
The District's Long-Term Growth Prospects

By Mark Drabenstott

In recent years, at the bank's annual meetings of its boards of directors, I have presented an economic outlook for the Tenth District in the upcoming year. But this year, rather than returning to the recent annual theme of slow growth in the district economy, I will consider the district's long-term economic prospects. After giving a brief update on the region's recent economic performance, I will develop an outlook for the district for the turn of the century and beyond.

In approaching this task, I will not, indeed cannot, give a precise forecast of the actual rate at which the regional economy will grow over the long term. Such forecasts are simply beyond the capacity of economic science. Instead, I will analyze the recipe for long-term growth now being concocted across the district. Many of the growth ingredients in this recipe are basic—such as the work force, infrastructure, and available financial capital. But economic growth, like good cooking, is as much art as science. The magic comes from the way in which the ingredients are combined. In this case, the chefs of the region are its public and private leaders.

The district's long-term growth obviously

depends on the performance of the U.S. economy. Nevertheless, economists agree that a region's long-run growth path *relative to other regions* depends on the quantity and quality of its growth ingredients; or to put it in economic terms, its assets.¹ Five such district assets merit consideration: work force, education, infrastructure, fiscal climate, and financial capital.

An analysis of these five growth assets points to slower growth for the district economy than for the national economy. But the district is not necessarily doomed to that growth path. There is much that the region's leaders might do to improve growth prospects.

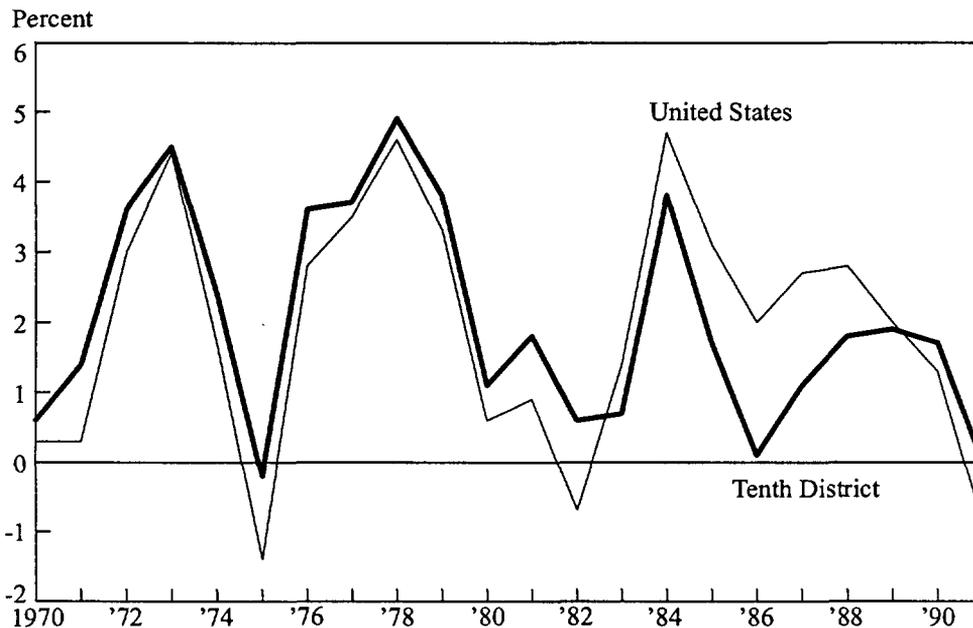
THE RECENT PERFORMANCE OF THE DISTRICT

Recently, the district economy has grown slowly, although perhaps slightly faster than the national economy. Employment growth, one of the best broad gauges of the district economy, increased 0.6 percent over the year that ended in the third quarter of 1992, compared with a 0.4 percent drop in the nation. In terms of new jobs added over the past year, the district outperformed the nation by a full 1 percent. Growth in real income, another broad economic indicator, shows a similar pattern of slow growth across the region.

