are that either the tax base or the tax rates will be increased.

The word government means different things to different people. For some, government provides the necessary rules for the functioning of a civilized society. Others think of government as the supplier of certain public products and services. Still others think of government negatively because it imposes taxes and spends money in a manner that they consider inappropriate.

Regardless of individual impressions, it must be admitted that government is big business. In fiscal year (FY) 1985, expenditures by all levels of government equaled about 35 percent of the gross national product (GNP).[1] The federal government expects to spend about $1 trillion in FY 1987. Total expenditures by state government in Nebraska will approximate $2 billion in FY 1986-87. In addition, local governments in Nebraska (such as, counties, municipalities, and school districts) spend hundreds of millions of dollars annually.

In a representative democracy the amount spent by any unit of government ultimately is determined through a majority vote, either directly by citizens or through their elected representatives. Prior to voting, the parameters for debate and compromise are as follows:

- What should government provide?
- What unit of government should provide it?
- Who should pay for it?

The purpose of this chapter is not to usurp the rights and responsibilities of citizens to answer these questions. Instead, it is to provide perspective on issues affecting state government finance in Nebraska. In so doing, it is hoped that the electorate will have an improved informational base from which to answer these questions.

Why Focus on State Finances?

State finances in Nebraska are of current interest for several reasons:

- General economic conditions shifted dramatically in the early 1980s from a period of high inflation to one of high interest rates and recession. Although the national recession ended in late 1982, growth in the Nebraska economy has continued to be slow, especially in counties heavily dependent on agriculture. As a result, the perceived income-generating capability of state government has been reduced.
- Local governments in Nebraska depend principally on property taxes. Moreover, property taxes per capita are relatively high. This has led many citizens to argue that state government should offer property tax relief because the latter tax is especially onerous during poor economic periods. To do so, state tax revenues would probably have to be increased.
- Federal aid to state and local governments, including those in Nebraska, has declined on a real basis since 1978. According to the Advisory Commission on Intergovernmental Relations (ACIR), state and local governments received $24 from the federal government for every $100 they raised on their own in FY 1985[2]. This is considerably less than the high of $32 reached in FY 1978. Furthermore, ACIR projects that this figure will drop to $20 in FY 1987 (and this is before the effects of the Gramm-Rudman-Hollings Deficit Reduction Act are realized). This has both direct and indirect implications for state government as local subdivisions look to state government to replace reduced federal assistance.
- Some of Nebraska's political and civic leaders have indicated that Nebraska should make significant changes in its state finance system. Suggestions range from abandoning programs and services that it is alleged the state can no longer afford to requiring a general sales tax to be paid on an array of services. A major study of the state's tax system was authorized by the 1986 Legislature. The major purpose of the study will be to consider comprehensively where the state is and how it might meet its financial obligations in the future.

State Government Budget

Any overview of state government finance must consider both expenditures and revenues. Nebraska's Constitution requires that sufficient revenues be generated annually to pay for what the state spends, that is, deficits are prohibited. Thus, whenever lawmakers decide to increase spending for any program, they must immediately find a way to pay for it.

In short, public finance issues for Nebraska ultimately come down to figuring out how to balance the state budget.

In FY 1986-87, total appropriations for state government in Nebraska are just under $2 billion (table 1). Of this total, $839.3 million is projected to come from the state general fund. Taxes and other general revenues of the state generate money for this fund. Therefore, budget deliberations by the legislature tend to focus on the general fund.

The state cash fund includes monies generated from specific sources for specific purposes. For example, the state levies a tax on motor fuels that is used for the construction and maintenance of roads, streets, and highways. Another source of cash funds is tuition paid by University of Nebraska students, which supplements funding for the university that comes from the general fund. In FY 1986-87, the cash fund is expected to generate $538.9 million.

The federal fund is used to account for expenditures financed from monies received from the federal government through grants, contracts, and letters of credit. It is expected to total $419.3 million in FY 1986-87.

The final designation, other funds, is used primarily for revolving funds that are collected by state agencies providing goods or services to other state agencies. It also includes funds that go directly into the Nebraska Capital Construction Fund from the cigarette tax and donations. In FY 1986-87, the other funds category is expected to amount to $191.5 million.

Table 1 — Budget for the state of Nebraska, by fund type and purpose, FY 1986-87

	Fund				
Appropriation	General[1]	Cash	Federal	Other[2]	Total
			Million dollars		
Operation	404.0	503.8	131.3	176.6	1,215.7
Aid	432.7	33.2	287.7	1.8	755.5
Subtotal	836.7	537.0	419.0	178.4	1,971.2
Construction	.5	1.9	.3	13.1	17.8
Total	839.3	538.9	419.3	191.5	1,989.0

[1]May not sum to total because of rounding.

[2]Includes revolving funds, the Nebraska Capital Construction Fund, and donations.

Source: Nebraska Legislative Fiscal Office, unpublished data.

State Government Expenditures

State government expenditures are often broadly designated as one of three types: operations, aid, or construction. Operations expenditures are for those functions that are the immediate responsibility of state government. Funding for the Governor's office, the University of Nebraska, and the court system are noteworthy examples.

State aid includes assistance to citizens and to local governments. For example, the state's Aid to Dependent Children Program provides direct assistance to individuals, while state aid to education provides funds for local school districts. State aid grew rapidly during the 1970s, before it stabilized at about $400 million in the early 1980s. In FY 1986-87, state aid is expected to account for over half of the general fund appropriations and nearly 40 percent of total appropriations. In the absence of state aid, local governments might be forced to increase substantially property taxes or to impose local option sales taxes to finance local services that are currently being paid for by state government. To cite one example, about 30 percent of the funding for local elementary and secondary education comes from state government. If the more than $200 million that state government currently provides to local school districts were eliminated, it would cause considerable financial stress to local schools.

Construction funds, as the designation implies, are for new construction. In FY 1986-87, most of these funds will come from the Nebraska Capital Construction Fund.

The FY 1986-87 appropriations compare to expenditures of about $1.2 billion from all state funds and $440 million from the general fund in FY 1976-77. Thus, total and general fund expenditures increased 68.8 percent and 90.8 percent, respectively, during this 10-year period. Much of the increase appears to have been associated with inflation. In 1976-77, the Consumer Price Index (CPI) was near 176 (1967=100); by early 1986, the CPI was about 330, an increase of 87.5 percent.

However, aggregate expenditure totals tend to mask shifts in spending that may occur within individual parts of state government. Total spending may change little on an inflation-adjusted basis, but if allocations shift within the budget, the impact could vary significantly for individuals. For example, the Department of Social Services has been granted total appropriations of $350.6 million for 1986-87, an increase of 149 percent from the expenditure total in 1976-77. But, during the same period, total expenditures by the Department of Revenue rose only 56 percent.

