

Approved: 1-25-93
Date

MINUTES OF THE HOUSE COMMITTEE ON ECONOMIC DEVELOPMENT.

The meeting was called to order by Chairperson Wanda Fuller at 3:30 p.m. on January 12, 1993 in Room 423-S of the Capitol.

All members were present except:

Committee staff present: Lynne Holt, Legislative Research Department
Bob Nugent, Revisor of Statutes
Ellie Luthye, Committee Secretary

Conferees appearing before the committee:
Anthony Redwood, Professor, University of Kansas
Lynne Holt, Research Department

The Chair welcomed the guests from the Senate Commerce Committee and introduced the staff to the committee. She then asked each member to introduce themselves and to state which district they represent.

The Chair welcomed Anthony L. Redwood, Professor of Business and Executive Director of the Institute for Public Policy and Business Research from the University of Kansas. Dr. Redwood presented a paper entitled "Review of the Kansas Strategy for Economic Development; the Past, the Present, and the Future".
(Attachment 1)

The Chair next called on Lynne Holt, Principal Analyst, Legislative Research, who presented a memorandum on "Preliminary Observations - German Marshall Fund Trip" and a memorandum listing a brief description of Economic Development agencies in Kansas. (Attachments 2 and 3)

Following these presentations Dr. Redwood and staff stood for questions.

The Chair announced that public hearings on the proposed final statement of community development objectives and projected use of funds for the Kansas Small Cities Community Development Block Grant Program for 1993 would be held at 9:00 a.m., Thursday, January 14th in the Kansas Department of Commerce and Housing conference room, Suite 1300, 700 SW Harrison.

The meeting adjourned at 5:20 p.m.

The next meeting of the House Economic Development Committee will be held on Wednesday, January 13th, 3:30 p.m. in Room 423-S.

GUEST LIST

COMMITTEE: Economic Development DATE: 1-12-93

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REVIEW OF THE KANSAS STRATEGY FOR ECONOMIC DEVELOPMENT

ADOPTED IN 1986

Anthony L. Redwood
Professor of Business, and
Executive Director, Institute for Public Policy
and Business Research,
The University of Kansas

attachments

1. "The Outlook for Kansas Industry in the New Global Context: Change and Adaptation," Kansas Business Review, 16(2), Winter 1992-93.
2. "Review of the Kansas Strategy for Economic Development: the Past, the Present, and the Future," Kansas Business Review, 15/16(4/1), Summer/Fall 1992.
3. Institute for Public Policy and Business Research monograph list.

Presented to the
House and Senate Economic Development Committees
Topeka, Kansas

January 12, 1993

The Outlook for Kansas Industry in the New Global Context: Change and Adaptation

Anthony L. Redwood

Dr. Redwood is a Professor in the School of Business and Executive Director of the Institute for Public Policy and Business Research, University of Kansas.

This article has been adapted from a speech Dr. Redwood gave at the 16th Annual Economic Outlook Conference, at the University of Kansas, on October 16, 1992.

Introduction

To succeed economically in the next decade, Kansas and the nation must become globally competitive. On what must we focus in order to achieve this goal? The answers lies in two words: Change, and Respond.

In our 1986 report underlying the state's economic development strategy,¹ Charles Krider, my colleague in the Institute and the School of Business, and I identified the basic challenge of economic development in this way: "the objective of an economic development strategy is to foster timely adaptation to change and transformation." This objective of change and adaptation needs to be iterated and emphasized again and again, and we must be explicit in explaining what it means.

My theme is that this imperative of change and response applies not only to business but also to the ways we do things in our society that affect economic activity. Indeed, business will not succeed in this challenge unless the environment in which it operates, and the resource base upon which it relies, also change in response to the new world context.

Change and Response

There has always been change and an evolving response to it in our dynamic economy, but now, when we compare this era with earlier ones, we realize that the change is more profound and it is happening faster. Certainly a response of "business as usual, we've always done it that way," is no longer adequate.

Let us remind ourselves of the forces in our environment that are precipitating the change:

1. globalization;
2. rapid technological change;
3. increasing consumer sophistication: a demand for quality;
4. shorter product and process cycles: the notions of incremental improvement and value-added; and
5. rapid diffusion of know-how throughout the world and rapidly improving production capabilities overseas.

We know what these forces are. Why, therefore, are we unresponsive, or responding so slowly, to them? Why do we insist on doing things the "old way," producing the same goods and services we have always manufactured and doing so in the same manner that we did in the past? The challenge we face now is how to produce new products in new ways: ways that will help us be competitive in world markets and at the same time sustain and improve the American standard of living.

What was the "Old Way"?

It was the mass production system that elevated the United States to world economic leadership in this century. Key characteristics included an emphasis on quantity rather than quality, adequate rather than superior quality, sales over

service, hierarchical forms of management, long production and product cycles, and semiskilled labor.

The fundamental dilemma for the United States is that this form of production is no longer cost competitive: it can be copied elsewhere in the world at a fraction of the unit cost. The U.S. no longer has a competitive advantage in this form of production; consequently, the country's industry must move to new forms of production, and develop new products, to the point where it can, in fact, have a competitive advantage.

What is the New Way?

Key characteristics include a focus on quality in process and products, value added and specialized products and services, flexible manufacturing systems, and less hierarchical organizational structures.

Decisions on what, and how, goods and services are produced, are made by industry in the private sector, but these decisions are made within a larger political, social, and economic environment that complicates the process. The effectiveness with which these decisions are implemented is determined by the nature of that environment and the supportiveness of the underpinning infrastructures. Productivity, for example, will depend heavily on the skills of the workforce, innovation will depend on access to new science and technology, investment in new plant and equipment will depend on the tax code, and entrepreneurship of new companies will depend on the availability of appropriate capital.

The Problem

Why are we having such a problem moving to "the new way"? It is, in my view, because our systems of education

and training, science and technology, industrial relations, finance, philosophy of management, law, taxes, and physical and social infrastructure, are rooted in and geared towards supporting the "old" mass production economy rather than the "new" economy. To quote Ray Marshall, labor economist and former Secretary of Labor, "Our country is locked in a time warp, wedded to strategies long since outmoded by events."²

These strategies are not only mis-oriented but downright harmful: they are retarding the ability of U.S. industry to move from the "old way" to the "new way." Hence, just as U.S. industry must change to the new, so must the supporting societal infrastructure. The fundamental task of government, therefore, is to respond by facilitating this change on the part of industry and ensuring that the underlying support systems of economic activity are conducive to competitive success.

Changing and responding to altered circumstances are what economic development is all about, or should be. If it comprises nothing more than tax breaks or subsidies to prop up companies that continue the "old way," nothing will be achieved other than the delay of the inevitable demise of those companies. The real cost will be the misuse of public funds that could have been used to invest in the future infrastructure underlying business activity, such as skill training.

Current Systems—Implications

There are numerous examples of how our current systems that support economic activity are misoriented.

1. Technology

The old way involved designing a product and production process on the basis of known technology, sticking with that process and product with little change, other than cosmetic, for a long period, then making a discrete change in both product and process based on a new standard technology. Most firms were followers, losing little in the process because the long production cycles allowed for ample time to catch up and achieve normal profitability.

The new approach to production involves short product and process cycles. A firm must innovate at the cutting edge and respond to consumer needs quickly in order to survive. The key is incremental improvement, not discrete periodic change.

The implications are that the new way places a high premium on companies that access new technology to underpin ongoing innovation. These are the companies that will be cost competitive over the long term.

Our science and technology system places a great emphasis on basic research, particularly at our major research universities. The fundamental problem is that, in contrast to our competitors, we have very poorly developed mechanisms for commercialization of this basic research, and for the transfer of science and technology from its sources to its potential users in the private sector.

Industry-university interface and collaboration is the exception rather than the norm. Universities conduct research for its own sake and for publication. The private sector, for its part, under-invests in R&D because of its short-term, "bottom line" orientation and only values research which is "relevant," meaning it has an immediate payoff. There is a fundamental inconsistency between these philosophies that is detrimental to future competitiveness.

2. Human Capital

With the old way, business hired semi-skilled labor—drawn from high school dropouts and often barely literate graduates—and trained them to specific tasks on the job. Workers did not have to think or make decisions, only to show up for work and perform their specific, repetitive tasks.

The new way requires an extension of post-high school education to the entire workforce. Workers at all levels must be empowered to think and act for themselves. The production worker must be literate, have reasoning skills, do mental arithmetic, and make decisions.

What are the implications? In the past, it did not matter to industry if high school, non-college bound graduates were

mediocre; therefore, high schools produced them. As job responsibilities were reduced to isolated, repetitive tasks there was no need to train, retrain, or cross-train employees. This task simplification was the demise of vocational and technical training.