The district pattern of slow growth extends back much further than just the past year. Indeed,

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Chart 1

Total Employment Growth

Source: Bureau of Economic Analysis.

slow growth has characterized the district economy for most of the past decade (Chart 1). The district economy fared quite well in the 1970s as agriculture and energy—pivotal industries in the region—both did well. But since 1980, the district averaged just 1.4 percent annual growth in employment, compared with 1.7 percent for the nation. The only two district states that had stronger job growth than the nation over the past decade were Colorado and New Mexico, states where population growth was the strongest in the district.

Milton Friedman once observed that despite the central place of elections in our society, the most important vote that people cast is with their feet. Population growth provides one of the most striking pictures of the district over the past two decades (Chart 2). A weak economy in the 1980s led

to a sharp slowdown in the growth of district population. Coming into the 1980s, the district's population was growing about 1.5 percent per year. But as the farm and energy recessions gripped the region's economy, more people started leaving the region. In just two years the region's population growth plummeted to a mere 0.5 percent. By 1988, it was down to zero—a demographic downswing of seismic proportions. Recently, however, population growth has picked up somewhat. Within the district, rural areas have lost population every year since 1983, while its cities have continued to grow, albeit slowly.

THE DISTRICT'S LONG-TERM GROWTH ASSETS

The district's long-term growth prospects will

Chart 2
Population Growth



Source: U.S. Bureau of the Census.

be framed by the quantity and quality of its economic assets. These basic ingredients will combine with the unique flavor of the region's leadership to yield tomorrow's growth. The question is, then, how do the region's economic assets look under close inspection? Five growth assets need to be considered: work force, education, infrastructure, fiscal climate, and financial capital. In each case, the asset can be assigned either a plus or a minus for long-term growth. A plus means that it will help the district grow faster than the nation, a minus means it will keep growth below the national rate.

Work force

The district is blessed with an excellent work

force. It is well-educated, productive, and hard working. In its ethnic makeup, it is more homogeneous than the rest of the nation, a feature that is both a plus and a minus. The biggest question may be whether the region's work force will grow fast enough to fuel rapid economic growth.

By standard measures, the district work force is somewhat better educated than the nation as a whole. Seventy-nine percent of the district work force are high school graduates, compared with 77 percent for the nation (U.S. Bureau of the Census 1992). Nearly 22 percent of the district work force are college graduates, compared with about 21 percent for the nation. And district students scored about 1,000 on the SAT exam in 1990, compared with 900 for the nation as a whole (College Entrance Examination Board).

In addition to being well-educated, a relatively high percentage of the available work force is employed. In 1991, 57 percent of the district's population of 18-to-64 year-olds were working, compared with 54 percent for the nation as a whole (U.S. Department of Commerce). The district's participation rate has been higher than the nation's for more than two decades.

The district work force shares nearly the same age profile as the national work force. A bigger difference is found in the ethnic profile of the district's 17 million people. According to the 1990 census, the district has a disproportionate share of whites and native Americans, but is underrepresented by blacks, Hispanics, and Asians. Therefore, the district lacks the ethnic diversity that boosts entrepreneurial energy in regions like the West Coast. At the same time, the district may avoid some of the ethnic strife that is becoming more commonplace in other parts of the country.

Overall, the district's work force is a plus for long-term growth. The productive work force is recognized by business leaders elsewhere in the country. There is room for continued improvement, but compared with many other parts of the country, the quality of the work force is likely to help, not hinder, economic growth.

The quantity of workers, not their quality, may be the constraining factor over the coming years. The district seems destined to have a slowly growing population. The Commerce Department, for example, forecasts that district population will grow by about 0.5 percent a year through the year 2010, just under the national rate of growth. Based on the recent economic record of the region, district population growth could fall short of the nation by a wider margin. If true, such slow growth will act as a soft brake on growth.