Aggregate expenditure totals have other limitations as well. The larger the population of the state, the larger the aggregate expenditure total would be expected to be. This suggests that expenditures might be measured more appropriately on a per capita basis. Moreover, state government may perform many functions in one state that are left to local governments in other states. Accordingly, an even better basis for interstate comparisons is the per capita expenditure by both state and local governments.

In FY 1983-84, the per capita direct expenditure by state and local governments in Nebraska amounted to $2,056[3]. While this was about 4 percent less than the national average of $2,131 per capita, expenditures as a percentage of personal income were slightly higher in Nebraska than the national average (table 2). Moreover, state and local expenditures have tended to increase relative to the national average since 1957.

In Nebraska, about 90 agencies, boards, and commissions (hereafter called agencies) have been authorized to receive appropriations each year. These appropriations determine the total amount that the agency may spend and, to a considerable extent, how the funds must be spent. For example, appropriations for the operation of an agency are clearly distinguished from aid appropriations. The source of funds (for example, general fund or cash fund) may determine how funds are spent. Agencies also are restricted in the amount that can be spent by major account category, such as personal services or operating expenses.

In FY 1986-87, agency appropriations range from less than $40,000 (the Athletic Commission) to $468.4 million (the University of Nebraska). Appropriations for the largest five agencies are shown in table 3. Because

Table 2—Direct general expenditures by state and local governments in Nebraska, selected years, FY 1957-84

	State and local expenditures in Nebraska	
Year	Per capita	Relative to personal income
	Percent of U.S. average	
1984	96	100
1976	89	86
1966	92	95
1957	85	95

Source: Advisory Commission on Intergovernmental Relations. *Significant Features of Fiscal Federalism, 1985-86 Edition.* Washington, DC, February 1986, p. 26 and 28.

Table 3 — Appropriations for the largest state agencies, Nebraska, FY 1986-87

Agency	Fund: General	Fund: All
	Million dollars	
University of Nebraska:		
Aid	8.3	21.5
Operation	159.4	446.9
Subtotal	167.7	468.4
Department of Social Services:		
Aid	121.6	297.7
Operation	21.5	52.9
Subtotal	143.1	350.6
Department of Roads:		
Aid	0	1.0
Operation	.8	287.9
Subtotal	.8	288.9
Department of Education:		
Aid	179.7	231.7
Operation	9.0	20.3
Subtotal	188.7	252.0
Department of Public Institutions:		
Aid	32.1	35.0
Operation	36.3	68.3
Subtotal	68.4	103.3

Source: Nebraska Legislative Fiscal Office, unpublished data.

of their significance to total state spending, a brief description of each of these agencies follows.

The University of Nebraska. Total appropriations for the University of Nebraska represent nearly 25 percent of projected total state spending in FY 1986-87. University appropriations from the general fund are about 20 percent of the fund's total. As such, the university ranks first in total appropriations and second to the Department of Education in general fund appropriations. More than $100 million are appropriated from cash funds (for example, tuition payments and medical center fees) and other funds. Another $50 million is expected from the federal government, primarily for research. The $21.5 million in state aid will go to individuals, mostly in the form of tuition remissions.

Department of Social Services. This agency, formerly the Department of Public Welfare, provides assistance to individuals who, for reasons beyond their control, are unable to support themselves. Some cash assistance is provided to needy individuals. The remaining public support goes to providers who, in turn, supply needed services through programs such as Medicaid. Nearly 60 percent of the total funding for the department comes from the federal government. Almost all of the remainder comes from the general fund. During the 1980s, the need for county funding for social services has been reduced significantly because the state has increased its funding commitment. Equity among counties and more efficient administration are primarily responsible for this shift.

Department of Roads. The Department of Roads is expected to spend almost $300 million on construction and upkeep of the state's roads, streets, and highways in FY 1986-87. Nearly all of the funds will come from the cash fund and will be generated from user fees, including an excise tax on motor fuels, motor vehicle registrations, and the state sales tax on motor vehicles. The $1 million in aid will go into a specially designated City and County Road Fund. Some additional funds that are designated as operations funds in table 2 will go eventually to counties and municipalities through the Highway Allocation Fund. Almost all of the general fund allocation will be spent on buses for the Metropolitan Area Transit System in Omaha.

Department of Education. Most of the Department of Education's budget will be used for state aid to school districts and most funds will come from the state's general fund. The general fund expenditure of nearly $189 million will be the largest for any agency of state government. Aid is distributed through several programs, the most important of which is the school aid formula. Currently, this formula is used to direct funds to local districts, primarily on the basis of enrollment, although assessed property valuations and teacher qualifications play a role as well.

Department of Public Institutions. The Department of Public Institutions is responsible for the treatment and care of individuals who are in one of the following categories: retarded or developmentally disabled, mentally ill, alcohol or drug abusers, ill and aged veterans, and visually impaired. This department has operational responsibility for the Beatrice State Development Center for the mentally retarded; regional centers for the mentally ill in Hastings, Lincoln, and Norfolk; and veterans homes in Grand Island, Norfolk, Scottsbluff, and Omaha. This department also provides aid for community based services for the mentally retarded, mentally ill, and visually impaired. General fund spending is nearly equally split between the department's operations and state aid.

These five agencies account for 73.6 percent of the total budget and 67.8 percent of the general fund budget for FY 1986-87. This should not imply that funding for other agencies is insignificant or noncontroversial. For example, in the 1986 General Session of the Nebraska Legislature, funding for the Commission on the Status of Women, the Mexican-American Commission, and the Commission on Indian Affairs provoked considerable debate. In each case, the money ultimately appropriated to each agency was less than $100,000.

When viewed in a comparative context, per capita expenditures by state government in Nebraska vary considerably (table 4). By functional area, state government spending on higher education and highways is more than the national average. In contrast, less is spent on local elementary and secondary education (through state aid) and public welfare (social services) than the average for other states. State aid to local schools in Nebraska is particularly low when compared with the national average. In FY 1983-84, 29.5 percent of the funding for local schools in Nebraska came from state government; nationally, 48.3 percent of funding for local schools came from state sources. This should not imply, however, that total funding for local schools is low in Nebraska; in FY 1983-84, a per capita state and local expenditure of $552 was the 14th highest among the 50 states.

Table 4 — Per capita general expenditures by state government in Nebraska relative to other states, FY 1983-84

Item	Per capita expenditures		
	United States	Nebraska	State ranking[1]
	— — — Dollars — — —		
Elementary and secondary education	308	183	48
Higher education	184	208	25
Public welfare	266	183	29
Highways	123	197	9

[1]Nebraska's ranking among the 50 states, with a ranking of 1 representing the largest amount of taxes paid and a ranking of 50 representing the smallest amount of taxes paid.