The production workers of the future require a blend of formal education to a certifiable competency level, with further on-the-job training. Public expenditure at the post high school level, however, is heavily biased towards higher education than vocational and technical education.³ As for R&D, American employers significantly underinvest in workforce training, with less than 1/2 of 1 percent of all companies accounting for 90 percent of all workplace training in the United States.⁴

Thus, the basic education foundation has grown weak, and investment in skill-upgrading has not been a business priority, because the "old way" did not demand highly skilled labor. In essence, our K-12 system, vocational and technical education, and employer-provided training, are all geared to supply the type of worker needed in the past, not the type of worker needed in the future.

3. Management Philosophy

In the old way, firms were characterized by hierarchical organizational structures that precipitated a "them" versus "us" attitude with respect to management and line workers. Managers directed line workers in the minute, repetitive tasks assigned to them, offering little or no opportunity for input. Firms, as well as individuals and governments, were characterized by individualistic propensities and short-termism.

Now, in the new way, competitive pressures, both domestic and abroad, have required firms to re-evaluate their organizational structures and philosophies. Firms have flattened their organizational structures, incorporated team systems, necessarily pushed decision making down to lower levels in flexible production systems, and formed alliances with other firms, within and across industrial sectors. Labor-management relations are moving from conflict to cooperation.

The implications? Through training, culture, and tradition, American management is immersed in a philosophy and style that has been inconsistent with successful enterprise in the new global context.

4. Business Environment

Business environment encompasses tax policies, legal systems, financial institutions, regulatory controls, and other systems that are influential in improving business competitiveness. While many of these elements are outside the states' jurisdiction (e.g., federal controls of the banking system, macroeconomic policy, federal tax laws), the states do have influence in many crucial areas through tax, spending, and regulatory powers.

The fundamental problem is that most government policies and business practices have evolved on the premise that U.S. industry is operating predominantly in the domestic economy, and doing so with little external competition. Public policy has not adjusted to a new premise that U.S. industry is operating in a global economy, and doing so against stiff external competition. Here are some examples at the national and state levels:

a. Savings: America's overall savings rate is the lowest among industrialized nations largely because we penalize savings and encourage consumption. This low savings level severely limits the amount of money available for investments in R&D, education, infrastructure, and new factories and equipment.⁵

b. Corporate Governance: The responsibility for improving U.S. productivity lies primarily with U.S. industry. Thus, the way firms "govern" themselves is of central importance. As alluded to earlier, U.S. capital markets have encouraged firms to focus on short-term quarterly profits rather than long-term investments. The structure of corporate management and the incentive systems on which compensation is based have magnified the problem.

c. Federal Tax Policy: In a relative sense, long depreciation schedules faced by U.S. firms do not encourage invest-

ment in new domestic plant and equipment. The capital gains tax is a disincentive to the entrepreneurship of startups, and U.S. firms face weak tax incentives for undertaking R&D.

d. Legal System: Most of today's laws were enacted during a period when the U.S. economy was insulated from international competition. Antitrust and related laws have had a chilling effect on private sector partnerships that are a successful feature of business activity in competitor countries. Product liability law is damaging U.S. firm competitiveness in some sectors, including general aviation. National and state legislatures have been unable to reconcile and balance the competing interests of the individual and the commercial entity. With global markets, the legal system must be refined to allow U.S. firms to compete with firms from other countries without undue burdens.

e. State Tax Policy: Institute for Public Policy and Business Research studies show that existing Kansas firms carry a tax burden up to 10 percent higher than firms in other states in the region, the differential being due to the over-reliance in Kansas on taxes that impact businesses, namely corporate income tax and property tax.⁶

f. Industrial Relations: The old system of adversarial industrial relations, developed out of the mass production paradigm, resulted in, and reinforced, the "management vs. union," or "we vs. them" attitudes in the workplace. It is inconsistent with the flexible production systems, teamwork, and other characteristics of the new way to produce.

What must Kansas Do to Compete Within the New Economic Order?

Obviously, states cannot control the external forces that are transforming the world economy, nor do they have the capacity or power to affect all aspects of economic development; e.g. saving and investment rates, financial markets, health care costs, trade. However, they can play a vital role by establishing an optimum foundation, such as tax structure and

physical infrastructure, and key relationships, such as public-private partnerships, that will foster private sector growth and modify existing trends favorably.

The following are several illustrative examples of where Kansas can influence a more competitive business sector in the state by fostering rapid change in the underlying environment and resource base. Each involves significant change over the status quo:

1. Technology

This foundation of economic development is probably the state's greatest weakness, in a U.S. context of diminishing strength globally. It is a primary focus of the state's strategy, through the Kansas Technology Enterprise Corporation (KTEC). Issues to be addressed, shared by most states, include:

a. Science Education. The state must foster a re-emphasis on science and math in K-12, leading to more scientists, engineers, technologists, and technicians graduating from post secondary institutions.

b. Industry-University Interface. New mechanisms need to be developed for much broader university-industry cooperation to enhance technology transfer and application. Firms need to be more proactive in telling universities what they need, universities need to cultivate a more responsive atmosphere, and mechanisms need to be developed to foster this interaction.

c. Technology-Oriented Entrepreneurship. The gestation of startup firms based on science and technology can only occur in an entrepreneurial climate and with a supporting infrastructure that includes incubators, seed and venture capital, management assistance, and synergistic networking.

d. Technical Assistance. Most firms in Kansas are small and geographically disperse. These factors retard timely access to existing technology and its application, a significant vulnerability which must be overcome through technical assistance programs, such as those being developed by the MidAmerica Manufacturing Technical Assistance Center, a subsidiary

of KTEC.

Each of the above constitutes a major change from the past.

2. Human Capital

The education and productivity of the Kansas workforce is our greatest strength, but this is relative in a U.S. context where it is becoming a significant weakness globally. Issues include:

a. *Weak Links Between Public Education and the Private Sector.* Firms must become more involved in conveying to the educational system the type of workforce they need; the education system must be more responsive to this demand and recognize a primary responsibility of preparing youth for the world of work.

b. *Expectations and Standards for Achievement.* Competency levels, and the incentives for meeting them, must be established for students preparing for entry into the workforce at all levels of education.

c. *Adult Training and Retraining.* Education and training institutions are geared to youth, yet there is an increasing gap between the skills of the existing workforce and those needed to compete successfully. This constitutes a monumental challenge that will require a major reorientation of the education and training system as well as a greater responsibility for training on the part of the private sector.

d. *Career preparation.* Vocational and technical education and training has been a "stepchild" in status, quality, and funding, relative to K-12 and higher education. It needs to be reorganized into a seamless system that will provide the broadest opportunities for workforce preparation for those (70 percent) who will not become university graduates.

3. Management and Business

Philosophy

Just as large U.S. firms must change their management approach, so must small and medium-sized firms, the backbone of the Kansas economy. The question is: How can this transition be effected? Suggestions include:

a. Kansas firms, within and across industrial sectors, need to come together to address mutual challenges and let government know how it can help.

b. Private and public organizations across communities need to form regional alliances for effective initiatives in areas such as tourism, education, and telecommunications.

c. State universities need to develop a response to the pressing need for management education of existing managers throughout the state.

4. Business Environment

In 1985 the state made the strategic choice to focus on business startups and existing industry rather than rely on incentives to attract firms from outside. One objective was to have a tax structure that would neutralize tax as a factor in business location. After six years of significant tax changes, Kansas has ended up with a relatively high tax burden on existing industry, and preferential tax treatment for newly attracted firms. The tax code needs to be revisited from a business development perspective.

Conclusion

For the past 10 years, American industry has been severely criticized, even ridiculed, for not changing, or for being too slow in changing, its practices in re-

sponse to the new global environment. But remember, American firms operate within a particular domestic context and infrastructure, which can be supportive or harmful, and they draw upon a domestic resource base—such as labor and technology—which can be adequate or deficient. For the "old way," the environment and resources were supportive and adequate. For the "new way," they are harmful and lacking. If Kansas wants its industry to be competitive in the new economy, it has to make the necessary changes in the supporting infrastructure and resource base. Given resistance to change, this constitutes a monumental challenge. This is what economic development is all about.

Acknowledgements

The author very much appreciates the assistance of Stacie Cooper, Jennifer Keil, and Thelma Helyar in the preparation of this article.

Notes

1. Anthony L. Redwood and Charles Krider, *Kansas Economic Development Study: Findings, Strategy and Recommendations. Executive Report*, Report No. 108 (Lawrence, KS: Institute for Public Policy and Business Research, University of Kansas, June 1986).
2. Marshall, Ray, "The Future of Government in Industrial Relations," *Industrial Relations*, 31, No.1, 1992, pp. 31-49.
3. Thurow, Lester, *Head to Head: the Coming Economic Battle Among Japan, Europe, and America*, New York: Morrow, 1992.
4. Marshall, p. 42.
5. *Challenges*, Council on Competitiveness, Nov. 1991, p.3.
6. Pat Oslund, *Costs and Taxes in Selected Kansas Industries: 1992 Update* (Topeka, KS: Kansas Inc., 1992).