It is worth remembering, however, that population growth in the region can change quickly. If the region's leaders can address some of the more pressing constraints to growth, the population problem may take care of itself. If a region builds a strong economy, the workers will usually come.

Despite a concern about population growth, therefore, the district's work force remains a plus for economic growth.

Education

The district's educational system is critical to the region's long-term growth. The K-12 part of the system leaves an indelible imprint on the quality of the work force, and this part of the system appears to be working well in the district. The higher education part of the system shapes the quality of the work force, too. But it also affects the business environment as a fount of ideas and technology for new and existing businesses. In this higher tier, the district shows much less strength. Thus, the district's educational system has both strengths and weaknesses as an asset for long-term growth.

Dollars spent may not be the best yardstick to measure an educational system, but they do provide one reference point. The district spends less per capita on education than the United States as a whole. In 1990, district school boards spent an average of nearly \$4,000 per school-age pupil, compared with \$4,500 in the nation as a whole (U.S. Bureau of the Census 1991). Among district states, per pupil spending ranged from \$5,400 in sparsely settled Wyoming to \$3,400 in Oklahoma. While per capita spending is less in the district, governments in the region devote a bigger share of their budgets to education than elsewhere in the nation. Fully a third of total spending by state and local governments in the district goes to education, compared with only 29 percent for the nation as a whole (U.S. Bureau of the Census 1991).

Despite lower per pupil spending, the district apparently turns out smarter students, on average, and more of its students finish school. The lower spending on education in the district, therefore, may be as much a testament to the skills of the region's educators as it is a question about the miserliness of the district's taxpayers. Overall, elementary and secondary education cannot be

Table 1

Research and Development Spending at District Universities

<u>Institution</u>	<u>Rank among public universities</u>	<u>Rank among combined public & private universities</u>	<u>Millions of dollars</u>		
			<u>R&D spending</u>	<u>Federal support</u>	<u>State support</u>
Univ. of Colorado	19	29	155	116	2
Univ. of Missouri	44	65	84	24	13
Univ. of Nebraska	48	71	78	23	27
Colorado State Univ.	53	78	74	51	9
New Mexico State Univ.	54	81	71	55	8
Oklahoma State Univ.	58	85	66	18	3
Univ. of Kansas	64	92	61	27	2
Univ. of Oklahoma	67	95	59	17	4
Univ. of New Mexico	69	97	58	25	5
Kansas State Univ.	71	101	50	16	23
Univ. of Wyoming	100	143	23	12	2
<i>Addenda</i>					
Univ. of Wisconsin	2	4	310	179	52
Univ. of Minnesota	3	7	292	144	47

Note: All information based on 1990 R&D Budgets.

Sources: National Science Foundation 1991, 1992.

neglected in the future, but they are more strength than weakness for the district as a whole.

The region shows much less strength in higher education. District states tend to have a lot of universities, more than the nation on a per capita basis. The district has roughly 3.5 universities per million people, compared with just 2.4 for the nation. At first glance, that seems to be positive for the future.

But on closer inspection, it quickly becomes apparent that the district comes up short in one key aspect—university research and development. University research is critical to long-term economic growth on two grounds. First, it provides the innovation and technology that fuel new businesses. Second, research provides the magnet for

retaining the best and brightest college graduates. Some economists believe that the region's universities are net exporters of college-educated talent to the rest of the country.²

Universities in the region are mostly second tier in the scale of their research efforts. Using dollars spent on research and development as a guide, the district has only one of the top 25 public universities in the nation—the University of Colorado (19) (Table 1). Only two others are in the top 50—the University of Missouri (44) and the University of Nebraska (48). Combining public and private universities, the district has only the University of Colorado ranked among the top 50. The district is home to none of the top 50 private research universities.

Why do district institutions lag so far behind? At least part of the answer is that most state governments in the district provide paltry funding for research compared with many states elsewhere in the nation. The University of Colorado built their research program almost totally on federal and private grants; the state of Colorado put up only \$2 million for research in 1990—the smallest state contribution in the district. Only three district institutions receive more than \$10 million a year in state funds.