Source: U.S. Department of Commerce, Bureau of the Census. *State Government Finances in 1984*. Washington, DC, October 1985, p. 53.

State Government Revenues

State government must generate revenues to fill the gap between what it intends to spend and what it receives from other sources, such as the federal government. The smaller the gap, the less revenue needed and vice versa.

Most revenues generated by state government in Nebraska come from taxes and most taxes are used to pay for expenditures from the general fund. There are, however, exceptions. For example, some revenues come from interest on investments and various fees and charges, such as court fees. And, as noted earlier, certain taxes, such as the excise tax on motor fuels, go into the cash fund, not the general fund. Although state imposed taxes generate more than $200 million annually for the cash fund, the focus here is on revenues for the general fund. Failure to generate revenues for the general fund has much broader implications than failure to generate funds for the more narrowly defined functions of the cash fund[4].

In FY 1985-86, revenues collected for the general fund in Nebraska amounted to $834.2 million (table 5). The individual income tax was the

Table 5—General fund receipts by source, Nebraska, FY 1985-86

Source	Amount[1]	Percentage of total[1]
	Million dollars	**Percent**
Individual income tax	357.2	42.8
Corporate income tax	54.6	6.5
General sales and use tax	310.4	37.2
Miscellaneous	112.1	13.4
Cigarette tax	22.9	2.7
Insurance premium tax	20.7	2.5
Liquor tax	14.6	1.8
Pari-mutuel tax	7.1	.9
Interest on investments	5.8	.7
Total	834.2	100.0

[1]May not sum to total because of rounding.

Source: Nebraska Legislative Fiscal Office, unpublished data.

single most important source of revenue, accounting for 42.8 percent of the total. General sales and use taxes generated another 37.2 percent. Corporate income taxes and miscellaneous revenue sources were of lesser importance, accounting for 6.5 percent and 13.4 percent of the total, respectively.

Ten years earlier, in FY 1975-76, revenues collected for general fund expenditures totaled $343.8 million.[5] Thus, revenues increased by 143 percent from FY 1975-76 to FY 1985-86. During the same period, the CPI increased from about 165 to 327, an increase of 98 percent.

A major limitation of aggregate revenue totals is that they do not give a perspective of the cost of government from the standpoint of individual citizens. Comprehensive data from FY 1983-84 indicate that per capita state tax collections amounted to $665.[6] This ranked the state 44th among the states, with only Arkansas, Texas, Missouri, Tennessee, South Dakota, and New Hampshire having lower taxes per capita.

However, even per capita state tax collections may give an incomplete indication of how taxes affect individual citizens. For one thing, state and local taxes (primarily property) should be considered together because local taxes pay for some services (especially education) that are supported to a greater degree by state taxes in other states. In FY 1983-84, state and local taxes collected in Nebraska amounted to $1,232 per capita (table 6). This compared with a national average of $1,356 and ranked the state 29th among the states.

Second, because all taxes ultimately must be paid from income, perhaps a more appropriate way to measure tax obligations is to compare taxes paid with income. In FY 1983-84, Nebraska residents paid an amount equivalent to 11 percent of their incomes in state and local taxes. Nationally, the average state and local tax obligation amounted to 11.7 percent of income. Nebraska ranked 31st among the states using this standard for comparison.

Nebraska's individual income, corporate income, and general sales taxes ranked below national averages, both per capita and as a percentage of personal income. However, Nebraska ranked above average in property tax collections.

Income Taxes. State government in Nebraska has levied a tax on income since 1968. This tax applies to income earned by individuals, fiduciaries (trusts and estates), and corporations.

For individuals and fiduciaries (hereafter called individuals), the state income tax is a percentage of the adjusted federal income tax liability on

Table 6 — State and local taxes, per capita and as a percentage of personal income, U.S. average and Nebraska, FY 1983-84

Tax	Per Capita			Percentage of personal income		
	U.S. average	Nebraska	Nebraska ranking[1]	U.S. average	Nebraska	Nebraska ranking[1]
	— — Dollars — —			— — Percent — —		
All state-local tax revenue	1,356	1,232	29	11.7	11.0	31
State-local individual income tax	274	189	34	2.4	1.7	35
State-local general sales and use tax	318	267	30	2.8	2.4	33
State-local corporation income tax	72	42	36	.6	.4	35
State-local property tax revenue	408	507	15	3.5	4.5	12

[1]Nebraska's ranking among the 50 states, with a ranking of 1 representing the largest amount of taxes paid and a ranking of 50 representing the smallest amount of taxes paid.

Source: Advisory Commission on Intergovernmental Relations. *Significant Features of Fiscal Federalism. 1985-86 Edition.* Washington, DC, February 1986, p. 182 and 184.

that portion of income derived from Nebraska sources. Corporations, in contrast, pay state income tax on the basis of federal taxable income allocated to Nebraska. Although a different base is used for individual and corporate taxes, there is a relationship between tax rates for individuals and corporations. Specifically, the corporate tax rate is 25 percent of the individual rate on the first $50,000 of taxable income and 35 percent of the individual rate on all taxable income above $50,000. Thus, with an individual rate of 20 percent, corporations paid a state income tax of 5 percent on the first $50,000 of net income in 1985. Above that income level, the tax rate was 7 percent.

In FY 1984-85, all states except Florida, Nevada, South Dakota, Texas, Washington, and Wyoming had a state individual income tax. State corporation income taxes were collected everywhere except Nevada, Texas, Washington, and Wyoming. In addition, several states (Pennsylvania and Ohio being the most notable examples) allowed local governments to levy income taxes. However, the latter has never been authorized in Nebraska.

Income tax collections have grown rapidly since 1969-70, both in absolute terms and as a percentage of general fund receipts (table 7). This growth has been necessary to support increased expenditures. It also reflects an apparent philosophy that income taxes should fund a significant percentage of the general fund budget.

General Sales and Use Taxes. Sales and use taxes are taxes on spending. The taxes are paid by adding them to the price of purchased items.

Sales taxes in Nebraska have several dimensions. First, the state's general sales tax applies to most retail sales of products. It generally does not apply to services, although a few services, such as those associated with restaurant meals, are taxed.[7] The general sales tax is accompanied by a general use tax. The use tax applies primarily to goods purchased outside Nebraska for use within the state.[8] Its purpose is to preclude the possibility of buying out-of-state where nonresidents may not be subject to the sales tax. The use tax is levied on the same base and at the same rate as the sales tax.

As of late 1985, fifteen municipalities in Nebraska were adding general sales and use taxes to the state tax. Except for the tax rate, municipal sales taxes have all of the characteristics of the state's general sales and use taxes. Municipalities typically have used this tax as a means of providing property tax relief. State government receives a modest fee for collecting these taxes for municipalities.