Review of the Kansas Strategy for Economic Development: The Past, the Present, the Future

Anthony L. Redwood

Dr. Redwood is Professor of Business in the School of Business and Executive Director, Institute for Public Policy and Business Research, University of Kansas.

This is the text of a speech presented to the Kansas Inc. Strategic Planning Committee in the Adams Alumni Center, Lawrence, Kansas August 21, 1992.

The purpose of this presentation is to review the Kansas Economic Development Strategy from the perspective of the past, the present and, most important of all, the future. These three dimensions are of course interwoven and sequential. We are all captives of our past, so the future will evolve out of, and depend upon, where we are today and how we got here.

My own view is that we have established a very sound foundation upon which to build for the future. This foundation was laid down in 1986, in the form of a basic philosophy, a basic strategy, key organizational arrangements, and key programmatic initiatives.¹ It has evolved over the last six years through the lead-

The strategy adopted in 1986... was a radical change from, indeed reversal of, the previous Kansas strategy, characterized as "smokestack chasing" through incentives.

ership of Kansas Inc. in a systematic, building-block fashion to where we are today.

Some of you will remember that the strategy adopted in 1986, which I would characterize as an "investment in the fundamentals" approach, was a radical change from, indeed reversal of, the previous Kansas strategy, characterized as "smokestack chasing" through incentives. That strategy was obviously not working. As a generalization, I can say that it never does in the long run, although it can help in the short run if one has enough resources to commit to both incentives and investment in the fundamentals. Most states do not have such resources, and we certainly do not in Kansas.

This was the most significant strategic recommendation that we made in 1986. It is illustrative of the strategic choices that you will need to revisit in your deliberations. We at the University, particularly Charles Krider and I, are excited to have the opportunity to work with the Kansas Inc. Strategic Planning Committee in undertaking this challenging task.

This review of the Kansas strategy is timely, and it is crucial. We need to evolve our thinking in a rapidly changing world. We need to clarify and prioritize our strategy on the basis of where we are today, where the rest of the world is today and will be tomorrow, and where we want to be tomorrow.

Let me address these dimensions through two basic questions:

1. What is the Kansas strategy for economic development, and where are we with its implementation?
2. What are some of the particular challenges and problems that our future strategy needs to focus upon in this review?

Basic Research Findings of the 1985/86 Study

As you will be doing, we looked at strengths, weaknesses, opportunities, and threats, in our comprehensive study of Kansas and its external environment. Think about these relative to today's context.

The Kansas Economy and Key Environmental Considerations

Our basic findings were:

1. The Kansas economic structure was dominated by mature, and sometimes declining sectors, and under-represented with growth sectors.

2. The Kansas economy, inescapably a part of the interdependent world economy, was facing the following, major environmental trends:

- increasing global competitiveness;
- rapid technological change;
- growth in the service sector, particularly in the evolution of information transfer technology;
- increasing consumer sophistication worldwide in product demand; and
- shrinking product and process cycles.

These trends embody forces that were harmful to our traditional industrial base (agriculture, oil and gas, manufacturing), and we were slow and reactive in dealing with them, which is why we were hit so hard in the 1980-82 recession. In essence, we were in a "new" ball game, with new techniques and conditions, but we were still oriented towards the "old" game with an old approach.

3. A continuation of existing trends, unabated, would result in an on-going and relative erosion of the state's tax base and economic well-being.

4. In essence, the state's economic per-

In essence, the state's economic performance was clearly vulnerable to both short-term business cycles, and long-term structural forces—a double "whammy" if you will.

formance was clearly vulnerable to both short-term business cycles, and long-term structural forces—a double "whammy" if you will.

5. The existing Kansas economic foundation was dominated by industries suited to the state's environment and, as such, based on comparative advantage. The existing industry in Kansas was here because it was suited to Kansas conditions.

6. The majority of Kansas business development has historically evolved from within, rather than been attracted from outside.

7. The Kansas economic structure was dominated by small and medium-sized firms throughout the state.

Strengths of Kansas with Respect to Business Development (1985-86)

Let me mention the most important:

1. Sound diversity of economic base: the three legs to the Kansas economic stool (agriculture, oil and gas, and manufacturing), with an evolving fourth leg—namely, the business export services sector, largely located in Johnson County.

2. Above average education, particularly K-12 and higher education.

3. Significantly higher work force production than the national average.

4. Sound fiscal management in state and local government.

5. Average or below average costs of production for business.

6. Above average entrepreneurial environment: historically for small business start-ups.

Weaknesses of Kansas with Respect to Business Development (1985/86).

The following appeared to be the most significant:

1. Inadequate investment in R&D by small and medium-sized Kansas firms, and significant barriers to technology transfer and innovation due to the dominance of smaller businesses in Kansas industry and to non-existent industry-university interface.

2. Major impediments in the state tax structure, including:

- sales tax on plant and equipment
- property tax on inventories
- problems with the corporate tax computation.

3. Lack of most forms of financial capital, but particularly:

- seed capital
- venture capital
- export finance.

4. Poor links between government, business, and universities: "everybody was doing their own thing".

5. Inadequate funding and narrow focus in the state's economic development effort.

6. Weak self image, and relatively neutral image externally.

7. Conservatism in business and government.

8. Distant location from major markets.

9. Deteriorating physical infrastructure; e.g. roads.

10. Lack of emphasis and funding for vocational and technical education, the "step-child" of the Kansas education system.

The Kansas Strategy Adopted in 1986

Vision

Taking all these factors into account, namely:

- 1. the external economic environment,
- 2. the Kansas economic structure, and
- 3. the state's strengths and weaknesses in relation to the three forms of business development, which are, of course, retention/expansion, creation, and attraction,

The most successful economic development strategies have been driven by public/private partnership.

we recognized that the only realistic vision for a future Kansas economy was one that would evolve out of, and be based upon, the existing structure.

Implicitly then, the vision was of a Kansas economy and society that would evolve out of what we had then, by responding to the world around us, but doing it so as to retain the character, culture, and way of life, if you will, of what is "Kansas".

Goals and Objectives

The goal was clearly understood to be to restore and sustain Kansas economic well-being to a level equal to, and hopefully better than, the rest of the United States.

The specific objectives were to bring Kansas employment and income growth rates first, up to US averages on a consistent basis in 5 years, and second, above the national averages on a consistent basis in the 1990s.

Guiding Principles

Given this vision, goal, and objectives, we recommended the following guiding principles:

1. The state strategy should be tailored to the specific conditions of Kansas.

2. The principal engine of economic growth is the private sector operating in the competitive market.

3. The state does not have the capacity to control many of the impacting forces, but it can:

- identify what it is able to influence effectively,
- establish the preconditions and basis for an effective response,
- foster and facilitate adaptation to change, and

- provide leadership and coordination of a total effort.

4. State resources are limited, and must be used effectively for maximum impact; therefore, state funds should leverage a broader resource commitment and be allocated on the basis of best return per dollar expended.

5. The strategy must be responsive to the geographic diversity, and local community basis, in Kansas.

6. The most successful economic development strategies have been driven by public/private partnerships.

Strategic Choices

The key strategic choices that were recommended and adopted in 1986 were:

1. *Attraction vs. Creation/Retention.* Should Kansas target a certain form of business development, such as attraction, or should we have a more balanced focus?

We contended that the optimum approach would be one of a balanced focus on:

- encouraging the development of new Kansas start-ups from within, through establishing entrepreneurial conditions and climate,
- fostering the retention and expansion of existing Kansas industry by enhancing its long term competitiveness, and
- attracting new industry to the state on the basis of a favorable business climate and favorable production conditions.

This optimum approach would be done through a set of carefully selected initiatives aimed at removing the barriers, minimizing the weaknesses, and building on the strengths that underlie the three forms of business development.

Our existing economic structure is better diversified than most states and, despite its maturity, has distinct potential.

Key considerations in making this choice included:

- attraction was not working, partly due to the fact that there were fewer "buffalo-les" to catch;

- Kansas resources were too limited to "compete" successfully with other states in attracting industry;

- entrepreneurship and growth within had been successful in Kansas;

- Kansas needed to pursue all feasible forms of business development, in contrast to "putting all the eggs into one basket"; and

- industry attracted "today" is gone "tomorrow" unless the long term business fundamentals are sound enough to sustain competitiveness when the subsidies are removed.

2. *Incentives vs. Investment in the Fundamentals.* Which of these basic alternatives is more effective in fostering economic development?

The incentives approach, which includes tax breaks, subsidies, financial assistance, and the like, has the advantage of securing short term visible results. However, major disadvantages include:

- it focuses on attraction, the state's weakest card in business development;
- it diverts available resources from enhancing strengths and minimizing weaknesses; and

- total funds available for incentives are often not sufficient to make a significant impact, so the return can be low.

The investment in the fundamentals approach focuses on enhancing strengths and minimizing weaknesses to heighten and sustain long term growth.