State funds are not the only way to boost research activity, but they often form a critical base for first-rate research institutions, especially for universities that lack strong ties to industry or endowment funding. The University of Wisconsin, for instance, is the nation's second ranking public university in R&D spending; its research budget is twice the size of Colorado's. The state of Wisconsin invested \$52 million in 1990. The University of Minnesota has the third biggest research program; the state of Minnesota invested \$47 million in 1990.

Is there a strong link between public research and economic development? Economists say yes (Leslie and Slaughter). The evidence seems to support that view, both in this region and elsewhere. For example, the region had 6.6 percent of the nation's new businesses in 1990 (Dun and Bradstreet); and a third of the new businesses in the district started up in Colorado, where the largest and fourth largest of the district's research universities reside. Colorado's scenic amenities are a plus, but even more important to new businesses are ideas.

On balance, education is a slight minus for the district. The district's high schools and institutions of higher learning turn out quality graduates, but its research universities are mostly second tier in size. In an economy where innovation is the fuel of progress, the district's supply of creative energy is scarce.

Infrastructure

A third key asset for long-term growth is in-

frastructure. The district has an extensive array of infrastructure, ranging from roads and airports to fiber-optic networks. The quality of the region's physical infrastructure has slipped during the past decade but is probably not much worse than the rest of the country. A more pressing question may be whether the district has the right kinds of infrastructure to ensure access to the global economy of the 21st century.

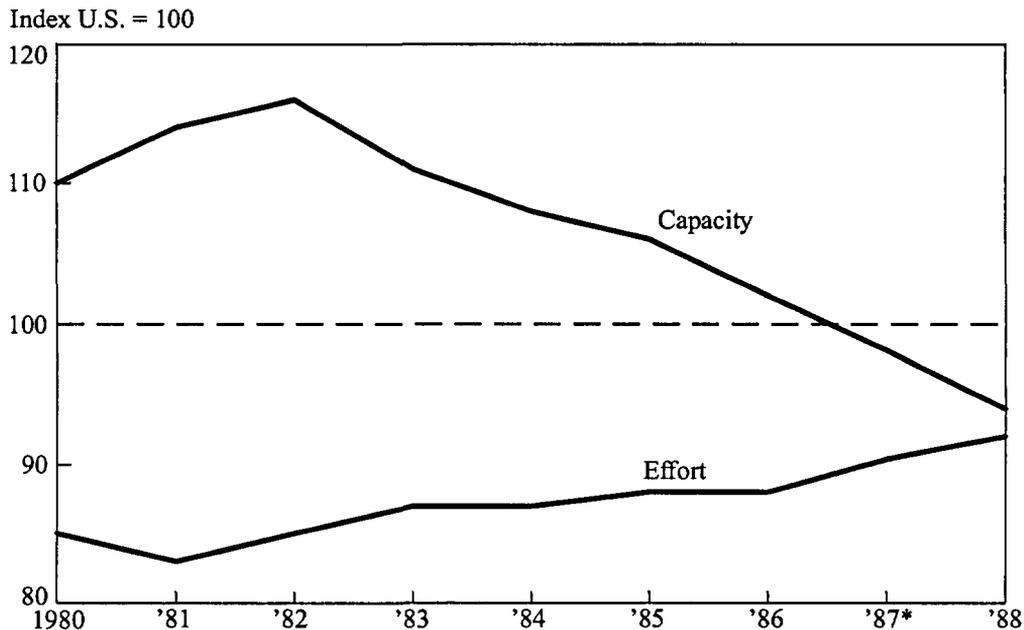
Throughout the past 30 years, the district has generally spent more on infrastructure than the nation, but the rate of investment now appears to be converging. In the district, annual spending on infrastructure has fallen from 2.6 percent of gross state product in 1960 to 1.8 percent in 1990 (U.S. Bureau of the Census 1990). In the nation, meanwhile, the decline has been from 2.2 percent to just under 1.8 percent.