Table 7 — Net receipts from individual and corporate income taxes, Nebraska, selected years

Fiscal year	Income taxes			
	Individual	Corporate	Total	Percentage of general fund receipts
	— — — — — Million dollars — — — — —			Percent
1969-70	57.6	8.9	66.5	34
1979-80	272.2	58.7	330.9	53
1985-86	357.2	54.6	41.8	49

Source: Nebraska Legislative Fiscal Office, unpublished data, and Nebraska Department of Revenue, *Annual Report, 1971*, p. 8.

The state's general sales and use taxes (hereafter called sales taxes) go primarily into the general fund. A notable exception is the sales tax on motor vehicles, which goes into the highway allocation fund and is used for the construction and maintenance of roads, streets, and highways.

In FY 1985-86, net sales tax receipts for the general fund amounted to $310.4 million (table 8). Although this represented more than a fourfold increase since 1970, it was consistent with the rise in other general fund receipts. Sales taxes represented 35-37 percent of net receipts for the general fund in fiscal years 1969-70, 1979-80, and 1985-86.

Miscellaneous Revenues. Miscellaneous sources of revenue supplement state sales and income taxes. In FY 1985-86, miscellaneous revenues amounted to $112.1 million, or 13.4 percent of the general fund budget.[9] The largest contribution from miscellaneous sources, $22.9 million, came from the cigarette tax. Other important sources of miscellaneous revenue were the insurance premium tax, $20.7 million; alcoholic beverages tax, $14.6 million; pari-mutuel wagering, $7.1 million; court fees, $7.8 million; and interest on investments, $5.8 million.[10]

In addition to the specific types of miscellaneous revenues noted above, there are about 15 other revenue sources for the general fund that the Nebraska Department of Revenue groups in the miscellaneous category. Examples include estate taxes, various business fees and licenses, admissions and entertainment taxes, and certain motor vehicle fees and licenses. None of these revenue sources individually generated as much as $5 million in FY 1985-86 for the general fund.

Table 8 — Net receipts from state sales taxes for the general fund, Nebraska, selected years

	State Sales Taxes	
Fiscal year	Amount	Percentage of general fund receipts
	Million dollars	Percent
1969-70	71.4	37
1979-80	219.4	35
1985-86	310.4	37

Source: Nebraska Legislative Fiscal Office, unpublished data, and Nebraska Department of Revenue, *Annual Report, 1983,* p. 8.

State Finance Issues in Nebraska

A perfect system for financing state government expenditures in Nebraska has not been devised. Nor is one likely to be, simply because individual citizens seem certain to disagree on the definition of an ideal system. But, certain principles have evolved to guide policymakers in the implementation of an individual tax or, more importantly, a state and local tax system. McClelland, in his 1962 study of Nebraska's state and local finance system, listed the following criteria for evaluating a tax system:

- Equity and fairness. A basic principle of equity is that people of similar taxpaying ability should bear equal tax burdens. That is, persons taxed on the same amount of income, wealth, or expenditures should pay the same amount of taxes. Ultimately, of course, all taxes come from income, present or future, and, thus, a fair tax system will be equated in some manner with income.

- Economic neutrality. Taxation must promote the effective operation of a competitive system without distorting economic activity.

- Economy of administration. We should minimize both the administrative costs of government and the compliance costs of business and individual taxpayers.

- Stability of yield. In a state or local tax system, particularly one with limited borrowing capacity, tax yields must be relatively stable throughout the business cycle so that essential expenditures may be met.[11]

Two other major concerns must be addressed by those who design tax policy. The first relates to proportionality. If taxes are proportional, all taxpayers pay approximately the same percentage of their income in taxes. If taxes are progressive, higher income individuals pay a larger percentage of their income in taxes than those with lower incomes. With regressive taxes, low-income individuals pay a higher percentage of their income in taxes than those with higher incomes. Whether a tax or a tax system should be proportional, progressive, or regressive is a matter of personal and political philosophy.

Second, the amount of tax revenue generated from a single source is a function of both a base (what is to be taxed) and a rate (how much it is to be taxed). To raise a given amount of revenue, the larger the base, the lower the rate needs to be and vice versa. McClelland asserted that low rates were preferable to higher rates, because the effort required to pay the tax and the ability to escape it would be less than with high rates.[12]

When the primary emphasis of Nebraska's system of financing state government shifted from property taxes to income and sales taxes in the late 1960s, policymakers used the principles outlined above in designing the new system. They hoped that the total tax system could be kept approximately proportional and that the tax rates could be kept low by using both income and sales taxes. While questions about proportionality remain, there is no question that tax rates have increased. The individual income tax rate rose from 10 percent on January 1, 1968, to 20 percent on January 1, 1983 (and has fluctuated between 19 and 20 percent since then). The general sales tax rate was set initially at 2.5 percent on June 1, 1967. After dipping briefly to 2 percent in 1969, it rose to 4 percent on July 1, 1983. Although the sales tax rate dropped to 3.5 percent in the 1984-85 period, it will increase to at least 4 percent again on January 1, 1987.[13]

Critique of Income Taxes

Income taxes are often presumed to be fair because they are based on the ability to pay, that is, taxes are paid only if income is generated. As the economic circumstances of an individual change, income taxes shift with those circumstances more satisfactorily than with any other tax.

Although the income tax can be commended for fairness, any government levying the tax must be concerned about its stability. Revenue can fluctuate widely because of the high income elasticity of this tax. A 1979 study found that the elasticities of state individual income taxes ranged between 1.3 and 2.4.[14] Thus, when income is increasing, revenues increase faster than income. Unfortunately, when the economy turns down, income tax collections decline rapidly.

Both individual and corporate income taxes in Nebraska have been considered progressive because the tax rate increases as taxable income increases. The individual income tax has been considered the more progressive because it is tied directly to the escalating scale of federal rates (with a maximum rate of 50 percent in 1986). This compares with only two rate brackets for the corporate tax.

Despite a progressive rate structure, the overall progressiveness of the individual income tax probably has been reduced by various deductions and credits at the federal level. One of the primary objectives of the forthcoming comprehensive tax study in Nebraska is to determine the actual amount of taxes paid by different types of taxpayers. Both the amount and source of income will be used to develop taxpayer profiles.

A November 1985 study by the Minnesota Taxpayers Association provides partial answers to questions about individual income tax progressivity.[15] In this study, tax liabilities were compared for various types of taxpayers in various states. Married taxpayers in Nebraska with one wage earner and a gross income of $50,000 paid a state income tax of $1,300 in 1984, according to the study. At this income level, the Nebraska individual income tax obligation ranked 33rd among the 41 states taxing earned income.[16] At $100,000 gross income, it rose to $4,031 and Nebraska's rank to 25. At $200,000, it increased to $10,684 and Nebraska's rank to 17. Similar jumps in relative ranking occurred for married taxpayers with two wage earners and single taxpayers whose incomes exceeded $50,000.