It emphasizes business formation based on start-ups and the expansion of existing industry: the more successful modes in Kansas. In the long term, Kansas industry will survive and be profitable only if it is globally competitive. This will occur only if fundamental business conditions and environment are sound.

The disadvantage of the investment approach is that it requires political patience and fortitude, as results are long term. Taking a long term view is not a distinguishing characteristic of American life.

3. *Develop a New Economic Structure or Build on the Old?* The existing Kansas economic foundation is based on a natural comparative advantage. To abandon the existing foundation for a substitute economy based on an artificial comparative advantage, undoubtedly induced by an incentives approach, would be too expensive and risky. Our existing economic structure is better diversified than most states and, despite its maturity, has distinct potential. Building upon the existing structure is the only viable option to the state.

4. *Target Some "Winners" or Have a Broad-Based Strategy?* The scope for targeting could include rural over urban, manufacturing over agriculture or business services, certain manufacturing sectors over others, or certain science/technology sectors.

While a sound case may be made today for some targeting, the basis for doing so, including expected resources for economic development initiatives, was not evident at the time of initial strategy development; therefore, the state adopted an economic development strategy based on a broad-based investment in the fundamentals.

The Key Elements of the Investment Strategy

1. State resources are strategically invested in seven foundations underpinning business development, namely:

- Human capital
- Financial capital
- Technology development
- Infrastructure (eg., physical, telecommunications)
- Capacity capital (eg., organization, networking)
- Business environment (eg., tax structure, business support)
- Quality of life

In the investment approach, the objective is to neutralize tax and incentives as factors affecting business development, and to compete and foster growth on the basis of non-tax factors.

There will be strengths and there will be weaknesses in each foundation that will enhance and retard each form of

Kansas has approached economic development in a strategic way. We are one of the first states to do so, and our approach has been widely acclaimed and emulated.

business development. For example, in relation to business start-ups, there are significant shortages of certain forms of financial capital, such as seed and venture capital, without which entrepreneurship will not thrive. In relation to existing industry, the tax burden has been high relative to the region.

The allocation of state resources should reflect the strategic priorities among the foundations. These have been shifting over time towards technology development, a significant weakness; human capital, a significant (but vulnerable) strength; and towards programs with the potential for a higher return, such as export support and trade promotion.

2. A key task of the state is to allocate resources across those foundations in such a way as to maximize the three forms of business development, which has been done through systematic implementation of programs or initiatives (Appendix A). In one way or another, most of the initiatives represent responses to identified weaknesses in our business sector.

3. Another key task of the state is to nurture interrelationships between key economic development and related institutions in the state (local government, business, higher education, other representative groups, and so on) to achieve a synergism of commitment, effort, and activity across those foundations and to facilitate innovation and adaptation to change. The concept here is one of networking, coordinating, and leveraging to achieve the common economic development vision.

The Kansas Strategy Today

Implementation of the strategy has proceeded for six years. Let me identify several key accomplishments and distinguishing characteristics underlying progress over this period.

1. Kansas has approached economic development in a strategic way. We are one of the first states to do so, and our approach has been widely acclaimed and emulated.

2. We recognized in 1986 that what was adopted then and legislated into place over a three year period was simply a start. Strategic planning is not a one-shot effort, but rather a dynamic process of continuous review, evaluation, and evolution. This challenge was handed to Kansas Inc., a public-private partnership that has successfully led the evolution since. We at the Institute have hopefully helped this process through our research on social and economic conditions of Kansas, which underpins informed decision making.

3. A comprehensive, sound strategy is in place. It is research based and tailored to the specific conditions of Kansas and is subjected to continuous direction, updating, coordination, monitoring and review by Kansas Inc. and the standing Economic Development Committees of the Kansas Legislature.

4. Implementation has proceeded systematically, particularly since the availability of lottery monies in 1987/88. After careful legislative review, a significant number of programs have been initiated and implemented. All core programs have been consolidated within the Kansas Department of Commerce (KDOC), with the exception of those relating to technology, which are driven by our other public-private partnership, Kansas Technology Enterprise Corporation (KTEC).

Let me stress that this is not an eclectic set of unrelated or barely related programs. Each initiative has been considered within the framework of the strategy. Each program has a purpose and is integrated into the broader strategy. Some programs have been more effective than others, but as a set they have been increasingly effective over time.

Based on the foundation we have developed, what is needed now is to elevate economic development in Kansas to a new level.

5. Funding for economic development programs has increased steadily since 1986, particularly since gaming funds dedicated to economic development started to become available in 1988. Frankly, the funding level is clearly inadequate, but by and large it is being used effectively.

6. The economic development strategy has enjoyed bipartisan political support, both legislative and executive, from the start. This is perhaps the key element of success to date. The commitment of the legislative leadership and other key legislators from both parties, best illustrated by service on the Kansas Inc., KTEC, and the Mid-America Manufacturing Technology Center (MAMTC) Boards, has been unwavering. I would also identify the key role of the standing legislative committees dedicated to economic development.

7. Furthermore I believe, on the basis of comparison with other states, that our institutional arrangements have been a key factor underlying the progress that has been achieved. The key here has been the public-private partnership concept.

Business and community confidence and the overall climate for business development have improved significantly in Kansas since 1986. There is a clearer recognition by Kansans that the future lies largely in our own hands. In relation to the goals and objectives, indicators of state economic performance suggest that the Kansas economy has reached US averages for employment and income growth, the first objective of the strategy. Indeed, we are tending to out-perform surrounding states and the nation.

The key foundations of business development in the 1990s will be human capital and technology development for innovation.

Where Do We Go From Here: The Future?

Obviously, we have accomplished a great deal in the last six years, and we have developed a solid foundation upon which to build. This has been confirmed by a variety of sources including the 1991 Peer Review of the state's investment strategy and its progress, conducted by a panel of nationally recognized economic development experts; the National Association of State Development Agencies review of KTEC; and the Kansas Inc. evaluation of programs within KDOC.

The whole purpose in establishing Kansas Inc. was to ensure an ongoing and continuous process of strategic planning for economic development. Based on the foundation we have developed, what is needed now is to elevate economic development in Kansas to a new level. The first step in this challenge is to review and further define the state's vision, goals, and objectives, based upon what we know today. Kansas Inc. has presented this committee with excellent suggestions of specific goals and objectives developed via the regional planning workshops and the Kansas Vision Congress.

The next step is to reach a consensus on these goals and benchmarks based on the current strengths, weaknesses, opportunities, and threats facing Kansas, identified by the numerous research projects underpinning this process. Key strategic considerations or guiding principles should also be revisited and defined. Once this has been accomplished, the next step will be to formulate the Kansas strategy

of the 1990s to achieve these goals and objectives. This is our challenge.

Let me again characterize the underlying problem we are facing. It is that our education and training system, science and technology system, industrial relations system, financial system, philosophy of management, legal system, tax code, infrastructure, etc., are rooted in, and geared towards, supporting the mass production economy that elevated the US to world economic leadership for this century.

Unfortunately, this mass production economy is quickly becoming anachronistic because of the changing technology, globalization, and other key environmental factors identified earlier. Economic viability in the future will depend on new forms of production of goods and services, and on major changes in the underpinning systems, such as education. The task of the state is to adapt and change these underpinning and support systems in order to enhance the competitiveness of its business sector.

In formulating our strategy for the 1990s you might keep the following considerations, in some instances imperatives, at the forefront.

1. Third Wave Clusters

Kansas industry needs to come together to address sector challenges and tell the state where it can help. Kansas communities need to form regional alliances for effective initiatives in areas such as tourism, education, and telecommunications. The question is clear: how can we form such effective relationships?

2. Targeting

Given limited resources, would the return (economic and social) to the state's investment in economic development be enhanced by more targeting in the following areas:

- business sectors with the largest presence and comparative advantage in Kansas;
- small and medium-sized firms, the backbone of the Kansas economy; and
- business development in the non-metropolitan areas, where the potential for economic viability is less, but the social return is more?

3. Priorities

The key foundations of business development in the 1990s will be human capital and technology development for innovation. The education and productivity of the Kansas work force is our greatest strength, but this is relative in a US context where it is becoming a significant weakness globally. Science and technology are probably our greatest weaknesses in Kansas, in a US context of strength (albeit a diminishing one) globally. Neither can be ignored. Both must be challenged with a boldness and commitment that is not yet evident in Kansas, despite some significant successes in technology.

4. Business Environment

In making the strategic choice of an investment-over-incentives strategy, and a focus on start-ups and retention/expansion, the objective was to have a tax structure that would neutralize the tax issue as a business location factor. Instead, we would compete on the basis of business fundamentals, such as an educated, productive work force.

After six years of significant tax changes, we have ended up with a relatively high tax burden on existing industry, and favorable treatment for newly-attracted firms. The changes have created a bias in favor of attraction over retention/expansion.