The drop in spending on infrastructure may be causing some problems. For example, the district's roads and bridges are deteriorating. The district has a sixth of the nation's highway miles, but more than two-thirds of those miles are in poor or fair condition (Federal Highway Administration). And more than half the district's bridges are deficient (Walzer and McFadden).

Roads and bridges are vital to the district economy, but a scarcity of public funds is already sparking debate on the type of infrastructure in which to invest. The critical issue is whether the district has systems in place that enable it to access the national and international economies.

Landlocked in the center of the nation, the district has both advantages and disadvantages in terms of market access. The district lies at the nation's crossroads, but that is less and less important in an economy where transactions pass through fiber-optic lines and where growth markets lie beyond the nation's borders. The district lays claim to only one hub airport—Denver. The district is home to some major telecommunications companies, such as U.S. West and Sprint. But in comparison to some other parts of the nation, the district's access to distant markets is probably

Chart 3
Tenth District Tax Capacity and Effort



* Data not available for 1987.

Source: Advisory Council of Intergovernment Relations, 1990.

less developed.

Overall, infrastructure is a minus for the district's long-term prospects. The road system is extensive but needs improvements. On the more critical issue of market access, the district must run even harder to compete with regions that have more natural advantages in reaching foreign markets.

Fiscal climate

A fourth ingredient for long-term growth is the district's fiscal climate. When businesses choose where to locate, they naturally look for states with low taxes; but they also look for high-quality government services, like education and transportation. Services are especially important for technology and information companies. In fact, some

economists argue that public services have become as important as low taxes in the location decisions of some firms.³ But to provide more services, governments must raise taxes. The term "fiscal climate" describes the mix of taxes and services that a government chooses.

The economic downturn in the 1980s put a squeeze on the district's fiscal climate (Chart 3). Tax capacity went down in district states. Tax capacity is a broad measure of the resources states can tap to generate taxes, such as income, property, and sales. Tax effort, a corresponding measure of the extent to which a state taxes its available taxable resources, went up as states tried to maintain public services.⁴ Historically, the region has been characterized by low taxes and low services. The district has had a lot of untapped taxable resources.

Today, the district remains a low-tax, low-service region. Most district states raised taxes in the 1980s, but that was mostly to maintain existing services. The difference today is that the district's untaxed reserve has evaporated significantly, the victim of a decade of sluggish growth. Every district state lost tax capacity in the 1980s, and the drop was striking in energy-producing states. So, even if state and local governments wanted to offer more services to attract some businesses, they lack the resources to do it. The district still has lower taxes than the nation as a whole, but taxes are higher than a decade ago, and services have improved little if any. State and local spending in the district is lagging well behind the nation, and while some might like to think government is more efficient in the Midwest, the reality is that the district probably offers fewer services than elsewhere.

On balance, the district's fiscal climate is neutral to long-term growth. The district is a low-tax region, a plus for economic growth, all other things equal. But in today's economy, businesses are much more concerned with all the other things. The district must admit to having fewer public services, on average, than other regions. This lack of services is a minus that, depending on the business and industry, may or may not be overcome by low taxes.

Financial capital

The last ingredient for long-term growth is financial capital. Does the district have the capital and the institutions to sustain growth? Following a tough decade, the district has strong financial institutions. But the conservatism born of tough times, though reassuring in light of the nation's banking problems, poses questions about the region's future economic growth. Adding to those questions is the region's relative lack of venture capital.

Commercial banks in the district historically have had lower loan-asset ratios than banks

elsewhere in the nation. Such conservatism has served district bankers well over the past five years as the nation's banks have seen bad loans skyrocket. Nevertheless, two things are worth noting. First, the gap between district and national loan-asset ratios is the widest in more than two decades. Second, the district's loan-asset ratio has generally been on the decline since it peaked in 1984.