Nebraska's individual income tax is relatively simple to administer because it piggybacks on federal income tax liability. This helps to keep administration costs low. Compliance is also enhanced by basing individual income taxes directly on federal liability.

However, by piggybacking on the federal individual income tax system, state government implicitly assumes any loopholes or faults attributed to the federal system. Furthermore, changes in the federal tax code have been both frequent and significant in recent years. In 1981, a major tax bill significantly reduced taxes over a period of several years for both individual and corporate taxpayers. In 1986, it appears likely that another major tax bill will be approved that will shift tax liabilities from individuals to corporations. The result of these ongoing adjustments is that federal tax liability for individuals has been reduced during the 1980s. This forces state government into the politically difficult situation of raising rates to generate even a nominally constant amount of revenue. Moreover, this may have become more of a challenge because a 1984 statute change requires the legislature, not the State Board of Equalization and Assessment, to assume responsibility for rate-setting.

Although the corporate income tax is based on the same principles as the individual income tax, its effects may differ substantially. A corporate income tax must eventually tax citizens—stockholders, suppliers, employees, and consumers. Therefore, some argue that revenue might be obtained more directly and equitably through the individual income tax.

Critics also charge that a corporate income tax, especially if it is perceived to be a progressive one, deters large corporations from doing significant business in the state. Other evidence indicates, however, that taxes are only one factor, and perhaps not the most important, in determining business location.[17]

Another point sometimes made by critics is that the administrative difficulty of dealing with corporations with operations in more than one state is not worth the revenue collected. Until recently, Nebraska was a member of the Multi-State Tax Commission. One of the commission's important responsibilities is to audit income and tax obligations of multi-state corporations. Nebraska dropped its membership because of a perception that the state's corporate income tax was significantly different from other states, and, therefore, the Department of Revenue could not effectively utilize information generated by the commission. The problem is that there is no good monitoring system to replace the commission. Whether Nebraska is receiving its fair share of tax revenue from multi-state corporations remains an unanswered question.

Despite the criticism of corporate income taxes from some parties, there are two compelling reasons for keeping it in place. First, corporation income taxes generate revenue that would have to be raised from other sources. Second, taxes on corporations make the individual income tax more acceptable politically. In short, as long as Nebraska has an individual income tax, there is a strong likelihood that a corporate income tax will be a prominent part of the state tax system as well.

Critique of Sales Tax

In mid-1986, Nebraska sales taxes applied to most items bought in retail stores; gas, electricity, and water used in the home; restaurant meals, hotel and motel rooms; energy purchases by businesses, except where more than 50 percent of the energy was consumed in processing, manufacturing, refining, irrigation, or farming; and machinery and equipment purchases by farmers, businesses, and industrial firms.[18]

Notably excluded from sales taxes were foods and food products that were eligible for purchase with food stamps. This provision applied regardless of whether the retailer from which the food was purchased participated in the Food Stamp Program.

Most services represent a second major area that is excluded from sales taxes. For example, services performed by physicians, auto mechanics, and cosmetologists are not subject to this tax. However, products used in performance of a service may be subject to the tax.

Other exemptions from general sales taxes fall into one of the following categories:

Certain sellers — Meals and foods sold by schools and churches and their related organizations, unless they are open to the general public, and meals, products, and rooms provided to patients in hospitals and to inmates of public institutions.

Certain property — Motor fuels (which are subject to an excise tax), daily and weekly newspapers, prescription medicines, and livestock and poultry used to produce food for human consumption.

Certain purchasers — Purchases by federal, state, and local governments; schools; hospitals; orphanages; religious organizations; and similar agencies.

Producer goods — Items that become an ingredient or a component of products that are made for ultimate sale at retail, such as livestock and poultry feed, fertilizer, and seeds. These products are excluded in an effort to avoid double taxation.

Nebraska's retail sales tax statutes are based on the physical ingredients rule. Seed, feed, and fertilizer are not taxed because they are direct ingredients to the eventual production of food and fiber. However, tractors and combines are taxed because the products produced with these contain no part of the machine itself.

It probably would not be effective to exempt from the general sales tax any product that is used directly in the production or marketing of another product. The problem comes in the definition of the word direct. Many products are used to produce other products. At the least, such a statute would cause administrative difficulties for the authority charged with the responsibility of administering the tax. It also would likely reduce taxpayer compliance and cause rates to increase because of a reduced tax base.

Sales taxes have two major advantages. First, they can generate a substantial amount of revenue; in FY 1986-87 the Nebraska Legislative Fiscal Office estimates that each percentage point of sales tax would raise \$95 million for the general fund.[19] Second, sales taxes offer a gradual, somewhat concealed method of payment. Except for big-ticket items, such as boats and automobiles, large amounts of sales tax are not paid at one time.

Nationally, the degree of regressivity of sales taxes is the most important issue surrounding its use. Because a sales tax is imposed on consumption, and because poor persons must spend more of their incomes on consumption than rich persons, the tax is considered regressive.

A 1980 study showed the average tax burden of state and local sales taxes for a family of four decreasing from 1.1 percent of income to 0.6 percent as family income increased from $21,500 to $86,000.[20] Unfortunately, sales tax bases, rates, and exemptions vary from state to state; thus, the degree of regressivity in an individual state may vary significantly from a national average. To further complicate matters, it is likely that family expenditures change over time, that expenditure patterns vary across the country, and that even within a local community, families spend their money differently.

Several approaches have been used to reduce the regressiveness of sales taxes. In Nebraska and most other states with state sales taxes, prescription drugs and retail food sales are exempt.[21] This tends to be most helpful to low-income families who must spend a relatively high proportion of their income on food and health care. The case for the food exemption is strengthened wherever families grow a substantial amount of their own food. Home grown food would not be taxed while food purchased at retail markets would be.

Most states, but not Nebraska, exempt utilities and a few exempt clothing from sales taxes. The philosophy used for the food and prescription drug exemption is applied, that is, all citizens must purchase these necessities, even if incomes are low.[22] The problem with extending exemptions is that eventually tax rates will become prohibitively high because of a shrinking base. The narrower the base and the higher the rate, the more a sales tax discriminates between products. In fact, if the sales tax applies only to non-necessities, it could become a progressive tax. At some point, the imposition of sales tax on a restricted list of goods and services becomes just as onerous to society as a sales tax which does not acknowledge the special concerns of low-income individuals.