5. Funding and Commitment

Funding is limited, being barely at a threshold level for impact, placing effectiveness and leveraging at a premium: these criteria need to be elevated even more in program management and accountability. Our few dollars must be stretched and they must be prioritized.

Finally, for those of you, including all the legislators here, who have struggled for six years in this area, I have to say that the hardest challenges lie ahead, not behind. We need a renewed commitment from you, and from many others, and in particular, from the private sector, to meet these challenges.

Most of all, we need from all of you involved in this strategic planning review, foresight, boldness, and determination.

Appendix A
Kansas Economic Development Programs:
By Key Foundation and Focus of Business Development (1986-1991)

FOUNDATION

**FOCUS OF BUSINESS
DEVELOPMENT**

**Attract Expand/
 Retain Create**

Human Capital

1. Margin of Excellence
2. Educational Excellence Program
3. Industrial Training Program
4. Industrial Retraining Program
5. Job Training Partnership Act
6. State of Kansas Investments in Lifelong Learning (SKILL)
7. Kansas Technology, Innovation and Internship Program

(X)	X
(X)	X
X	
	X
	X
X	
	X

Infrastructure Capital

1. Loan Partnership Fund
2. State Highway Program
3. State Water Plan
4. Recreation/water Projects

(X)	X
(X)	X
(X)	X
(X)	X

Financial Capital

1. Kansas Venture Capital, Inc.
2. Community Venture Capital Tax Credit
3. Community Seed Capital Tax Credit
4. Seed Capital-Ad Astra Fund
5. Export Finance Program
6. Basic Enterprise Loan Program
7. KFDA Industrial Development Revenue Bond Program
8. Certified Development Companies
9. Community Development Block Grants
10. Trade Show Assistance Program
11. Interstate Banking

		X
		X
		X
		X
	X	
	X	
	X	
	X	
	X	
	X	
(X)	X	

Innovation/Technology Capital

1. Centers of Excellence
2. Value Added Agriculture Center
3. Industrial Liaison Program
4. Applied Research Matching Grants Program
5. SBIR Matching Grants
6. Training Equipment Grants
7. R & D Tax Credit
8. Industrial Liaison Offices
9. Mid-America Manufacturing Technology Center (MAMTC)

		X
	X	(X)
	X	
	X	
	(X)	X
	X	
	X	
	X	
	X	(X)

Appendix A (con'd)

FOUNDATION

FOCUS OF BUSINESS DEVELOPMENT

	Attract	Expand/ Retain	Create
Commitment/Capacity Capital			
1. Kansas Inc	X	X	X
2. Kansas Technology Enterprise Corporation	X	X	X
3. Kansas Department of Commerce	X	X	X
4. Board of Agriculture Marketing Program		X	
5. Legislative Economic Development Committees	X	X	X
6. IPPBR/Ks. Inc. Strategic Database	X	X	X
7. Small Business Development Centers		X	(X)
8. Main Street Program		X	
9. Community Strategic Planning Program		X	(X)
10. Rural Assistance Center		X	(X)
11. Huck Boyd Institute for Rural Development		X	
Business Environment			
1. Manufacturing Mach/Equip. Sales Tax Exemption	X	X	
2. Farm Mach. Sales Tax Exemption		X	
3. Inventory Property Tax Exemption		X	
4. Property Tax Abatements		X	(X)
5. Corporate Tax Reform		X	
6. Enterprise Zone Program		X	(X)
7. Existing Industry Division-(KDOC) programs		X	
8. International Trade Division-(KDOC) programs		X	
9. Industrial Development Division-(KDOC) programs	X		
10. Trade Development Division-(KDOC) programs		X	
11. Travel and Tourism Division-(KDOC) programs		X	(X)
Quality of Life			
1. Kansas Arts Commission	(X)	X	
2. Joint Comm. on Arts & Culture	(X)	X	
3. Center for Historical Research	(X)	X	
4. Waste Reduction, Recycling & Market Development Program	(X)	X	

* secondary focus denoted by (X)

Notes

1. Anthony Redwood and Charles Krider, *Executive Report, Kansas Economic Development Study: Findings, Strategy, and Recommendations*, Report No. 108. Lawrence, KS: Institute for Public Policy and Business Research, June, 1986.

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- ***** The following ten reports are based on the *Business Retention and Expansion Study of Ten Mid-Size Kansas Communities* (Report No. 137); Charles Krider, Steven Maynard-Moody, Helga Upmeier, Don Eskew, Andrew Hiss, Byeong-Hee Choi and Kellie Farran.
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MEMORANDUM

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December 1, 1992

To: Joint Committee on Economic Development
From: Lynne Holt, Principal Analyst
Re: Preliminary Observations -- German Marshall Fund Trip

Background

For a two-week period (November 7-November 21) Senator Dave Kerr and I took part in a study trip to three countries -- Denmark, Germany, and Italy -- funded by a German Marshall Fund grant under the auspices of the National Conference of State Legislatures. A delegation of 12 legislators and staff from six states (Kansas, Colorado, Connecticut, Wisconsin, Ohio, and Kentucky), accompanied by a consultant and an NCSL staff member (Dan Pilcher), examined the strategies used in those countries to educate and train workers and to assist small and medium-sized firms. Such assistance involves the encouragement of business networks or partnerships, public sector leveraging, export assistance, applied research and technology transfer activities, and other forms of technical assistance. Whereas the review of Denmark's services focused predominantly (but not exclusively) on national efforts, the review of Germany's and Italy's services focused primarily on the regional efforts of Baden-Wuerttemberg and Emilia Romagna, respectively. The main objective of this trip was to acquire information about European training systems and business assistance policies and practices, in order to apply, where practicable, such information to the development of state policies aimed at increasing business competitiveness.

This memorandum outlines a few salient features of each country's approach to workforce training and business assistance. To that end, several observations are made about the similarities of, and the differences between, European approaches and the typical model of the United States. The final report will outline several ideas for modifying Kansas' economic development policies to incorporate certain successful features of the European models.

Prior to addressing the training and business assistance efforts of Denmark, Germany, and Italy, respectively, I might note that at least six major differences appear to exist between these countries and the United States (other differences are to be discussed further below). An initial understanding of those differences is useful to place the information provided below in context.

1. In contrast to the United States, all three countries appear to have some sort of national industrial policy, about which there exists considerable consensus among

January 12, 1993
Economic Development
Attachment 2

the public and private sectors, trade associations, chambers of commerce, and other relevant parties. The exact nature of the policy and degree of consensus varies among the three countries, but in each country it is certainly greater than what is found in the United States.

2. Each of the countries has adopted a "holistic" approach to improving its economic competitiveness. Most activities concerning workforce training and business assistance are viewed from a systemic perspective as being inextricably connected.
3. Each country appears to place greater emphasis on trying to meet the needs of the market (demand) than on trying to meet the needs of the individual worker (supply). This is in contrast to the United States where investments in supply do not necessarily correspond to actual and projected market demand.
4. Related to the second and third points, European strategies tend to emphasize the ultimate self-sufficiency of a business and workers as an overriding objective. This implies that investments in and assistance to businesses and their employees generally are directed to a greater extent to meeting long-term goals, and strategies to that end are more multifaceted in the three countries than is typical in the United States.
5. There is a much greater political awareness in Europe than in the United States that certain social and economic conditions must exist to ensure a country's enduring global competitiveness. Because of their smaller size, participation in the European Community, and intense reliance on exports, European countries have been much quicker than the United States in realizing the need for changing their strategies to guarantee a highly skilled workforce and high-quality products and processes from small and medium-sized businesses.
6. In each European country, to varying degrees, there is a belief that the public sector is most effective when it leverages money, facilitates economic development activities, and requires active private sector and trade association participation in developing and providing services. Because the intent is to meet market needs (see No. 3), the governments of these countries realize that the effectiveness of services must be dictated by the needs of those entities most closely attuned to changes in private sector demand. Although American states have begun to change their attitudes toward the most effective role of the public sector in encouraging economic growth, there are still many state economic development programs that are unilaterally offered on a grant basis with little or no connection to actual business demand.

Workforce Training

Denmark and Germany both place considerable focus on the training of skilled workers and there are many programs and services to upgrade workers' skills and provide a transition from school to the workplace. Both countries rely on apprenticeship programs to ease that transition. Visits in Denmark to the Ministry of Education and vocational school in the county of Storstrom, as well as visits in Germany to a regional vocational training center near Stuttgart and to training facilities in the Siemens Corporation proved to be instructive. Less information was available to the

delegation about Italy's workforce training systems, although a few comments are furnished below. The final report will incorporate available published research on Italy's systems.