The question, of course, is whether the district has the financial resources to fund adequate economic growth. In addition to having more conservative bankers, the district's share of the nation's bank assets has declined. Over the past two decades, the district's share of U.S. bank assets has slipped from more than 6 percent to less than 5.5 percent. Although not large in percentage terms, the decline amounts to \$17 billion, an amount bigger than any commercial bank in the district. In other words, the deposit base from which loans are made appears to be shrinking relative to the rest of the nation.

Another financial asset important to long-term growth is venture capital. Economists agree that venture capital is crucial to many business start-ups (Smith and Fox). The district, as it turns out, commanded only 3 percent of the nation's venture capital placements in 1991. Three-fourths of those placements were in Colorado, a fact that might be filed alongside the discussion over research spending at district universities.

Overall, financial capital appears to be a minus for long-term growth in the district. The district's financial institutions are strong, but they are conservative. Their asset base is not growing as fast as the rest of the nation. And the district has limited venture capital. Other things equal, the region's capital base seems likely to fuel slow, not rapid growth.

PLANNING FOR THE DISTRICT'S FUTURE

Taken together, these five key ingredients for

growth point to a district economy that will grow slower than the nation over the long term. The work force is a plus and the fiscal climate is neutral. But infrastructure, education, and financial capital are minuses. That mix of growth ingredients sums to a solid minus, meaning that the district is likely to grow more slowly than the nation.

The district's growth recipe, however, is not an unwitting concoction of basic ingredients. Also participating in the making of this stew are the chefs—in this case the region's collective set of public and private leaders. If they want to improve the district's growth prospects, a good starting point is to tackle the three principal growth impediments—university research, infrastructure, and capital.

New investments in research

How can the region bolster research programs at its universities? There are three possible approaches. First, more states in the region could adopt the "Colorado model." Following the University of Colorado example, states might select research niches, invest some additional seed money, and then aggressively leverage the research effort with federal dollars. The district is not without its areas of research expertise. This strategy suggests that such expertise has not been fully exploited for the region's benefit. Some universities, such as Kansas State, receive more research dollars from the state than from federal sources. But federal research dollars are becoming more scarce, so the Colorado approach may offer only limited potential in boosting research.

Second, leaders could combine research programs from across the region into a de facto major league research university. The creative energies of the region's universities have never been collectively harnessed, but under this approach they would be. Duplicate and competitive programs would be eliminated, and a new group of centers of research excellence could take their place. For

example, the University of Nebraska might become the site for a food research center, while deemphasizing its engineering research in favor of a new engineering research center at Kansas State.

To be successful, this approach demands that rival states cooperate. The problem is that neither mechanism nor incentive exists to channel the cooperation needed to create a regional research powerhouse. Can such a mechanism be created? It is worth noting that other regions are making gains in coordinating some development efforts through regional institutions such as the Great Lakes Commission and the Southern Growth Policies Board.

A third approach is consolidation. The region has more universities per capita than the rest of the nation. Some institutions might be eliminated and their teaching loads reassigned. The money left over could be spent to reinvigorate research programs. In a region like the Tenth District, which has a lot of space, new technologies might provide distance learning at lower cost. Notwithstanding the potential economic benefits, consolidation poses thorny political problems. In fact, most boards of regents in the district are debating whether to *add*, not subtract, institutions from their watch.

New investments in infrastructure

Next, what can be done to upgrade the district's infrastructure? With diminished tax capacity, the district must consider two things. First, it must target selected infrastructure for upgrading. District governments do not have the capacity to upgrade all their roads and bridges, nor to maintain courthouse public services in every county. Moreover, some parts of the district economy will not benefit from infrastructure investment simply because they lack the other assets that make for a viable economy. The Missouri legislature recently passed enabling legislation that proposes to build a four-lane highway to every community of 5,000 people in the state. A four-lane highway by itself will not rejuvenate rural towns whose economic

problems are much more fundamental. A public policy mechanism that disciplines infrastructure investments to those that have a clear payoff is badly needed in a region with public service demands that range from urban centers to the remotest rural areas.