Proposals to extend sales taxes to services have been debated vigorously in recent sessions of the legislature (for example, LB 1180 in the 1986 General Session). Extension of the sales tax base to services would mean that the overall sales tax rate could be reduced or more money could be raised with the same rate. Opponents have indicated that they fear a reduction in business for those economic activities to which the tax would apply. Farmers have argued that such a tax would unfairly discriminate against them because they use many services in crop and livestock production. Some operators of service businesses have opposed the tax because they do not want to be charged with the responsibility of remitting it to the Department of Revenue.

Beyond philosophical judgments, other concerns must be addressed in any debate on sales taxes on services. Among the most important is which services should be taxed. If all services were taxed at current general sales tax rates, the revenue generated would be well in excess of $100 million annually. Moreover, if the service sector of the economy continues to grow rapidly, the possibility of collecting more sales tax increases.

On the other hand, a strong case can be made for certain exemptions. For example, real estate construction and legal, accounting, engineering, and advertising services are usually producers' services. If one is to follow the standard of taxing final consumption at the retail level, then these services should be exempt. Moreover, certain consumption services might be exempt. Involuntary spending for medical and legal services falls into this category. Because the state subsidizes education through its system of public education, a sales tax probably should not be levied on tuition. Many transportation services are either producer-oriented or if they are consumer-oriented, they raise constitutional problems about taxation because these services extend across state lines.

The inescapable conclusion is that it would be difficult, even foolhardy, to attempt to tax all services. However, failure to tax ordinary expenditures for services in the same manner as expenditures for goods probably causes sales taxes to be more regressive. People with identical incomes pay different amounts of taxes by accident, depending on tastes or preferences. Persons preferring to purchase goods and equipment to serve themselves pay taxes, while those preferring to pay someone to serve them avoid taxes.

Sales taxes for the most part, are simple and easily understood. Sales taxes also provide a relatively stable source of revenue, with much less fluctuation in receipts throughout the business cycle than occurs for individual income tax receipts.

From the standpoint of state government, sales tax administration requires more diligence than individual income tax administration. The difference is that the federal income tax provides a structure for levying and auditing payments of the state income tax. No such federal structure exists for sales taxes.

From the standpoint of society, sales taxes probably do not retard economic growth as long as they do not apply to producer purchases. Taxing producer purchases would mean that taxes could be imposed as a product moved through the processing-marketing chain to the final consumer. This would cause special problems if no other state taxed at the producer level (which is basically the case at the present time).

Critique of Miscellaneous Taxes

Miscellaneous taxes, while an important contributor to the general fund, are perhaps best thought of as a supplement to sales and income taxes. It is inconceivable that miscellaneous taxes would even be sufficiently large to eliminate the need for sales and income taxes.

Perhaps the major limitation of miscellaneous taxes simply is that they tend to have narrow bases, that is, some people pay little or no miscellaneous tax. If one does not smoke, drink alcoholic beverages, or bet on horses, it is possible to avoid a significant portion of the miscellaneous taxes paid in the state. These, of course, are classic examples of sumptuary or sin taxes so lawmakers have seldom been concerned about the narrowness of the base.

Another concern with miscellaneous taxes is that the revenue generated must be sufficiently large to pay for appropriate administration and enforcement of the tax. If it fails to meet this test, then there is little reason to implement the tax.

Finally, like most other taxes, it is appropriate to ask what impact any individual miscellaneous tax will have on economic activity. For example, if the pari-mutuel tax rate is too high, ultimately it could cause wagering to decline. This, in turn, would hurt cities like Omaha where the Ak-Sar-Ben track is a significant part of the local economy.

Additional State Finance Issues

Many contemporary topical issues relate to the three major public finance questions raised at the beginning of this chapter. Some of these issues, such as extending the general sales tax to services, have already been addressed in the critique of individual revenue sources. Additional issues that are likely to command continuing public attention are highlighted here.

Property Tax Relief. Although property taxes are levied only by local units of government in Nebraska, many citizens believe that property tax obligations are much too high. The outcry for property tax relief continues despite a number of actions taken during the past two decades to reduce dependence on property taxes: abolishment of the state property tax in 1966, initiation of state aid to local school districts in the 1968-69 school year, enactment of a limited homestead exemption law in 1969, and the beginning of personal property tax relief in 1972. The last three items have been subjected to ongoing debate and frequent change in the Nebraska Legislature.

The property tax relief issue generally presumes that lower property taxes are very unlikely to result from reduced spending by local units of government, although some citizens continue to promote such an idea. The prevailing view is that if property tax relief is to occur it will have to come from state government. The problem is that state government can provide relief only if it increases its revenue-generating capability. This, in turn, quickly turns into a debate about whether tax rates should be increased or the current state tax base expanded. A potential political problem with property tax relief is that local officials would receive credit for lower property taxes while state officials would have to assume the responsibility for higher state taxes.

In November 1986, Nebraskans will vote on Referendum Measure 400. If approved, it will mandate school district reorganization and presumably provide property tax relief through a provision that limits real property tax support to no more than 45 percent of total funding for local school districts. The state general sales tax would be increased one percentage point to make up for part of the property tax reduction, but it is likely that additional state revenue would have to be generated to offset the entire property tax reduction. This illustrates yet another problem with property tax relief. Because it accounts for more than twice as much revenue as any other state-local tax, meaningful reductions in property taxes will likely bring big increases in other taxes. Inevitably, a significant shift in the mix of taxes will hurt some while helping others.

State Lottery. In recent years, frequent proposals have been made to implement a state lottery. Supporters believe a lottery could provide an important supplementary source of tax revenue for the state. In some larger states, such as Ohio, Michigan, and Illinois, lotteries have become the second or third largest source of state tax revenue. Opponents of a lottery argue that some persons would be tempted to participate when they did not have sufficient financial resources to purchase necessities for themselves and their families.

Typically, lotteries in other states have returned about 52 percent of the amount wagered to bettors. After paying administrative expenses for the lottery, states have retained about 42 percent of the total. The administrative cost is three to five times as high as for other taxes even in states where there is widespread participation in the lottery.[24] When there are relatively few participants, administrative costs can consume more than half of projected tax revenues.

Earmarking. Proposals are often made to use a specific tax base to generate revenues for a specific purpose. Supporters argue that taxpayers know exactly how their tax dollars will be spent with earmarked programs. This rationale is strong when there is a direct link between benefits received by particular users of governmental services and taxes collected from those users. The motor fuels tax collected for the upkeep of roads, streets, and highways is a notable example.

However, if promoters of earmarking simply wish to avoid annual legislative scrutiny, evaluations, and appropriations, the case for earmarking is much weaker. In this situation, earmarking may have the effect of entrenching programs for long periods of time, even when funds could be better spent elsewhere. Moreover, the annual budgeting process for the governor and the legislature becomes increasingly difficult. In the interest of having freedom to make necessary changes, earmarking probably should be avoided, except when benefits are directly linked to costs.