Denmark. Until 1991, Denmark had essentially two training programs -- apprenticeships and basic vocation training (Erversfaglige Grunduddannelser or EFG) -- for students making the transition from school to the workplace. In 1991, the vocational training system was reformed to replace these two programs with a system which combined EFG, apprenticeships, and technician courses, focusing on broadly-based qualifications and individual specializations. Training for approximately 85 trades is currently offered. Students must enroll in school alternating with periods of practical training in a business (described as a sandwich structure). A typical technical course takes four years and includes 80 weeks of school. A typical commercial course takes three years and includes 46 weeks in school. For students with a training agreement at the outset, cumulative schooling is condensed. The theoretical component of the course includes basic subjects, more specialized subjects, area subjects which characterize a vocational field, and optional subjects. Vocational education and training for young people is financed entirely by the government. For part-time students, the government pays 90 percent. Schools are given block grants based on student enrollments. Trade committees, consisting of representatives in various trades from businesses and the Ministry of Education, are responsible for innovation and course development. Although the curriculum is developed locally, there are national standards to determine the successful conclusion for apprenticeship.

There are other types of training programs available to adults who want to upgrade their skills. Of central importance is the AMU system, which is largely aimed at transforming semi-skilled workers into skilled workers. There are 25 AMU centers -- both public and private. The curriculum consists of modular courses lasting one to three weeks, followed by job experience, and then by additional courses. Courses must meet the actual needs of businesses. AMU training is funded 50 percent by the user and 50 percent by a fund to which each Danish citizen and business must contribute. The Danish Labor Market Authority is responsible for AMU-center activities. Finally, for the chronically unemployed, the Ministry of Culture provides a production school system with nonstructuralized, practical training in such areas as catering, woodworking, and tourism.

The panoply of Danish training systems, in conjunction with other types of support, enables companies to hire and fire employees with little notice. Thus, the systems allow for responsiveness to rapid changes in business demand, while facilitating the movement of workers among distinct activities.

Germany. In Germany, a dual system of training forms the cornerstone of vocational training. Young people in vocational training begin their careers at the workplace or at school. They receive their training at a factory, workshop, laboratory, office, or shop. At the same time, they attend a part-time vocational school for one or two days per week. Training only commences after a contract between the employing firm and the trainee has been concluded. Approximately 70 percent of all young people leave full-time secondary school for the dual system. The majority of young people enter the system after nine or ten years of general education (at age 16 or 17). However, there is no entry restriction and people may enter the system after completion of high school or later. Training generally averages three and a half years. The first year is devoted to training useful for all vocational occupations. The second year provides some differentiation in training courses and the last one and a half years are devoted to specialization in a particular vocation. There are 380 training occupations covering almost all economic sectors. Costs are borne

by firms which, on a voluntary basis, pay considerably more than 50 billion DM annually for vocational training. Government subsidies are provided only for complementary training courses for trainees in small firms or for certain disadvantaged young people who need pre-vocational support.

In addition to the dual system, continuing vocational training is greatly encouraged. For example, at Siemens 30 percent of the workforce gets continuing training, which is paid for by the employer. Continuing training is mostly designed to meet regional and business needs. It is provided by many suppliers, such as firms, associations, and schools. Retraining is the last resort available to the employee who is unable to find a job in his or her trained occupation. Retraining generally takes two years and is provided in firms or inter-firm centers.

The Federal Ministry for Education is responsible for policy formulation and coordination of vocational training efforts. It receives recommendations from the Federal Institute for Vocational Education, which has representatives from businesses, trade unions, and regional and federal government. At the regional, state, and federal levels, vocational training committees with representatives from business and unions cooperate with representatives from federal and state agencies concerning the provision of vocational education. Chambers of commerce also participate actively in vocational training. An official at the Stuttgart Area Chamber of Commerce explained to the delegation that the Chamber approves all contracts between companies and apprentices, monitors company compliance with training regulations, and administers mid-term and final exams to 35,000 apprentices in the region. Chambers also cooperate in the development of vocational training curricula, and support pilot projects on training.

Italy. Unlike Denmark and Germany, Italy tends to prefer job training agreements to apprenticeships (although the latter apparently is offered to a far lesser extent). With job agreements, the trainee does not have a contract with a firm as a precondition for training. Apparently, Italian law favors such agreements and there is less of a financial burden placed on firms than is the case with apprenticeships. There are 30 public vocational institutions operated by municipalities, as well as approximately 270 private vocational institutions. Both types of institutions receive public support. Most young people acquire job specialization through a one-year vocational course. In Italy the regional councils are responsible for vocational training, including various types of preparatory and in-service vocational training.

Training is also provided for different purposes. For example, the European Social Fund financed by the European Community supports persons in Emilia Romagna who have been unemployed for a long time and people who have never worked. Priority in this Fund is given to women, handicapped persons, and immigrants. Chambers of commerce likewise offer training programs, such as training for skilled operators, skilled workers in small businesses, and managers in large businesses. Moreover, regional experimental projects are offered in Emilia Romagna. These projects focus on specific areas, such as training for employees in total quality control, or in building conservation and restoration. Experimental projects are generally restricted to two-year periods.

Preliminary Observations About European Training Models

1. Perhaps the most striking feature of European vocational training in the European countries under consideration is that these training services are really comprehensive systems that attempt to address workforce needs at every critical stage ranging from the chronically unemployed to upper management echelons. The Danish and German systems (insufficient information was available on the

Italian system) particularly stress the need for life-long learning and continuing investments in human resources. In fact, vocational training is provided in each country in anticipation of demand for certain skills in the future. Curricula are constantly being modified to respond to shifts in industrial needs.

By contrast, in the United States, vocational training does not attempt, for the most part, to integrate theory with practice. There is little emphasis on life-long learning, nor is there training offered in anticipation of projected market demands. What training exists is offered predominantly to managers and higher-skilled workers. In particular, employees in small businesses are least likely to take advantage of training opportunities. Small businesses often lack the necessary resources to provide training and retraining and, with some exceptions, there is no system in place to address these needs.

2. In Europe, training programs and "know how" are considered exportable commodities. For example, the Danish system encourages the development of courses by private companies in the former East Bloc countries. Another example is the implementation of apprenticeship programs through multi-national corporations, such as Siemens. These programs can be found in Siemens corporations in England, Spain, and Austria. Making the export of training programs a priority might be one area in which American states could have some effect.
3. The prevalent philosophy in Denmark and Germany is that it is imperative that sustained investments are made by society in imparting basic skills to workers. Once those skills are developed, a solid foundation exists for many distinct vocations and a person can be trained and retrained in several specialties, if need be, during a lifetime of work. These countries have realized that they must compete globally on the basis of value-added production, and value-added production is predicated upon a skilled workforce. Basic skill acquisition is considered a primary responsibility of government. Moreover, there appears to be consensus, at least in Germany, that conceptual and social skills are more important to impart to students as a basic foundation for work than are particular technical skills. The reason is that technical skills become obsolete more rapidly than do the other two types of skills. Although there appears to be a widespread realization about the importance of basic skills in the United States, the fact that approximately 20 percent (or more) of the workforce is functionally illiterate suggests that much of that realization has yet to be translated into action.
4. An overriding assumption is that specialized training in European countries is ultimately the responsibility of the employer, not government. Therefore, businesses, with representation from trade unions and trade associations, consider it in their best interest to reach consensus and participate actively in the development of standards and curricula, and in funding training programs. In the United States, many businesses, particularly the smaller ones, have not yet realized that they must be part of the training solution. Moreover, there is often little consensus among businesses, education and trade associations and unions, and the public sector on the necessary prerequisites for a skilled workforce. This lack of consensus is in part due to the fact that in the United States most

educational policy decisions are made at the subnational level. Moreover, relationships among government, the private sector, and trade unions have historically been characterized by mistrust and antagonism, although this appears to be slowly changing.

5. Each European country the delegation visited supports the development of a national set of standards, ongoing evaluation of skill acquisition, and uniform testing. When a student has completed an apprenticeship program or other form of vocational training, the employer usually knows what to expect in terms of skill proficiencies. In the United States, there is generally no way to ensure the job-readiness of any student for a specific vocation.
6. In Europe far fewer students attend a university and there is considerable interest on the part of government for the vast majority of students to acquire more applied skills to meet projected industrial needs. As in the United States, university education in Europe is considered a more prestigious alternative to vocational training but the mismatch in Europe between existing higher-order workforce skills and jobs that require such skills is not as great. Denmark and Germany have historically relied on "guest" workers from less developed countries to take jobs involving few or no specialized skills.

Business Assistance

Business assistance programs in Denmark, Baden-Wuerttemberg, and Emilia Romagna are largely targeted to small and medium-sized businesses. Two-thirds of all businesses in Baden-Wuerttemberg employ fewer than five persons and almost one-third employ between five and 49 persons. Only 2 percent employ more than 50 persons. In Denmark, almost all of the 10,000 firms in the country are considered to be small. The largest company in Denmark employs only 6,000 people. In Emilia Romagna, the average manufacturing firm employs six workers. Each country has its own approach to assisting businesses but several types of services were addressed throughout the study tour: export assistance efforts; applied research and technology transfer assistance; financial assistance; and the promotion of innovation and "best" business practices, including quality and management improvements. What characterizes business assistance efforts in each European country is the integration and -- with the possible exception of financial assistance -- the scope of such efforts. Each type of service will be described in the final report. Due to time constraints, however, only export assistance and technology transfer services are described in this memorandum. Preliminary observations contrasting the European models with similar activities in the United States conclude this section.