Second, district leaders must consider creating new institutions that better link the region to potential trading partners. The first issue speaks to *where* the region invests, the second speaks to the *type* of investment. Currently, about half of state and local spending in the district goes to highways. Although highways are vital arteries of commerce, should not new types of infrastructure be considered that would tie the region more closely to global markets?

To grow more rapidly in the decades to come, the district must successfully tap the dynamic new markets in the global economy—Asia, Mexico, and Latin America, Eastern Europe, and the former Soviet Union. The region has goods and technology to sell in all of these countries. There may be a role for new institutions that would coordinate the flow of information and assist technology transfer between the region's industries and these developing markets. An example might be a regionwide trade center to coordinate trade and technology transfer in emerging markets.

Filling a capital gap

Finally, how can the district enlarge its pool of capital, the fuel of economic growth? The region appears to have a capital gap. Financial institutions are strong but tend to be conservative, and the district's venture capital market is fragmented at best. Most economists agree that new businesses are the foundation of a growing economy, and new businesses often depend on venture capital for starting up. One solution, therefore, is to consider a way to bolster the district's venture capital insti-

tutions and thereby spur business start-ups.

If improving the region's economic growth is the goal, new institutions for providing public/private venture capital might be one answer. These institutions could be capitalized initially by public and private funds, then operated under independent management for long-run profitability. Kansas Venture Capital, Inc. (KVCII) is one example whose operation and results could be studied more closely. KVCII is a small business investment corporation that was capitalized through matching contributions from Kansas banks and the state of Kansas.

CONCLUSIONS

The district is brewing a recipe for slow economic growth. Its productive work force is a major plus, while low taxes but limited tax capacity make fiscal climate neutral. The district's research universities are second tier in size, raising questions about the flow of innovations to fuel new businesses. The region will need to upgrade its existing infrastructure while also investing in new institutions that put the district in touch with growing foreign markets. Finally, the district has solid financial institutions, but they tend to be conservative and the district lacks a strong venture capital market.

The district is not doomed to this slow growth recipe—the region's public and private leaders can adjust it. It is encouraging that many leaders across the region are giving more thought to new initiatives to boost future growth. But in a region where economic growth trailed the nation for most of the past decade, individual efforts may not be enough. Instead, the best chances of success may come from pooling the efforts of the region's public and private leaders. In that respect, cooperation may prove to be the district's best growth asset of all.

ENDNOTES

¹ Smith (1989) concludes that "environmental factors" are more important than "discretionary factors" in influencing business location. Environmental factors include such things as labor markets, access to markets, transportation, education, and tax structure. Discretionary factors include such things as tax incentives and direct financial incentives. For additional discussion of the factors that affect the location of economic activity, see Wasylenko (1985) and Wasylenko and McGuire (1985).

² At a recent Regional Economic Roundtable held at the Federal Reserve Bank of Kansas City, directors of business research centers in the seven states of the district universally decried the loss of college graduates to other parts of the nation. The loss of college graduates, they believe, will curtail the region's growth in the future.

³ Helms (1985) concludes that higher state taxes retard economic growth when the tax revenue is used to fund transfer payments. But if the tax revenue is used to fund education or other public services like health or safety, improved economic performance may outweigh the negative influence of the higher tax.

⁴ Tax capacity and tax effort are both measured relative to the national average for all 50 states (Advisory Council on Intergovernmental Relations). That is, a tax capacity of 110 means that a state has per capita taxable resources that are 10 percent greater than the average for all 50 states. Correspondingly, a tax capacity of 90 means per capita taxes are 10 percent less than for all 50 states. Tax effort numbers carry the same general meaning.

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