Tax Mix. In 1985, the legislature rescinded the statute requiring that revenues collected from general sales tax be as close as possible but not exceed individual income tax revenues. At present, tax rates may be set at any level agreed to by the legislature and the governor. By action of the 1986 Legislature, the state sales tax will increase by one-half percent on January 1, 1987. If Referendum Measure 400 is approved, sales taxes will increase by an additional one percent on the same date. This combination of circumstances would increase greatly the relative importance of sales taxes in state government finance.

If proportionality is a continuing objective in the state's tax mix, then continued increases in sales tax rates may be questioned. On the other hand, if sales tax increases are utilized for property tax relief, as proposed in Referendum Measure 400, then higher sales tax rates simply mean that one relatively regressive tax is being substituted for another.

Economic Forecasts. Because the Nebraska Constitution prohibits deficit financing for general fund expenditures, revenues must be generated to pay for expenditures. This, in turn, means that a forecast of available revenues must be made as appropriations are budgeted.

The state of Nebraska purchases sophisticated economic forecasts from consulting firms outside the state. These forecasts are monitored and sometimes adjusted by fiscal experts in the Department of Revenue and the Legislative Fiscal Office. Ultimately, the State Economic Forecasting Board has responsibility for forecasting the amount of revenue to be collected.

Economic forecasts will never be precise, simply because the future is never exactly like the past. In Nebraska, a forecast that turns out to be even 3 percent too high would mean a shortfall in the state budget of $25 million. Although provision is made for a cash reserve, it has been necessary for the legislature to meet in special session in recent years to adjust expenditures and tax rates.

Generally, economic forecasts will be more reliable when conditions in the national and state economies are not changing rapidly. When this is not the case, the only option to avoid special sessions is to increase the size of the reserve, and that means larger up-front tax levies.

Policy Options

Any assessment of options for financing state government in the future must consider the state's needs, first. Among the factors that will shape needs will be population changes, both in total and by geographic sector within the state; demographic shifts, with special attention given to the number of senior citizens (because their health care costs are highest) and schoolage children (because education is the single largest area of expenditure for state and local government); economic growth, or the potential for growth, in the private sector; and inflation. Many of these issues are addressed in other chapters of this book. The inescapable conclusion is that the need for state supported funding of public services will continue to grow, especially if measured in aggregate dollars.

Beyond the question of the need for state services, the actual amount spent will depend on the collective values of Nebraska's citizens. What are our hopes and fears for the future? What services should be provided by the public sector? What services should be left to private enterprise? Are we willing to increase our taxes? As citizens respond to these questions through the political system, policymakers will find they have the following options for financing state government in Nebraska.

Reduce Services. Even if the need for services grows, citizens must be willing to have state government respond and to support that response with their tax dollars. If these conditions do not exist, then there is little state government can do but reduce services. In recent years, this option has been used sparingly when measured in nominal dollars. In real (inflation = adjusted) dollars, however, reductions in support have occurred more often.

Shift Funding to Another Governmental Unit. State government has experienced dual pressures resulting from declining real amounts of federal grants-in-aid and outcries for property tax relief at the local level. Both trends seem likely to continue. Thus, prospects are not good for any significant state expenditures to be shifted to another unit of government. In fact, the more likely prospect is that state government will be forced to assume additional financial obligations from other governmental units.

Expand the Tax Base. A number of possibilities exist for expanding the tax base in Nebraska. The most prominently discussed possiblity is to extend the general sales tax to services. Although political opposition to this proposal is strong, it could raise a substantial amount of revenue if imposed on an array of services at the same tax rate as for retail products. A statewide lottery, although fully as controversial as sales taxes on services, is being promoted by some. Other possibilities for tax base expansion relate more to interstate cooperation and enforcement than legislation. In particular, the use portion of the general sales tax and the income tax on multi-state corporations might raise additional revenues if monitored carefully. Finally, it may be necessary to adjust, if not expand, the individual income tax base to keep revenues from falling after the 1986 federal tax revision is implemented.

Increase Tax Rates. Raising tax rates is the most direct means available to increase revenues. However, there are two concerns about imposing higher rates. First, the rate must not be increased so much that taxpayers try to avoid the tax. Second, a change in rates may alter significantly the proportionality of the tax system. In either case, policymakers may want to reconsider their overall tax strategy.

Increase the Use of User Fees. User fees have been used to support public goods and services, such as state parks and post-secondary education at state-supported colleges and universities. Often, however, the user fee does not cover all costs, so a partial subsidy continues. Also benefits from the goods or services must be confined to those using the goods or services. Nonpayers must not be able to benefit. If the latter possibility exists, then efficiency and equity demand that the service be financed by general taxation.[25] Even if these basic conditions exist, user fees may not be desirable bcause of the potential hardship imposed on some users or high collection costs. In short, the opportunities for using additional user fees in state government appear to be limited.

Summary and Conclusions

State government represents nearly a $2 billion per year business in Nebraska. Over half of the state's funds are raised from the state's tax sources. Education represents the largest area of expenditures, and the most important sources of revenue are income taxes (individual and corporation), although general sales taxes may become the primary revenue source by FY 1987-88.

The state will continue to struggle with questions about what services each governmental unit should provide and how the funds should be raised to pay for these services. It is likely that state government will be asked to increase its funding for public goods and services in the future. Whether economic growth will be sufficient to generate needed revenues is doubtful. If not, careful study of current state tax bases and rates is warranted.

An unheralded new source of income of the magnitude that some energy-rich states enjoyed in the 1970s seems unlikely. A state lottery, which has become the golden goose of the 1980s in some states, presumably would provide some additional revenues but probably would not displace a major revenue source, such as sales or income taxes.

At this time, the major state finance issues appear to revolve around property tax relief, extension of the general sales tax base to services, and whether the current system for levying individual income taxes should be retained. The more informed that citizens are about these and other public finance issues, the better the resulting public policy is likely to be.

Endnotes

1. A major caveat should be noted here. Government does not consume 35 percent of the GNP because a significant portion of government spending simply shifts income from one citizen to another (Social Security expenditures are a good example). Government expenditures, expressed as a percentage of GNP, are simply a measure of the presence of government in the overall economy.

2. Advisory Commission on Intergovernmental Relations. *Significant Features of Fiscal Federalism, 1985-86 Edition.* Washington, DC, February 1986, p. 3.

3. Ibid, p. 26.

4. If general fund expenditures threaten to exceed revenues, the governor must call a special session of the legislature to reduce expenditures or to increase revenues. Such sessions have been necessary on several occasions, most recently in FY 1985-86. On the other hand, if cash fund revenues are below expectation, the scope of activity being paid for out of cash funds (for example, road maintenance) simply is reduced.