Export Assistance Efforts

Denmark. In Denmark (population -- 5.1 million), pork and wheat comprise the greatest share of exportable agricultural commodities. With respect to manufacturing, exports are primarily industrial components. Moreover, 80 percent of all commodities produced by small businesses can be exported. Denmark reports a trade surplus with both Japan and Germany.

At least two regional business development centers in Denmark assist small and medium-sized businesses with exporting. Their main objective is to identify within the region potential trade partners in other countries (mostly former East Bloc countries). The center in Storstrom County, for example, generally arranges the framework for the meetings between potential partners. A fee is charged for such services. The local business development center in Storstrom County likewise engages in export assistance activities. That center formed a private export company with 21 shareholder companies. One of the center's objectives is to internationalize local companies by organizing trips abroad and providing information on other countries' cultures and financing regulations. At least in Storstrom County there is no formal connection between local and regional business development centers. On the one hand, this results in areas of conflict. On the other hand, it illustrates the importance placed upon export assistance in Denmark -- even at the local levels. Another entity engaged in export assistance in Denmark is the Confederation of Danish Industries which, among other responsibilities, provides assistance in establishing relationships between exporters and purchasers.

One means of encouraging exports has been through a Network Program administered by the Danish Ministry of Industry. This program began in 1989 and terminates in 1992. Funding has been provided in the form of grants to groups consisting of at least three manufacturing companies which agreed among themselves to certain conditions, including the articulation of a clear marketing objective. Other criteria included demonstrable export potential and the prospect of increased employment in Denmark. The underlying justification for networking is that certain operations and innovations are more likely to occur if cooperation of firms engaged in complementary activities is fostered. The initial grants were used for feasibility studies to examine the potential benefits and disadvantages of establishing a network. Under the program, a network is essentially a contractually established company formed by the individual cooperating companies. A participating company retains its independent status and may withdraw from the network if it no longer sees any significant advantages for continued participation. New partners may likewise join at any time.

Germany. Exports in Baden-Wuerttemberg (population -- 9.8 million) totaled almost 111.9 million DM in 1990. The largest share of exported goods was in machinery (25 percent), followed by automotive equipment (23 percent). The export rate (the ratio between foreign revenues and total revenues) for the manufacturing sector alone was 31.4 percent in 1990.

Foreign aid policy is generally the domain of the federal government although each state provides a modest amount of assistance to that end. As in the United States, export assistance activities in Germany are evident at the subnational level. In Baden-Wuerttemberg, export assistance is provided by a private limited liability company known as the International Economic Cooperation Agency (GWZ). GWZ organizes visits of foreign trade delegations to the state, as well as delegations to foreign countries. GWZ supports medium-sized companies in their search for potential foreign trade partners and relies on data bases to link partners. It cooperates with local authorities in advising companies in matters of site selection and compiles location offers. In addition, GWZ accompanies interested firms on visits to possible sites, contacts experts, suppliers, and research institutes for firms, and provides technical assistance to start-up firms.

One task of GWZ is to identify cheaper sources of supply for highly technical products. Apparently, Germany needs to reduce the price of sophisticated machinery and equipment by 20 to 25 percent to remain competitive with Italy and Japan. This involves identifying suppliers to German companies in such countries as Hungary, Czechoslovakia, and Moscow. This is apparently a controversial activity given the national decline in production and increasing unemployment. It involves a fine balancing act of maintaining the need for upgraded skills and a highly educated

workforce through expanded diversification of existing manufacturers while, at the same time, reducing the costs of German products. Other GWZ responsibilities include providing vocational training for specific commercial projects in foreign countries and offering training to managers from East European countries.

Italy. Emilia Romagna (population -- 4 million), exports 10.7 percent (\$14 billion) of all national exports. According to one report metalworking, textiles, and ceramic tiles and terracota are the leading export products.

In Emilia Romagna, the agency with the most central involvement in export assistance is SVEX, a limited liability company established by the regional economic development agency (ERVET), the Regional Union of Chambers of Commerce, and regional business associations. SVEX resembles GWZ, its counterpart in Baden-Wuerttemberg, in many of the services offered. These services include: use of specialized data banks; establishing contacts with potential trading partners; use of consultants and marketing services; collaboration with qualified import and distribution services; promotional initiatives at distribution centers; organization and exchange of trade delegations; participation in trade fairs; organization of autonomous promotional initiatives; organization of technical symposiums and seminars; sector-county market research; planning of support mechanisms for technology transfer, joint ventures, direct investments, and industrial collaborations; and others. SVEX differs from other organizations and also from GWZ in that it provides an array of promotional, informational, and operational services to specific entrepreneurial organizations or consortia established within an industrial sector, (*e.g.*, ceramic tiles, machine tooling, farm machinery), rather than to individual companies. Generally, the region of Emilia Romagna funds 50 percent of any given project (consisting of an appropriate mixture of services determined by SVEX and the entrepreneurial organizations) and the participating businesses represented by the entrepreneurial organization finance the remaining half.

Projects are also developed to foster joint ventures and develop markets in foreign countries. Such projects are generally administered in cooperation with ERVET (the regional economic development agency). As in Denmark and Germany, much effort is expended in identifying prospective trade partners and suppliers in East Bloc countries. Each year Emilia Romagna promulgates general guidelines to finance projects. These guidelines define the sectors which are to be developed or are in crisis and warrant assistance from SVEX. The entrepreneurial organizations propose projects which are then selected by the Regional Board based on their feasibility and adherence to SVEX objectives.

Technology Transfer

What is particularly striking about technology transfer services in the three European countries is both the diversity of structures and the commitment to improving the quality of manufacturing products and processes (to be discussed in more detail in the final report).

Denmark. Central to technology transfer in Denmark is the Danish Technological Institute (DTI), a private company established in the form of a foundation with an annual budget of close to \$100 million. DTI is an independent agency authorized by the Danish Ministry of Education as a technological service institute. It receives an annual grant from the government of approximately 18 percent of its total income, but the greatest portion of its budget (58 percent) is derived from fees from client businesses. DTI's mission is to identify and solve the problems of businesses in applying existing technologies. DTI is not primarily a research institution; it rarely engages in basic research

and is generally involved in identifying new applications for existing technologies. Most of the institute's activities relate to testing and consultation (41 percent), followed by research and development (38 percent). DTI consists of technologically specialized divisions which focus on specific technologies, production and distribution processes, management (quality, productivity, and business, organization, and product development), and industrial development processes (including network and institutional development). Employees generally have company experience prior to coming to DTI. Almost half of the staff of over 1,200 are engineers and academics and slightly more than one-fifth are technicians.

Network development is one of the responsibilities discharged by DTI. According to the Director of Corporate Strategy of DTI, successful networks have three distinct characteristics: (1) they engage in identifying joint solutions to a common problem; (2) there is complementariness among firms; and (3) they work in developing the quality of subcontractors. An example of assistance provided by DTI to such a network might assume the form of hiring a production manager for several companies. That manager's services would be financed on an escalating basis by participating companies. After a set period of time DTI's subsidy would terminate and the companies would have to decide if they want to continue funding those services without external support.

DTI occasionally subcontracts with universities for work on specific projects and relies on 15 technological centers throughout the country to assist companies in accessing information. Under contract with the Danish Ministry of Industry, DTI administers these centers and coordinates their operations.

Germany. Applied research and development and technology transfer activities in Germany are described very adeptly in Dr. Tony Redwood's article, "Innovation and Business Competitiveness Through Technology-Transfer and University-Industry Liaison in Europe: Implications for State Technology Policies," *Kansas Business Review* (Spring, 1992), pages 1-7. Unlike DTI, which provides both applied research and technology transfer services, the German system has two mechanisms for executing those responsibilities: the Steinbeis system, which is a private enterprise, responsible for technology transfer and technical assistance; and the Fraunhofer-Gesellschaft, which is responsible for applied research and development.

The Steinbeis Foundation, headquartered in Stuttgart (Baden-Wuerttemberg), sponsors a statewide network of 150 technology transfer and technical consulting services that bring existing technology to bear on industrial product and process development. For the most part, the centers are located at institutions of higher learning (generally Fachhochschulen, formerly known as polytechnical institutes). All centers are intended to make a profit on technology transfer services and each one has a single focus. Each center is capable of being dismantled once its assistance is no longer needed. All services are provided in response to industry need on a fixed-term contractual basis. Approximately 2,600 professors, engineers, academicians, computer scientists, and others work on Steinbeis Foundation projects, which totaled 15,744 in 1991. In that year, most projects (42 percent) were technology and marketing consultations, followed by research and development (24 percent). The Steinbeis Foundation takes an integrated approach to technology transfer by examining all aspects of a company in determining a solution, (e.g., research and development, production, financing, personnel, marketing, latest technological developments of the company, external factors affecting the German economy).