5. Nebraska Legislative Fiscal Office. Unpublished data. Technically, $39.2 million of this total went directly to local governments for personal property tax relief, thereby reducing the amount in the general fund to $304.6 million.

6. Advisory Commission on Intergovernmental Relations. Op. cit., p. 182.

7. As of December 1985, only three states (South Dakota, New Mexico, and Hawaii) taxed most services.

8. Products purchased by mail order are not taxed because of potential conflicts with the federal constitution.

9. Nebraska Legislative Fiscal Office. Unpublished data.

10. Insurance premium tax revenues were about 50 percent higher than normal in FY 1985-86 because of a one-time accounting change.

11. McClelland, Harold F. *Nebraska: State and Local Finance.* Lincoln, NE. November 1962. p. 6-7.

12. Ibid, p. 6.

13. If Referendum Measure 400 is approved by Nebraska voters in the November 1986 general election, the state general sales tax will increase to 5 percent.

14. Advisory Commision on Intergovernmental Relations. *State-Local Finances in Recession and Inflation.* A-70. Washington, DC, 1979, p. 24. For an elasticity value of 2.0, each 1-percent rise in income could be expected to increase income tax revenues by 2 percent.

15. Minnesota Taxpayers Association. *Comparison of the 1984 Individual Income Tax Burdens by State.* St. Paul, MN, November 1985, p. 17-23.

16. Connecticut, New Hampshire, and Tennessee impose a tax on capital gains, dividends, and interest only. Therefore, these states were excluded from the study. Nebraska consistently ranked in the 30s, compared with other states on tax liability on income below $50,000.

17. For an excellent discussion of both sides of this argument, see: Advisory Commission on Intergovernmental Relations. *Regional Growth: Interstate Tax Competition.* A-76. Washington, DC, 1981, p. 4.

18. A tax credit is provided to offset the sales tax on the purchase of new manufacturing and processing equipment for new or expanding businesses.

19. Personal interview with Michael Calvert, Director, Nebraska Legislative Fiscal Office, August 25, 1986.

20. Advisory Commission on Intergovernmental Relations. *Significant Features of Fiscal Federalism, 1980-81 Edition.* Washington, DC, 1981, p. 49.

21. Advisory Commission on Intergovernmental Relations. *Significant Features of Fiscal Federalism, 1985-86 Edition. Washington, DC, 1986,* p. 92.

22. Ibid.

23. Advisory Commission on Intergovernmental Relations. *State-Local Finances in Recession and Inflation.* Washington, DC, p. 24. Estimated income elasticities for sales taxes in the studies surveyed ranged from 0.80 to 1.27.

24. Manvel, Allen D. "State Lotteries - A Source of High-Cost Revenue." *Tax Notes.* January 7, 1985, p. 97-98.

25. Aronson, J. Richard, and John L. Hilley. *Financing State and Local Governments, Fourth Edition.* The Brookings Institution: Washington, DC, April 1986, p. 155.

Contributors

Charles L. Bare currently teaches at the University of Alaska-Anchorage. He received his Ph.D. from the University of Wyoming. His most recent research focuses on econometric modeling and developing leading economic indicator series for Nebraska. Formerly, he was a Research Associate at the Bureau of Business Research, College of Business Administration, University of Nebraska-Lincoln.

Ann Coyne is Associate Professor of Social Work at the University of Nebraska at Omaha. She holds a Ph.D. from the University of Nebraska-Lincoln. Currently, she serves as Project Director of UNO's Child Welfare Training Institute and on the editorial board of the journal, *Child Welfare.* Her research interests are in the area of child welfare policy.

Jerome A. Deichert is a Research Associate at the College of Business Administration's Bureau of Research at the University of Nebraska-Lincoln. He earned a MA from the University of Nebraska-Lincoln. His current research interests include economic and demographic issues in Nebraska, and he has published numerous articles in this area.

A.L. (Roy) Frederick is Professor of Agricultural Economics and Extension Economist at the University of Nebraska-Lincoln. He received his Ph.D. from Purdue University. He is the author of more than 40 publications on public policy issues, including a series of *NebGuides* concerning public finance issues in Nebraska.

Herb Grandbois is Associate Professor of Social Work at the University of Nebraska at Omaha. He has served as the Undergraduate Coordinator for the School of Social Work since 1983. He received a DSW from the University of Utah. His research interests include American Indian culture, tribal government, and child welfare.

Bruce J. Horacek currently serves as Coordinator of Academic Affairs and Associate Professor in the Gerontology Program, University of Nebraska at Omaha. He received his Ph.D. from the University of Iowa. He has published several articles in the areas of aging, death and dying, and bereavement.

Bruce B. Johnson is an Associate Professor of Agricultural Economics at the University of Nebraska-Lincoln. He holds a Ph.D. in agricultural economics from Michigan State University. His teaching and research responsibilities focus on resource issues associated with agriculture and the viability of rural communities.

Bruce A. Kirchhoff is Professor of Entrepreneurship and Director of the Entrepreneurship Research Institute at Babson College, Wellesley, Massachusetts. Previously, he served as Chief Economist for the U.S. Small Business Administration and as Assistant Director of the Minority Business Development Agency in the U.S. Department of Commerce. He earned his Ph.D. in business administration from the University of Utah. His articles on entrepreneurship, economic development, business strategy, and organization effectiveness appear in a variety of academic journals and trade and popular publications.

Jeffrey S. Luke is Director of the Bureau of Governmental Research and Service at the University of Oregon. Previously, he was a Senior Research Associate at the Center for Applied Urban Research, University of Nebraska at Omaha. He earned a Ph.D. from the University of Southern California. His research interests include social policy issues and public administration.

Keith J. Mueller is Associate Professor of Political Science and Director of the Inter-University Health Services Research Group at the University of Nebraska-Lincoln. He holds a Ph.D. from the University of Arizona. His research publications include articles on health policy in the *Journal of Health Politics, Policy and Law,* the *Cornell Journal of Social Relations,* and the *International Journal of Public Administration.*

Donald E. Pursell is Director of the Bureau of Business Research, College of Business Administration, University of Nebraska-Lincoln. He holds a Ph.D. from Duke University and specializes in forecasting.

James A. Thorson is Professor of Gerontology and Director of the Gerontology Program, University of Nebraska at Omaha, and Professor of Adult and Continuing Education, University of Nebraska-Lincoln. He received his Ed.D. in adult education from the University of Georgia. He is the author of over 50 publications concerning aging.

Vincent J. Webb is a Senior Research Associate at the Center for Applied Urban Research, University of Nebraska at Omaha. He is also an Associate Professor of Criminal Justice and Chair of the Criminal Justice Department at UNO. He holds a Ph.D. from Iowa State University. He specializes in research on criminal justice and social policy issues.