The Fraunhofer-Gesellschaft, headquartered in Munich, is the largest organization responsible for applied research and development in Germany. It maintains 38 research institutes

in nine federal states and employs a staff of approximately 6,000, one-third of whom are scientists and engineers. The Fraunhofer-Gesellschaft is funded 90 percent by contracts with industries and the European Community and 10 percent by contracts with the German government. Contracts with industry are intended to respond specifically to industrial needs. With governmental funding, the research institutes may explore solutions to industrial problems which have already been identified but are not industry-specific. The individual institutes provide the following services: inform and advise on product and process innovations; demonstrate a project's feasibility; develop products up to the prototype and processes up to the application stage; develop information technologies for employment in the production and office sector; and test, evaluate, and improve products and processes to meet market and environmental requirements. Each institute trains prospective industrial users of technologies refined or developed within the institute. The institutes contract with all sizes of firms and provide free assistance to smaller firms on certain manufacturing problems.

Italy. In Italy, scientific and technology parks have been established at the local and regional levels to conduct applied research. The National Research Council promotes applied research projects which result in new designs and patents. (The legislative delegation did not receive any detailed information on the operations of these parks or the Council.) The central source for technology transfer and diffusion is ASTER, the Advanced Science and Technology Agency for Emilia Romagna. ASTER is a private limited liability company with 11 employees and consultants. The members of ASTER are sectoral associations, not individual companies. ERVET, the regional economic development organization, is a majority shareholder in ASTER. ASTER assists industries in exploring the use of new technologies in traditional industries, thus encouraging innovation. One of its major responsibilities is to provide companies with an analysis of their strengths and weaknesses, examining such areas as the internal organization and features of the company, technology, market needs, administrative attributes, etc. ASTER also collaborates with ERVET to improve the capacity of small businesses to compete in international markets by providing them with information on technological and scientific opportunities and developments in the EC.

Preliminary Observations About Business Assistance Programs

1. The European countries have developed export assistance programs which are much more encompassing than most programs offered in the United States. Part of the explanation for this disparity is that the small size of the countries under consideration makes exporting a critical component of their economic growth and vitality. Unlike in the United States, business assistance programs in the three countries are subject to EC approval. The intent is to discourage EC members from undercutting each other, although competition within countries and between EC countries is by no means eliminated. By contrast, there is no such regulating mechanism in the United States and many resources are unnecessarily depleted through interstate bidding wars for new companies and other forms of interstate competition. Central to each country's export assistance program is the concerted effort made to link companies with suppliers and trading partners in other countries. It would appear that our states could learn much from the sophisticated data bases and profiles which are developed to facilitate such linkages.
2. Exporting assistance is inextricably connected to assistance to companies in improving the quality and efficiency of a product or process and in sustaining a highly skilled workforce. This will be discussed further in the final report.

European countries realize that ongoing innovation, quality improvement, cost containment, targeted marketing applications of the newest technologies, the acquisition of skills to operate new technologies, and management efficiencies are critical to the production of competitive products and processes on the international market. That is why training is provided by export assistance entities like GWZ (Germany). The United States, however, generally views export programs as unrelated to most other facets of a business' operations and decoupled from vocational training efforts.

3. Each of the three European countries recognize the importance of networks, consortia, or partnerships in helping small businesses become self sufficient. Denmark and Italy, in particular, assist companies in establishing and maintaining cooperative efforts. DTI and various organizations in Italy (ASTER, SVEX, ERVET) provide assistance to groups of firms in a given sector. Networks are one means of containing a company's operating costs and providing it with a mechanism to identify joint solutions to common problems, exploit new markets, and share specializations to add value to products. Oregon has recently enacted legislation modeled after Denmark's program to encourage networks. Other states are considering such initiatives as well.
4. There is great emphasis placed on diagnosing the strengths and weaknesses of companies prior to recommending or implementing measures to make the company more competitive. DTI, the Fraunhofer-Gesellschaft, and ASTER are all involved in such diagnoses. In addition, innovation consultations similar to those offered by ASTER are provided by chambers of commerce throughout Germany. Some American states subsidize diagnostic services (offered by industrial extension services) similar to the European models discussed above. If such services exist, however, they are generally narrow in scope and are not well integrated with other types of services.
5. Most export assistance services and technology transfer and applied research services are not free in the European countries under consideration. Businesses pay for services, although some are subsidized. The intent is to offer quality services and to ensure commitment. The government's role is generally to leverage or seed assistance programs. Programs often have a termination date, (e.g., the networking program in Denmark and many assistance projects in Italy). The rationale is that industries should ultimately support services themselves if such services are considered to be useful to them. All services are designed to respond to actual or projected business needs. Their usefulness is ultimately determined by the business' ongoing support of such services in the absence of government intervention.
6. People in the European countries who provide services in the areas of technology transfer and innovation assistance generally have "hands-on" industrial experience in the industry. Indeed, academicians in the Fachhochschulen in Germany have industrial experience prior to employment in those postsecondary institutions. This "hands-on" experience enables them to better assist industries with their technological problems. For example, in Denmark, teachers of vocational on-the-job training must have five years of industrial experience and teachers of

theoretical concepts, at least two years. In the United States, no such requirements uniformly pertain.

MEMORANDUM

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January 12, 1993

BRIEF DESCRIPTION OF ECONOMIC DEVELOPMENT AGENCIES

Kansas Department of Commerce and Housing

This agency is authorized to "facilitate the growth, diversification, and expansion of existing enterprises and the creation by Kansans of new wealth-generating enterprises." There are seven divisions: General Administration; Existing Industry Development; Trade Development; Industrial Development; Travel, Tourism, and Film Development; Community Development; and Housing. In FY 1992, expenditures totaled over \$27 million, of which 59 percent were from federal funds, 30 percent from the Economic Development Initiatives Fund (gaming proceeds), 8 percent from the State General Fund, and 3 percent from fees. The agency has a total of 115 employees and operates six field offices throughout the state, in addition to three information centers. The diverse array of programs include, among others, three business training programs, services for minority and women owned businesses, a one stop clearinghouse providing a centralized source for business regulatory information, a trade show assistance program, community improvement grants, community strategic planning and action grants, and various federal housing-related programs.

Kansas Inc.

Kansas Inc. is a quasi-public entity governed by 15 predominantly private-sector members and administered by five employees. This entity is responsible for overseeing and evaluating the implementation of the state's economic development strategy and recommending program and policy enhancements and initiatives to ensure a prospering state economy. Its main responsibility during the past several months has been to formulate a state strategic plan for economic development. Funding for Kansas Inc. includes, as required by statute, 67 percent from the State General Fund and 33 percent from private sector funds. In FY 1992, expenditures totaled over \$477,000. Beginning in FY 1993, Kansas Inc. was given oversight of a federal program for making Kansas more competitive in science and engineering research (EPSCoR).

Kansas Technology Enterprise Corporation

The Kansas Technology Enterprise Corporation (KTEC) is a quasi-public entity governed by 20 members from the private sector, Kansas university research institutions, the Legislature, and designated state agencies. Its current staffing complement totals seven positions.

January 12, 1993
Economic Development
Attachment 3

The purpose of KTEC is to create and maintain employment in Kansas by providing various forms of assistance that: promote technological innovation; develop technologies through access to capital, intellectual property protection, and manufacturing modernization; and commercialize investment grade technologies through management oversight, securing additional capital, and market development. Programs include centers of excellence at four Regents universities, applied research matching grants, training equipment grants, small business innovation research grants, industrial liaison services, special projects, MAMTC (see below), and a seed capital fund for start-up companies (Ad Astra Fund). Funding for KTEC totaled \$8.3 million in FY 1992, which also included moneys for the Kansas Value Added Center. All funding came from the Economic Development Initiatives Fund.

Mid-America Manufacturing Technology Center

The Mid-America Manufacturing Technology Center (MAMTC) is a nonprofit wholly-owned subsidiary of KTEC with over 40 employees, the majority of whom are field engineers and technical specialists. MAMTC was established in 1991, when KTEC was awarded a \$12.9 million federal grant from the National Institute of Standards and Technology. In addition to federal funds, MAMTC operations are financed from state funding and client fees. MAMTC provides services to identify and resolve problems in the manufacturing process with the objective of reducing a manufacturer's bottom-line costs. Such services include: hands-on consulting; customized training, seminars, and workshops; industry roundtables; equipment and software demonstrations; and vendor and technology searches. MAMTC has five regional offices in Kansas, one in Kansas City, Missouri, and one in Ft. Collins, Colorado, and currently serves Kansas and portions of Missouri and Colorado. In future years, MAMTC intends to expand its service area to encompass all of the surrounding states.